



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

---



**UTTAR PRADESH ELECTRICITY REGULATORY COMMISSION**

**LUCKNOW**

Petition No. 1145/2016 & 1146 / 2016

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

**AND**

**TRUE-UP OF ARR AND REVENUE FOR FY 2015-16**

**FOR**

Noida Power Company Ltd. (NPCL) – (Petition No. - 1145/2016 & 1146 / 2016)

ORDER UNDER SECTION 62 & 64 OF

THE ELECTRICITY ACT, 2003

\_\_\_\_\_, 2017



## **TABLE OF CONTENTS**

1. BACKGROUND AND PROCEDURAL HISTORY .....	11
1.1 BACKGROUND .....	11
1.2 DISTRIBUTION TARIFF REGULATIONS .....	11
1.3 FILING OF BUSINESS PLAN, ARR / TARIFF PETITION FOR THE MYT CONTROL PERIOD .....	11
1.4 PRELIMINARY SCRUTINY OF THE PETITIONS .....	13
1.5 ADMITTANCE OF BUSINESS PLAN, MYT ARR / TARIFF & TRUE-UP PETITIONS OF THE LICENSEE .....	14
1.6 PUBLICITY OF THE PETITIONS: .....	15
2. PUBLIC HEARING PROCESS .....	16
2.1 PUBLIC HEARING .....	16
3. TRUE-UP FOR FY 2015-16 .....	32
3.1 INDEPENDENT AUDIT FOR FY 2015-16 .....	32
3.2 SALES APPROVAL: .....	33
3.3 DISTRIBUTION LOSSES: .....	34
3.4 ENERGY BALANCE: .....	35
3.5 POWER PURCHASE QUANTUM & COST: .....	35
3.6 OPERATION & MAINTENANCE (O&M) EXPENSES: .....	40
3.7 STATUTORY & OTHER RELATED EXPENSES: .....	48
3.8 CAPITAL EXPENDITURE (CAPEX): .....	49
3.9 INTEREST AND FINANCE CHARGES: .....	50
3.10 INTEREST ON LONG TERM LOANS: .....	50
3.11 INTEREST ON WORKING CAPITAL: .....	54
3.12 FINANCE CHARGE: .....	56
3.13 INTEREST ON SECURITY DEPOSIT: .....	59
3.14 INTEREST CAPITALISATION: .....	60
3.15 SUMMARY OF INTEREST & FINANCE CHARGES: .....	61
3.16 EFFICIENCY GAINS DUE TO SWAPPING OF LOAN .....	61
3.17 CAPITALISATION OF ASSETS & COMPUTATION OF EQUITY: .....	63
3.18 GROSS FIXED ASSETS (GFA) & WORK-IN-PROGRESS: .....	64
3.19 DEPRECIATION: .....	65

---



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

---

3.20	INCOME TAX: .....	66
3.21	CONTINGENCY RESERVE: .....	67
3.22	PROVISION FOR BAD & DOUBTFUL DEBTS: .....	67
3.23	MISCELLANEOUS EXPENSES: .....	68
3.24	RETURN ON EQUITY: .....	68
3.25	NON-TARIFF INCOME: .....	69
3.26	REVENUE FROM SALE OF POWER: .....	70
3.27	CARRYING COST: .....	71
3.28	SUMMARY OF ARR FOR FY 2015-16: .....	72
4.	BUSINESS PLAN .....	74
4.1	INTRODUCTION .....	74
4.2	SALES .....	78
4.3	DISTRIBUTION LOSS .....	83
4.4	ENERGY BALANCE .....	85
4.5	COLLECTION EFFICIENCY .....	85
4.6	POWER PURCHASE QUANTUM AND COST .....	87
4.7	FUEL AND POWER PURCHASE COST ADJUSTMENT / INCREMENTAL POWER PROCUREMENT COST .....	98
5.	AGGREGATE REVENUE REQUIREMENT FOR MYT PERIOD FOR FY 2017-18 TO FY 2019-20 .....	104
5.1	INTRODUCTION .....	104
5.2	POWER PURCHASE COST .....	104
5.3	OPERATION AND MAINTENANCE EXPENSE .....	106
5.4	CAPITAL EXPENDITURE .....	118
5.5	INTEREST CHARGES .....	120
5.6	EFFICIENCY GAIN DUE TO SWAPPING OF LOANS .....	128
5.7	CAPITALISATION OF ASSETS AND COMPUTATION OF EQUITY .....	128
5.8	GROSS FIXED ASSETS (GFA) & WORK-IN-PROGRESS .....	129
5.9	DEPRECIATION .....	129
5.10	INCOME TAX .....	136
5.11	CONTINGENCY RESERVES .....	138
5.12	PROVISION FOR BAD AND DOUBTFULL DEBT .....	139
5.13	RETURN ON EQUITY .....	140

---



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

---

5.14	NON-TARIFF INCOME .....	141
5.15	REVENUE FROM SALE OF POWER AT EXISTING TARIFF .....	142
5.16	REVENUE FROM SALE OF POWER AT APPROVED TARIFF .....	144
5.17	REVENUE GAP OF FY 2015-16 AND FY 2016-17 .....	145
5.18	CARRYING COST .....	145
5.19	SUMMARY OF ARR FOR FY 2017-18 TO FY 2019-20.....	146
6.	OPEN ACCESS .....	148
6.1	BACKGROUND .....	148
6.2	OPEN ACCESS CHARGES.....	149
6.3	WHEELING CHARGES .....	150
6.4	CROSS SUBSIDY SURCHARGE .....	154
6.5	ADDITIONAL SURCHARGE .....	157
7.	TARIFF PHILOSOPHY .....	160
7.1	CONSIDERATIONS IN TARIFF DESIGN .....	160
8.	TREATMENT OF REVENUE GAP .....	168
8.1	REVENUE GAP/ REGULATORY ASSET.....	168
8.2	REGULATORY SURCHARGE: .....	169
8.3	FUTURE POWER PROCUREMENT:.....	170
9.	DIRECTIVES.....	172
9.1	DIRECTIVES PROVIDED BY COMMISSION AND THEIR COMPLIANCE BY LICENSEES.....	172
10.	APPLICABILITY OF THE ORDER .....	190
11.	ANNEXURES.....	191
11.1	RATE SCHEDULE FOR FY 2017-18 .....	191
11.2	LIST OF PERSONS WHO HAVE ATTENDED PUBLIC HEARING IN NOIDA.....	239
11.3	ACTION TAKEN REPORT ON THE DIRECTIONS ISSUED BY THE COMMISSION IN THE ARR / TARIFF ORDER FOR MYT CONTROL PERIOD FY 2017-18 TO FY 2019-20 .....	241
11.4	CATEGORY AND SUB-CATEGORY WISE ABR FOR MYT CONTROL PERIOD .....	242
11.5	SUMMARY OF BENCHMARKING STUDIES CONDUCTED BY THE PETITIONER .....	245

---



## **TABLE OF FIGURES**

TABLE 3-1: CATEGORY WISE SALES FOR FY 2015-16 – APPROVED (MU) .....	33
TABLE 3-2: CATEGORY WISE CONSUMERS, LOAD & SALES – APPROVED .....	33
TABLE 3-3: DISTRIBUTION LOSSES AND EHV LOSSES APPROVED BY THE COMMISSION FOR FY 2015-16 .....	35
TABLE 3-4: ENERGY BALANCE APPROVED BY THE COMMISSION FOR FY 2015-16 .....	35
TABLE 3-5: ENERGY BALANCE APPROVED BY THE COMMISSION FOR FY 2015-16 AND POWER PURCHASE COST AS SUBMITTED BY THE PETITIONER FOR FY 2015-16 .....	36
TABLE 3-6: STATUS OF RPO COMPLAINT AS SUBMITTED BY DISTRIBUTION LICENSEE .....	39
TABLE 3-7: POWER PURCHASE COST AS APPROVED BY THE COMMISSION - FY 2015-16.....	40
TABLE 3-8: RECONCILIATION OF O&M EXPENSES AS SUBMITTED BY PETITIONER FOR FY 2015-16 .....	45
TABLE 3-9: INFLATION INDEXES FOR FY 2015-16 .....	47
TABLE 3-10: O&M EXPENSES FOR FY 2015-16 AS APPROVED BY THE COMMISSION (RS. CRORE) .....	47
TABLE 3-11: STATUTORY/OTHER REGULATORY EXPENSES (RS. CRORE) .....	49
TABLE 3-12: CAPEX FOR FY 2015-16 - TRUE-UP (RS. CRORE) .....	50
TABLE 3-13: INTEREST ON LONG TERM LOANS AS SUBMITTED BY PETITIONER FOR FY 2015-16 (RS. CRORE) ....	51
TABLE 3-14: INTEREST ON LONG TERM LOANS APPROVED BY THE COMMISSION FOR FY 2015-16 (RS. CRORE) .....	53
TABLE 3-15: INTEREST ON WORKING CAPITAL AS APPROVED BY THE COMMISSION FOR FY 2015-16 (RS. CRORE) .....	56
TABLE 3-16: SUMMARY OF PROCESSING CHARGES AS CLAIMED BY THE PETITIONER (RS. CRORE) .....	57
TABLE 3-17: PROCESSING CHARGES AS CLAIMED BY THE PETITIONER (RS. CRORE) .....	58
TABLE 3-18: PROCESSING CHARGES APPROVED BY THE COMMISSION (RS. CRORE) .....	59
TABLE 3-19: FINANCE CHARGES APPROVED BY THE COMMISSION (RS. CRORE) .....	59
TABLE 3-20: INTEREST ON SECURITY DEPOSIT AS APPROVED BY THE COMMISSION (RS. CRORE) .....	60
TABLE 3-21: SUMMARY-INTEREST & FINANCE CHARGES APPROVED BY THE COMMISSION (RS. CRORE) .....	61
TABLE 3-22: EFFICIENCY GAINS ON TERM LOAN SWAPPING FOR FY 2015-16 AS CLAIMED BY THE PETITIONER (RS. CRORE).....	61
TABLE 3-23: CAPITALISATION OF ASSETS & COMPUTATION OF EQUITY APPROVED BY THE COMMISSION (RS. CRORE) .....	64
TABLE 3-24: GROSS FIXED ASSETS APPROVED BY THE COMMISSION (RS. CRORE).....	65
TABLE 3-25: DEPRECIATION APPROVED BY THE COMMISSION (RS. CRORE) .....	65
TABLE 3-26: INCOME TAX AS CLAIMED BY THE PETITIONER AND AS PER CHALLANS (RS. CRORE) .....	66
TABLE 3-27: BAD & DOUBTFUL DEBTS FOR FY 2015-16 (RS. CRORE) .....	68

---



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

---

TABLE 3-28: RETURN ON EQUITY APPROVED BY THE COMMISSION FOR FY 2015-16 (Rs. Crore) .....	69
TABLE 3-29: COST OF BORROWING FOR DPS APPROVED BY THE COMMISSION FOR FY 2015-16 (Rs. Crore) ...	70
TABLE 3-30: REVENUE APPROVED BY THE COMMISSION FOR FY 2015-16 .....	70
TABLE 3-31: CARRYING COST APPROVED BY THE COMMISSION FOR FY 2015-16 .....	72
TABLE 3-32: SUMMARY OF TRUE UP FOR FY 2015-16 (Rs. Crore) .....	73
TABLE 4-1: SALES OF FY 2011-12 TO FY 2015-16 AS SUBMITTED BY THE PETITIONER .....	78
TABLE 4-2 DEMAND ESTIMATES FOR FY 2017-18 TO FY 2019-20 AS SUBMITTED BY THE PETITIONER .....	79
TABLE 4-3 NUMBER OF UNMETERED CONSUMERS, CONNECTED LOAD AND SALES FOR FY 2017-18 TO FY 2019-20 AS SUBMITTED BY THE PETITIONER .....	81
TABLE 4-4 APPROVED ENERGY BALANCE FOR FY 2017-18 TO FY 2019-20 .....	85
TABLE 4-5 COLLECTION EFFICIENCY FOR LAST FIVE YEARS AS SUBMITTED BY THE PETITIONER .....	85
TABLE 4-6 POWER PURCHASE COST AS SUBMITTED BY PETITIONER FOR FY 2017-18 .....	87
TABLE 4-7 POWER PURCHASE COST AS SUBMITTED BY PETITIONER FOR FY 2018-19 .....	88
TABLE 4-8 POWER PURCHASE COST AS SUBMITTED BY PETITIONER FOR FY 2017-18 .....	88
TABLE 4-9 PROJECTED QUANTUM FROM DIL (UNIT II) (MU) AS SUBMITTED BY PETITIONER .....	89
TABLE 4-10 PROJECTED COST FROM DIL (UNIT II) (Rs. Crore) AS SUBMITTED BY PETITIONER .....	89
TABLE 4-11 PROJECTED QUANTUM FROM DIL (UNIT I) (MU) AS SUBMITTED BY PETITIONER .....	91
TABLE 4-12 PROJECTED QUANTUM FROM DIL (UNIT I) (Rs. Crore) AS SUBMITTED BY PETITIONER.....	91
TABLE 4-13 COMPONENTS OF FIXED CHARGES (DIL UNIT-I) AS SUBMITTED BY PETITIONER .....	91
TABLE 4-14 APPROVED POWER PURCHASE COST FROM DIL-II.....	93
TABLE 4-15 RENEWABLE POWER PURCHASE COST APPROVED FOR FY 2017-18 TO FY 2019-20 .....	94
TABLE 4-16 APPROVED POWER PURCHASE COST FOR FY 2017-18.....	96
TABLE 4-17 APPROVED POWER PURCHASE COST FOR FY 2018-19.....	97
TABLE 4-18 APPROVED POWER PURCHASE COST FOR FY 2019-20.....	97
TABLE 4-19 MONTHLY POWER PURCHASE COST APPROVED FOR FY 2017-18 TO FY 2019-20.....	102
TABLE 5-1 APPROVED POWER PURCHASE COST FOR FY 2017-18.....	105
TABLE 5-2 APPROVED POWER PURCHASE COST FOR FY 2018-19.....	105
TABLE 5-3 APPROVED POWER PURCHASE COST FOR FY 2019-20.....	106
TABLE 5-4 APPROVED O&M EXPENSE FOR FY 2017-18 TO FY 2019-20.....	117
TABLE 5-5 BREAK UP OF CAPITALISATION AS CLAIMED BY THE PETITIONER FOR FY 2017-18 TO FY 2019-20	118
TABLE 5-6 CAPEX DETAILS FOR FY 2017-18 TO FY 2019-20 AS APPROVED BY THE COMMISSION (Rs. Crore)	120

---



TABLE 5-7 INTEREST ON LONG TERM LOANS AS CLAIMED BY THE PETITIONER FOR FY 2017-18 TO FY 2019-20 .....	121
TABLE 5-8 INTEREST ON LONG TERM LOANS AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 .....	123
TABLE 5-9 PROCESSING CHARGE AS SUBMITTED BY THE PETITIONER (Rs. CRORE).....	124
TABLE 5-10 PROCESSING CHARGE AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 (Rs. CRORE) .....	124
TABLE 5-11 FINANCE CHARGES AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 (Rs. CRORE) .....	124
TABLE 5-12 INTEREST ON WORKING CAPITAL AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 .....	126
TABLE 5-13 INTEREST ON SECURITY DEPOSITS AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 (Rs. CRORE).....	127
TABLE 5-14 SUMMARY OF INTEREST CHARGES AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 (Rs. CRORE).....	127
TABLE 5-15 CAPITALISATION OF ASSETS AND COMPUTATION OF EQUITY AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 (Rs. CRORE) .....	129
TABLE 5-16 GROSS FIXED ASSETS AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 (Rs. CRORE) .....	129
TABLE 5-17 DEPRECIATION AS CLAIMED BY THE PETITIONER FOR FY 2017-18 TO FY 2019-20 (Rs. CRORE) ....	130
TABLE 5-18 DEPRECIATION AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 (Rs. CRORE) .....	136
TABLE 5-19 APPROVED INCOME TAX FOR FY 2017-18 TO FY 2019-20 (Rs. CRORE) .....	138
TABLE 5-20 CONTINGENCY RESERVES AS CLAIMED BY THE PETITIONER FOR FY 2017-18 TO FY 2019-20 (Rs. CRORE) .....	138
TABLE 5-21 APPROVED PROVISION FOR BAD AND DOUBTFULL DEBT FOR FY 2017-18 TO FY 2019-20 .....	140
TABLE 5-22 RETURN ON EQUITY CLAIMED FOR FY 2017-18 TO FY 2019-20 (Rs. CRORE) .....	140
TABLE 5-23 APPROVED ROE FOR FY 2017-18 TO FY 2019-20 (Rs. CRORE) .....	141
TABLE 5-24 APPROVED COST OF BORROWING FOR DPS FOR FY 2017-18 TO FY 2019-20 .....	142
TABLE 5-25 REVENUE AT EXISTING TARIFF RECOMPUTED BY THE COMMISSION FOR FY 2017-18 .....	143
TABLE 5-26 REVENUE AT EXISTING TARIFF RECOMPUTED BY THE COMMISSION FOR FY 2018-19 .....	143
TABLE 5-27 REVENUE AT EXISTING TARIFF RECOMPUTED BY THE COMMISSION FOR FY 2019-20 .....	144
TABLE 5-28 REVENUE AT REVISED TARIFF RECOMPUTED BY THE COMMISSION FOR FY 2017-18.....	145
TABLE 5-29 CARRYING COST AS APPROVED BY THE COMMISSION FOR FY 2017-18.....	146

---



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

---

TABLE 5-30 SUMMARY OF ARR AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20.....	146
TABLE 6-1 WHEELING AND RETAIL SUPPLY ARR APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20.....	151
TABLE 6-2 WHEELING AND RETAIL SUPPLY ARR APPROVED BY THE COMMISSION FOR FY 2018-19.....	151
TABLE 6-3 WHEELING AND RETAIL SUPPLY ARR APPROVED BY THE COMMISSION FOR FY 2019-20.....	152
TABLE 6-4 WHEELING CHARGES APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20.....	153
TABLE 6-5: LONG TERM VOLTAGE LEVEL WHEELING CHARGES (Rs. / kWh) .....	154
TABLE 6-6: COST OF SUPPLY AS APPROVED BY THE COMMISSION FOR FY 2017-18 (Rs. / kWh).....	156
TABLE 6-7: COST OF SUPPLY AS APPROVED BY THE COMMISSION FOR FY 2018-19 (Rs. / kWh).....	156
TABLE 6-8: COST OF SUPPLY AS APPROVED BY THE COMMISSION FOR FY 2019-20 (Rs. / kWh).....	156
TABLE 6-9: CROSS SUBSIDY SURCHARGE APPROVED BY THE COMMISSION FOR FY 2017-18 .....	157
TABLE 6-10: CROSS SUBSIDY SURCHARGE APPROVED BY THE COMMISSION FOR FY 2018-19 .....	157
TABLE 6-11: CROSS SUBSIDY SURCHARGE APPROVED BY THE COMMISSION FOR FY 2019-20 .....	157
TABLE 8:1: REVENUE GAP ANALYSIS (Rs. Crore).....	169
TABLE 9-1: STATUS OF COMPLAINT OF DIRECTIVES OF TARIFF ORDER FOR FY 2014-15 DATED OCTOBER 1, 2014.....	172
TABLE 9-2: STATUS OF COMPLAINT OF DIRECTIVES OF TARIFF ORDER FOR FY 2015-16 DATED JUNE 18, 2015 .....	174
TABLE 9-3: STATUS OF COMPLAINT OF DIRECTIVES OF TARIFF ORDER FOR FY 2016-17 DATED AUGUST 1, 2016.....	182
TABLE 9-4: DIRECTIVES ISSUED UNDER PRESENT TARIFF ORDER .....	189

---





**Before**

**UTTAR PRADESH ELECTRICITY REGULATORY COMMISSION**

Petition No. 1145/2016 and 1146 / 2016

**IN THE MATTER OF:**

Petition No. 1145 / 2016: Approval of Business Plan for the First Control Period (Financial Year 2017-18 to Financial Year 2019-20)

Petition No. 1146 / 2016: Determination of Multi Year Tariff and Aggregate Revenue Requirement (ARR) for the First Control Period (Financial Year 2017-18 to Financial Year 2019-20) and True up for FY 2015-16.

**And**

**IN THE MATTER OF:**

Noida Power Company Ltd., Gr. Noida (NPCL) – (Petition No. - 1145/2016 & 1146 / 2016)

**Before**

**UTTAR PRADESH ELECTRICITY REGULATORY COMMISSION**

**ORDER**

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

---



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

---

such period as may be stipulated therein. The Regulatory surcharge shall be applicable as detailed in this Order. The Commission may issue clarification / corrigendum / addendum to this Order as it deems fit from time to time with the reasons to be recorded in writing.



## **1. BACKGROUND AND PROCEDURAL HISTORY**

### **1.1 BACKGROUND**

- 1.1.1 M/s Noida Power Company Limited (NPCL) was granted a supply license on August 30, 1993 by the State Government under Section 3(1) of the Indian Electricity Act, 1910, which authorized it to supply electricity in the licensed area.
- 1.1.2 NPCL started its operations in December, 1993 under a 30-year license from U.P. Government.

### **1.2 DISTRIBUTION TARIFF REGULATIONS**

- 1.2.1 The Uttar Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2006 (herein after referred to as the "Distribution Tariff Regulations, 2006") were notified by the Commission on October 6, 2006.
- 1.2.2 These Regulations are applicable for the purposes of ARR filing and Tariff determination to all the Distribution Licensees within the State of Uttar Pradesh.
- 1.2.3 Further, the Commission has notified Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014 (herein after referred to as Distribution MYT Regulations, 2014) on May 12, 2014. 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)

The transition period being of two years, which ended in FY 2016-17, Distribution Tariff Regulations, 2006 shall remain applicable for True Ups and the first control period being of three years, the Commission shall determine ARR / Tariff of the Distribution Licensee as per the Distribution MYT Regulations, 2014.

### **1.3 FILING OF BUSINESS PLAN, ARR / TARIFF PETITION FOR THE MYT CONTROL PERIOD**

- 1.3.1 As per the provisions stipulated in Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014, the Licensees under Regulation 12.1 were required to file before this Commission a Petition



for approval of Business Plan for the first control period i.e. FY 2017-18 to FY 2019-20 complete in all respect on or before June 1, 2016. Further, as per the provisions stipulated in Regulation 12.2 the Licensees were required to file before this Commission a Petition for approval of Aggregate Revenue Requirement (ARR) and Multi Year Tariff for the first control period i.e. Financial Year 2017-18 to Financial Year 2019-20 and for Annual Performance Review and Truing Up, complete in all respect on or before November 1, 2016.

- 1.3.2 Noida Power Company Limited, Greater Noida (hereinafter referred to as Petitioner', 'Licensee' or 'NPCL') however, did not submit its Business Plan as per the timeline provided in the Distribution MYT Regulations, 2014, i.e. on or before 1st June, 2016 and filed it later, along with the MYT ARR / Tariff petition for Control Period on October 27, 2016.
- 1.3.3 As the Business Plan Petition and the MYT ARR / Tariff Petitions have been submitted at the same time, the Commission is of the view that in case the Petition for Business Plan is processed first and approved by the Commission and then the Petitioner is asked to submit the revised MYT Petition based on the approved Business Plan, it would cause undue delay, in the already delayed Tariff determination process for the first Control Period by around 6-8 months.
- 1.3.4 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.

---



....”

- 1.3.5 In view of the above Judgment, and to ensure the timely Tariff Determination, the Commission, consider it appropriate to process the Business Plan Petition and MYT Petition simultaneously and, accordingly, the Commission has decided to club the Petitions for approval of Business Plan and Multi Year Tariff for the period from FY 2017-18 to FY 2019-20 and is issuing this single Order on approval of Business Plan and Multi Year Tariff. However, Commission would like to caution the Petitioner that such delays in future in filing of APR and truing up Petition during this control period would be dealt with as per Hon’ble APTEL’s directions. Furthermore, this would be treated as non-compliance of relevant provisions of various Regulations and may entail appropriate punitive action against the Petitioner.

#### **1.4 PRELIMINARY SCRUTINY OF THE PETITIONS**

- 1.4.1 NPCL, in its Business Plan Petition, has submitted the Capital Investment Plan, Financing Plan, trajectory of performance parameters and computation of norms for Operation and Maintenance expense for the first Control Period. Further, in the MYT Petition, NPCL has filed detailed calculations of its projected Aggregate Revenue Requirement (ARR) for the first Control Period i.e. from FY 2017-18 to FY 2019-20 as per the provisions of the Distribution MYT Regulations, 2014.
- 1.4.2 A preliminary scrutiny of the Business Plan and ARR Petitions for the Control period was carried out by the Commission and a detailed deficiency note was issued to the Licensee vide letter dated December 13, 2016, directing it to provide the required information within 10 days from the date of issuance of the Deficiency Note.
- 1.4.3 The Petitioner submitted its replies on December 30, 2016, to the above-mentioned deficiency note. The Commission issued a second set of deficiency note vide its letter dated February 14, 2017.
- 1.4.4 In response to the second set of deficiency note of the Commission the Petitioner vide its letter dated April 7, 2017 submitted its most of the critical data for the acceptance / admission of the Petition.
- 1.4.5 In terms of Distribution Tariff Regulations, 2006, the audited accounts for FY 2015-16 have been considered for true-up of FY 2015-16. Further, the provisional accounts for FY 2016-17 have been considered for the current proceedings in the matter of approval of Aggregate Revenue Requirement and Tariff Determination



for the first Control Period of FY 2017-18 to FY 2019-20 in terms of Distribution MYT Regulations, 2014.

## **1.5 ADMITTANCE OF BUSINESS PLAN, MYT ARR / TARIFF & TRUE-UP PETITIONS OF THE LICENSEE**

- 1.5.1 The Commission through its Admittance Order dated September 4, 2017, for Business Plan, MYT ARR / Tariff and True-up Petitions, directed NPCL to publish within 3 days from the issue of this Order, the Public Notice detailing the summary and highlights of the proposed Business Plan for the first control period i.e. Financial Year 2017-18 to Financial Year 2019-20, proposed Aggregate Revenue Requirement, Multi Year Tariff (MYT) for the first control period i.e. Financial Year 2017-18 to Financial Year 2019-20 and True up Petition for FY 2015-16 along with the proposed Rate Schedule for the Control Period (Tariff Proposed for different categories / sub-categories of consumers) along with their website address, in at least two (2) English and two (2) Hindi daily newspapers having wide circulation in the area of supply for two successive days inviting views / comments / suggestions / objections / representations within 15 days from the date of publication of the Public Notice(s) by all stakeholders and public at large.
- 1.5.2 The Commission also directed that the Public Notice should also contain the details of the cumulative revenue gap (regulatory asset) and its treatment, proposed 'Regulatory Surcharge', Distribution losses, average power purchase cost, average cost of supply, average retail Tariff realised from each category / sub-category of consumers and the % of average Tariff rise for each category / sub-category of consumers and the increase required to cover the revenue gap. The Public Notice should also contain the directions / observations of the Commission regarding power purchase, etc.
- 1.5.3 The Commission had also directed the Petitioner to put all details on its internet websites, in PDF format, showing detailed computations, the applications made to the Commission along with all regulatory filings, information, particulars and documents, clarification and additional information on inadequacies etc. and all subsequent events and material placed on record if any, made before the issuance of final Order subject to confidentiality of information which requires prior approval of the Commission.



## **1.6 PUBLICITY OF THE PETITIONS:**

1.6.1 The Public Notice detailing the salient information and facts of the True-Up and MYT ARR petitions appeared in Hindi & English language daily newspapers as detailed below:

1. Nav Bharat Times (Hindi): September 7, 2017 and September 8, 2017
2. Dainik Jagran (Hindi): September 7, 2017 and September 8, 2017
3. The Times of India (English): September 8, 2017
4. Statesman (English): September 7, 2017



## **2. PUBLIC HEARING PROCESS**

### **2.1 PUBLIC HEARING**

- 2.1.1 The Commission invited suggestions from consumers and all other stakeholders and conducted public hearings at Noida on September 22, 2017, to get the views / comments / objections, if any, of the various stakeholders and public at large on the proposals submitted by the Petitioner. Further, the Public Hearing was held at Kanpur, Varanasi, Lucknow on September 20, 2017, October 5, 2017 and October 12, 2017 respectively in the matter of State Discoms and UPPTCL. Consumer representatives, industry associations and other individual consumers participated actively in the Public hearing process. The Petitioner was also given an opportunity to respond to the stake-holders. The Commission has also taken into consideration the oral and written suggestions / comments / views / objections received from various stakeholders through post, e-mail and in person during the public hearings while disposing the ARR / Tariff petitions filed by the Petitioner.
- 2.1.2 The comments of the consumers play an important role in the determination of rate design and tariff schedule as factors like quality of electricity supply and the service levels have to be considered while determining the tariff. The Commission considers these submissions of the consumers before it embarks upon the exercise of determining the tariff for a particular period.
- 2.1.3 The Commission has taken note of the various views and suggestions made by the stakeholders and appreciate their keen participation in the process to provide feedback to the Commission on various issues. The major comments / views of various stakeholders in response to the Petition, the replies given by the Petitioner and the views of the Commission have been summarized below:

#### ***A) Comments / Suggestions of the Public:***

##### **Tariff Hike:**

- 2.1.4 Shri Devendra Tiger, Golden Federation of RWA's Greater Noida submitted that domestic tariff in Greater Noida is already higher than Noida and New Delhi and the 12.00% tariff hike proposed by NPCL is completely wrong. It is requested that Tariff should be kept same.
-





- 2.1.5 It is further requested that Public Hearing for NPCL shall be conducted in Greater Noida only.

**B) The Petitioner's response:**

- 2.1.6 The Licensee submitted that it has submitted its Multi Year Tariff Petition for FY 2017-18 to FY 2019-20 along-with retail tariff proposal to recover its Aggregate Revenue Requirement as well as accumulated Regulatory Asset for the approval of the Commission.
- 2.1.7 The Licensee submitted that the Public Hearing was conducted in Noida in accordance with the directions of the Commission.

**C) The Commission's view:**

- 2.1.8 The Commission has taken note of the objections / suggestions made by the stakeholders in this regard. The Commission has dealt with the issue of Tariff Hike in relevant chapters of this Order.

**CAG Audit:**

**A) Comments / Suggestions of the Public:**

- 2.1.9 Shri Devendra Tiger, Golden Federation of RWA's Greater Noida requested that CAG audit of NPCL must be done.
- 2.1.10 Shri Avadhesh Kumar, Chairman, Uttar Pradesh Rajya Vidyut Upbhoktha Parishad submitted that proposed hike by NPCL should not be accepted till the time CAG audit of all financial parameters is being done. He has further submitted that the power purchase cost of NPCL is also on the higher level.

**B) The Petitioner's response:**

- 2.1.11 The Licensee did not comment of the CAG audit. The Licensee further submitted that it has been proactively taking necessary action to arrange power through Long-Term PPAs (LT PPAs) in accordance with the various directions of the Commission issued from time to time.
- 2.1.12 The Licensee stated that as the Commission is aware that the Company entered into its first LTPPA for 25-years with M/s Dhariwal Infrastructure Limited (DIL)
-

for supply of 187 MW power under Section-62 of the Electricity Act, 2003. Further, the Commission vide Order dated April 21, 2016 approved the aforesaid LTPPA with DIL. The power supply had since then, commenced with effect from November 2016.

**C) The Commission's view:**

- 2.1.13 The Commission has taken note of the objections / suggestions made by the stakeholders in this regard. Further, the Commission observed that the Licensees have submitted the audited accounts for FY 2015-16. The Petitions of the Licensee were admitted only after the receipt of the above documents and the same is as per the provisions of the UPERC Distribution Tariff Regulation 2006, Distribution MYT Tariff Regulations, 2014 and in line with the Hon'ble APTEL order in the Appeal no. 121 of 2010 dated October 21, 2011. Further, the audit of the accounts for FY 2015-16 has been done by an independent auditor too.
- 2.1.14 As regards power purchase, the same has been discussed in the relevant chapters in this order.

**Regulatory Surcharge / Additional Surcharges**

**A) Comments / Suggestions of the Public:**

- 2.1.15 Shri S.P. Sharma, Chairman, Indian Industries Association – Greater Noida Chapter submitted that tariffs are decided on the basis of cost of power, expenditure, line losses and profit, then why additional surcharge is levied on the consumers. It is requested that additional surcharge should not be levied.

**B) The Petitioner's response:**

- 2.1.16 The Licensee submitted that Regulatory Surcharge and Delayed Payment Surcharge are being levied strictly in accordance with the provisions of the Commission's Tariff Order issued from time to time, latest being 1st August 2016.
- 2.1.17 This is to clarify that Additional Security Deposit is being levied strictly as per Clause 4.20 (e) of the Uttar Pradesh Electricity Regulatory Commission Electricity Supply Code 2005.
-



- 2.1.18 The Licensee submitted that barring transmission constraints and breakdowns, the Company provides full power supply to its consumers. Further, in order to maintain its T & D losses within the approved norms of 8%, the Company regulates power supply in the areas which are high loss prone and do not pay their bills timely and regularly.

**C) The Commission's view:**

- 2.1.19 The Regulatory Surcharge is allowed to recover the past unrecovered gaps. The Commission has determined the tariff in accordance to the Electricity Act, 2003 and UPERC Distribution Tariff Regulations, 2006, UPERC Distribution MYT Regulations, 2014, whichever is applicable. The issue of regulatory surcharge has been addressed subsequently in this Order.

**A) Comments / Suggestions of the Public:**

**True – Up for FY 2015-16:**

- 2.1.20 Shri R.S. Awasthi, Consumer Activist in the matter of True – Up for FY 2015-16 of NPCL had submitted the following:

**Power Purchase**

As per Draft Public Notice	Unit	Amount
UPERC approved total power purchase for FY 2015-16	1686.27 MU	852.86
Actual Purchase for FY 2015-16	1497.53 MU	655.32
Difference	188.74 MU	197.54
Difference in %	12.6	30.15

- 2.1.21 NPCL has proposed higher power purchase (quantum and cost) which was allowed by the Commission also, but in actual NPCL purchase 12.6 % less power (quantum) and resultant total power purchase cost reduced by 30 %. This completely highlights the lack of power purchase planning done by the Licensee and thereby putting additional tariff burden on the present consumers. The objector requests the Commission to allow the power purchase to NPCL in the coming MYT Petition only after proper load forecasting.

**Collection Efficiency**

- 2.1.22 NPCL also stated that their collection efficiency in FY 2015-16 was only 97.99% although their collection efficiency from FY 2011-12 to 2014-15 had been



approximately 99%, but NPCL did not provided any supporting reasons for decreasing collection efficiency.

#### **Audited accounts of FY 2015-16**

- 2.1.23 NPCL had not submitted audited account of FY 2015-16 and without audited account objector is not able to submit any objection/suggestion in true up petition.

#### **B) The Petitioner's response:**

- 2.1.24 The Licensee submitted that the Audited Balance Sheet for FY 2015-16 has been duly filed alongwith the MYT petition no. 1146 of 2016. The same is also available on the website of the Company since the date of issuance of Admittance Order dated 4th September 2017.
- 2.1.25 Further, during FY 2015-16, due to restricted transmission capacity provided by UPPTCL, the Company could not purchase power as per its projections which resulted into load shedding including in industrial area.

#### **C) The Commission's view:**

- 2.1.26 The Commission has taken note of the objections / suggestions made by the stakeholder in this regard. Further, the Licensees have submitted the audited accounts for FY 2015-16. The Petitions of the Licensee were admitted only after the receipt of the above documents and the same is as per the provisions of the UPERC Distribution Tariff Regulation 2006, Distribution MYT Tariff Regulations, 2014 and in line with the Hon`ble APTEL order in the Appeal no. 121 of 2010 dated October 21, 2011.
- 2.1.27 Regarding issue of power purchase the Commission has dealt in relevant chapter of this Order.

#### **Power Purchase Cost:**

##### **A) Comments / Suggestions of the Public:**

- 2.1.28 Shri R.S. Awasthi, Consumer Activist submitted that the power purchase plan submitted by NPCL for the MYT Period as the same is not in line with the provided power purchase planning methodology in the MYT Regulations, 2014.



Further, the Power Purchase Cost from M/s Dhariwal (Unit II) for the MYT Period as submitted in the MYT Petition is as follows:

Financial Year	2017-18	2018-19	2019-20
Fixed Charges (Rs./ unit)	2.23	2.19	2.14
Variable Charges (Rs./ unit)	2.12	2.22	2.33
Total Charges (Rs./ unit)	4.35	4.41	4.47
Transmission Charges (Rs. / unit)	0.89	0.95	1.03
Total Charges (Incl. Transmission Charges)	5.24	5.36	5.50

- 2.1.29 The Commission's vide its Order dated January 15, 2016 had approved the Power Purchase Agreement between NPCL and M/s Dhariwal for procurement of 187 MW power for a period of 25 years at a levelized tariff of Rs. 4.79/kwh. The relevant extract of the Order has been reproduced below:

Quote

*Point No.6*

*In this reply NPCL submitted the first year fixed charge of Rs. 2.14/ kwh and the term of PPA as 25 years. The levelized tariff has been calculated as Rs. 4.79/kwh. NPCL has mentioned that this levelized tariff is lower than the discovered levelized tariff of Rs. 5.73/kwh - Rs. 4.886/kwh under Case -1 bidding as adopted by the Commission vide order dated 24.6.2014 in petition no. 911 of 2013.*

Unquote

- 2.1.30 Also, NPCL has confirmed that there will be no upward revision in the project cost. The relevant extract of the Order has been reproduced below:

Quote

*Point No. 12*

*From the above discussions, it is evident that although NPCL has submitted a commitment on fixed charges for 25 years but has not submitted firm view on variable cost for the term of the PPA as promised by them during the hearing. The undertaking submitted by the generator is only for the period till fuel supply agreement is executed. In view of the fact that whole case of NPCL is based on the levelized tariff of Rs. 4.79/kwh (for the period of 25*



*years), it becomes necessary to firm up the fixed as well as the variable part of the tariff. The table showing fixed charges for 25 years and confirmation that there would be no upward revision in the project cost ensures sanctity of fixed charge. Similarly the component of variable charge also require to be as per the commitment of levelized tariff of Rs. 4.79/kwh for the period of 25 years except for the variation due to CERC escalation rates, over and above the escalation rates taken in calculation of levelized tariff of Rs. 4.79/kwh, which would be additionally allowed in variable charge.....*

Unquote

- 2.1.31 It is requested that the power purchase cost of NPCL must be scrutinized as it is not possible to establish that the levelized tariff for the complete term of PPA will be Rs. 4.79/kwh (at NPCL bus bar) as compared from the above table that power purchase cost is coming to be Rs. 5.24 / kWh, Rs. 5.36/ kWh & Rs. 5.50 / kWh for the MYT period respectively.
- 2.1.32 Further, the Commission must direct NPCL to submit the details of Tariff and establish that the levelized tariff for the 25 years will not exceed Rs. 4.79 / kWh (at NPCL bus bar).
- 2.1.33 It is further submitted that NPCL had filed business plan before the Commission for approval and in business plan they have proposed procurement of 200 MW Power from his sister concern M/s Dhariwal Infrastructure Ltd. As per objector knowledge, the proposed unit of Dhariwal is connected at Maharashtra STU, which means if NPCL procures power from proposed unit of Dhariwal then NPCL will pay STU charges of Maharashtra along with CTU charges of PGCIL and ultimately cost per unit will be too high and same can be verified from Table 19 of the business plan where NPCL has proposed 200 MW power form Dhariwal at Rs. 6.21 Rs. per kWh for FY 2018-19 and 6.35 Rs. per kWh for FY 2019-20. These power purchase cost are more than power purchase cost submitted by UPPCL for the same period.
- 2.1.34 It is submitted that the above same Generator M/s Dhariwal (Unit- I) has sold 150 MW power to MSETCL through PTC India Limited at Rs. 2.99 / kWh (Tariff including Trading Margin and at western region periphery). Even though, NPCL has proposed procuring at Rs. 6.21 from the same Generator M/s Dhariwal (Unit I).
-



- 2.1.35 It is requested that the proposed business plan of NPCL must be quashed and direction must be issued to NPCL for filing fresh business plan with procurement of power through competitive bidding.

**B) The Petitioner's response:**

- 2.1.36 The Licensee submitted that the Company has submitted its detailed reply on the Power Purchase Cost for the MYT period vide its letter no. P-77A/2017/041A dated 30<sup>th</sup> October 2017. It is pertinent to mention that the aforesaid letter is also available on the website of the Company.
- 2.1.37 Further, the fixed charges and variable charges have been incorrectly stated in the objection.

**C) The Commission's view:**

- 2.1.38 The Commission has taken note of the objections / suggestions made by the stakeholder in this regard. The Commission has dealt with the issue of Power Purchase Cost in relevant chapter of this Order. Regarding purchase of additional 200 MW power from Dhariwal Infrastructure Ltd. (DIL), it is clarified that the Commission has rejected the petition for approval of Long Term PPA between NPCL and DIL Unit I.

**Capital Expenditure:**

**A) Comments / Suggestions of the Public:**

- 2.1.39 Shri R.S. Awasthi, Consumer Activist submitted that the Commission is aware that the transmission network in the State is developed and maintained by UPPTCL and Investment in transmission network is charged to transmission tariff for UPPTCL.
- 2.1.40 The question arises that under what circumstances NPCL was allowed to invest around Rs. 220 Crore in Gharbara, R. C. Green, Pali and Surajpur for transmission network and in turn arbitrary and illegally overburdening consumers of NPCL. It is requested that NPCL must be directed to recover this amount from UPPTCL then the tariff of consumer of NPCL can be reduced by around Rs 0.87 / unit. This will be a huge relief to the consumer of NPCL.



**B) The Petitioner's response:**

- 2.1.41 The Petitioner submitted that the above capex had to be incurred by the Company since the then CMD of UPPCL/ UPPTCL informed GNIDA /Company that R C Green and Gharbara substations are required to be constructed at our own cost to enable the Company to get Open Access to serve the demand of the consumers of Greater Noida. This capex has since been approved by the Commission.

**C) The Commission's view:**

- 2.1.42 The Commission has taken note of the objections / suggestions made by the stakeholder in this regard. The matter of construction of Gharbara and RC Green Sub-stations by NPCL is sub-judice of the Commission and appropriate decision will be taken in the matter.

**T & D Losses:**

**A) Comments / Suggestions of the Public:**

- 2.1.43 Shri R.S. Awasthi, Consumer Activist submitted that the majority of NPCL network (around 60 to 70 %.) is on HT and NPCL usually invest 100 to 150 crore every year on extension/ up gradation or development of new network. It is submitted that NPCL distribution network is under - loaded and there is no problem of overloading on any of the feeders and thereby the T & D Losses should reduce in light of this heavy investment.
- 2.1.44 However, NPCL has proposed just opposite to it that is instead of reduction of T & D Losses they have proposed higher T & D Losses which shows that either figure of T & D Losses is cooked up or fraud. It is requested that the Commission should not allow this high investment in distribution network or should direct them to reduce their losses.
- 2.1.45 This also gives rise to a question whether these investments made by NPCL are ground reality or not. It is suggested that Commission should undertake the forensic audit of all the CAPEX / investment made by NPCL to safeguard the consumers of NPCL.





**B) The Petitioner's response:**

- 2.1.46 The Licensee submitted that the greater Noida Area, spread over 335 Sq Km, is a fast-developing township comprising industrial, urban and rural consumers. The load of the Company is growing @ CAGR of more than 10%. Therefore, the Company has to incur capex to develop distribution network to provide electricity connection in accordance with the provisions of the Electricity Act 2003. Despite servicing a peak load of more than 300 MW including rural demand of 118 villages, it has been able to contain its T&D losses around 8% which is the lowest in the State of UP and one of the lowest in the country.

**C) The Commission's view:**

- 2.1.47 The Commission has taken note of the objections / suggestions made by the stakeholder in this regard. The Commission has dealt with the issue of T & D losses in relevant chapter of this Order.

**O & M Expenses**

**A) Comments / Suggestions of the Public:**

- 2.1.48 Shri R.S. Awasthi, Consumer Activist submitted that NPCL's CAPEX is too high, therefore O & M expenses should not be more than 1.0 % whereas NPCL has charged very high O & M expenses. It is requested that Commission should direct to constitute Investigating Authority U/s 128 of EA, 2003 to conduct forensic audit of O & M expenses of NPCL.

**B) The Petitioner's response:**

- 2.1.49 The Licensee submitted that the O & M Expenses are commensurate with the operation and overall efficiency maintained by the Company. The O & M expenses incurred by the Company are most competitive vis-à-vis other Discoms both Government and private despite they are very big in size of operation. In any case, the O & M Expenses incurred beyond the norms are disallowed by Commission.

**C) The Commission's view:**

- 2.1.50 The Commission has taken note of the objections / suggestions made by the stakeholder in this regard. The Commission has dealt with the issue of O & M expenses in relevant chapter of this Order.
-



## **Fuel Cost Adjustment & Power Purchase (FCA)**

### **A) Comments / Suggestions of the Public:**

- 2.1.51 Shri R.S. Awasthi, Consumer Activist submitted that NPCL has already made submissions in the matter of FCA for the 1st, 2nd, 3rd & 4th quarter of the FY 2016-17 and their audited account their estimated power purchase cost has reduced by 0.03 Rs. p.u. thereby resulting in refund of 250 crore along with carrying cost of 12.50 % on the FCA to the consumers of NPCL.
- 2.1.52 It is humbly requested that Commission should immediately decide these petitions alongwith the ARR, so that the consumer may get their long lasting dues. This amount can also be adjusted in the regulatory assets of NPCL.
- 2.1.53 It is further submitted that due to lack of power from long term power purchase, M/s NPCL is purchasing power from M/s Dhariwal Industries Ltd. at a much higher rate than approved by the Commission. It is even much higher than the price discovered through bidding route.
- 2.1.54 Also, when Commission has taken a stand to cancel all MOU project in the State and has directed UPPCL and subsidiaries companies to purchase power only and only through bidding route as directed by Govt. of India. It is unable to understand why the Commission is providing preferential treatment to M/s NPCL to purchase power through MOU route from M/s Dhariwal which is also a sister concern to NPCL. It appears that Commission is not taking any interest neither directing to NPCL to reduce power purchase cost and forcing the consumers of NPCL to pay more.
- 2.1.55 It is also astonishing that they are purchasing the power of M/s Dhariwal at a price of more than Rs. 5.50 and the quantity of power purchase from M/s Dhariwal is much more then what they required for their distribution area and even then NPCL has proposed to sell this additional power at a rate of Rs. 3.50 /kwh. It seems that NPCL wants to get its sister concern M/s Dhariwal benefited from this additional purchase of quantum, resulting in loss of Rs. 2 / kWh which has to be paid by the consumers of NPCL without getting any additional benefit in reality because of the inefficiency in short sightedness of the Commission.
- 2.1.56 It can be observed from Table 22 of the Business Plan that NPCL is purchasing 10- 15% additional power as compared to its long-term power requirement for the entire MYT period and further selling this purchased additional long term
-



power at a rate much lower than the purchase price, the same trend can be observed in the True – Up of FY 2015-16, where NPCL has proposed to procure approx. 12 % additional power.

2.1.57 Hence, the objector requested the Commission that such additional long-term power purchase shall be disallowed and directs NPCL that any additional power requirement must be met through competitive bidding / market prevailing prices.

2.1.58 Further, Commission must immediately issue directions to not allow NPCL to trade this additional power at a cheaper rate.

**B) *The Petitioner's response:***

2.1.59 The Licensee submitted that the Company has saved Rs. 54 Cr through operating efficiencies during FY 2016-17 which have been duly adjusted in recovery of outstanding accumulated regulatory asset.

2.1.60 Further, in order to ensure reliable power supply, the Company is required to procure power on Long-term basis. Surplus power, if any, in certain time blocks in lean period is projected to be sold at the then prevailing market prices which may be higher or lower. We assure that the Company would make all possible efforts to optimise its power purchase costs.

**C) *The Commission's view:***

2.1.61 The Commission has taken note of the objections / suggestions made by the stakeholder in this regard. The Commission has dealt with the above issue in relevant chapter of this Order.

**Regulatory Assets**

**A) *Comments / Suggestions of the Public:***

2.1.62 Shri R.S. Awasthi, Consumer Activist submitted that It has come to the knowledge of objector that losses of M/s NPCL were much lower than what they claim to get the regulatory assets, eventually created by the Commission. It is requested that a thorough forensic enquiry should be constituted to look into the actual amount of regulatory assets already created by the Commission.



- 2.1.63 Further, it is requested to provide the actual carrying cost to NPCL instead of normative on loans and the regulatory assets.

**B) The Petitioner's response:**

- 2.1.64 The Licensees submitted that the regulatory asset and carrying cost have been claimed and approved by the Commission in accordance with the provisions of the Electricity Act 2003 and regulations framed thereunder.

**C) The Commission's view:**

- 2.1.65 The Regulatory Surcharge is allowed to recover the past unrecovered gaps. The Commission has determined the tariff in accordance to the Electricity Act, 2003 and UPERC Distribution Tariff Regulations, 2006, UPERC Distribution MYT Regulations, 2014, whichever is applicable. The issue of regulatory surcharge has been addressed subsequently in this Order.

**Procurement of Materials through Bidding Route**

**A) Comments / Suggestions of the Public:**

- 2.1.66 Shri R.S. Awasthi, Consumer Activist submitted that NPCL purchase all the material from the companies directly without any tender resulting in higher payout. It has come to the knowledge of the objector that some time even without the purchase of material the payments are made of the fraud bills. It is requested to constitute enquiry in the above matter.

**B) The Petitioner's response:**

- 2.1.67 The Licensees submitted that as per the procurement policy of the Company, procurement of material is done through competitive bidding and reverse auction basis. This was also informed to the Commission by our letter no. P-77A/ 2017/ 043 dated 30<sup>th</sup> Dec'16.
- 2.1.68 Further the Licensee has stated that Mr. Rama Shankar Awasthi in his objections has made allegations against the Company, which are defamatory and derogatory in nature. The allegation that "some time even without the purchase of material the payments is made of the fraud bills", is false, baseless and blatantly defamatory and derogatory in nature.



**C) The Commission's view:**

- 2.1.69 The Commission takes note of the submissions of the stakeholders. An independent Auditor has been appointed, with prior approval of the Commission, for audit of the NPCL's account to look into such activities. If the Auditor point out such discrepancies in its report, the same shall be dealt with accordingly by the Commission.

**Bad Debts**

**A) Comments / Suggestions of the Public:**

- 2.1.70 Shri R.S. Awasthi, Consumer Activist submitted that NPCL in his ARR has shown that their collection efficiency is more than 99 % and same was shown even in the earlier ARR petition. But they have claimed bad debts as 2 % of the ARR. They have never shown that whether they have recovered any amount from bad and doubtful debts. M/s NPCL has never submitted the list of bad debts in the Commission. It is humbly requested that M/s NPCL is directed to provide list of bad and doubtful debts.
- 2.1.71 The objector is unable to understand that if the recovery is around 99 % every year then how 2% of bad and doubtful debts are created. This shows the ambiguity in the ARR petition.

**B) The Petitioner's response:**

- 2.1.72 The Licensee submitted that the Commission considers 100% collection of the projected revenue and bad debts are claimed by the Company on actual basis which are generally close to 1.50% of revenue.
- 2.1.73 In any case, the bad debts incurred beyond the norms are disallowed by Commission.

**C) The Commission's view:**

- 2.1.74 The Commission has taken note of the objections / suggestions made by the stakeholder in this regard. The Commission has dealt with the above issue as per the provisions of the UPERC Distribution Tariff Regulation 2006, Distribution MYT Tariff Regulations, 2014 and the same has been discussed in the relevant chapter of this Order.



**Other General Issues:**

**A) Comments / Suggestions of the Public:**

- 2.1.75 Shri Devendra Tiger, Golden Federation of RWA's Greater Noida submitted that NPCL is levying various charges like surcharge, additional security charge, DPS charge, charges for new connection are very high and the same are unjustified.
- 2.1.76 Shri S.P. Sharma, Chairman, Indian Industries Association – Greater Noida Chapter submitted that electricity safety awareness program must be conducted by Discoms on regular interval. It is further submitted that the meters are running fast.

**B) The Petitioner's response:**

- 2.1.77 The Licensees submitted that the Company is recovering charges for new connection strictly in accordance with the rates and provisions of the Cost Data Book 2016 approved by the Commission.
- 2.1.78 Further, the cost of 35 mtr cable is recovered from the consumers for new connection in accordance with the provisions of the Cost Data Book, 2016 approved by the Commission.
- 2.1.79 NPCL has been installing meters of high quality and accuracy which are also sample tested at its NABL accredited Meter Testing Lab. Hence, the observation is vague and frivolous.
- 2.1.80 It is further submitted that as and when any complaint is received, prompt action is taken to redress the same.
- 2.1.81 The Company has been conducting such electricity safety awareness program on a periodical basis and especially at the beginning and during rainy season for rural and urban consumers. The safety tips are also published at the website of the Company i.e. [www.noidapower.com](http://www.noidapower.com).

**C) The Commission's view:**

- 2.1.82 The Commission has taken note of the objections / suggestions made by the stakeholder in this regard. The Commission would like to point out that Electrical Safety is of utmost importance and the Licensee must take utmost care and



precautions for the same. Further, the Licensee must conduct electricity safety awareness program in its License areas regular intervals to avoid any electrical accidents.

Further, the Licensee must comply with quality of meter and material and the cost of materials as per provisions of Electricity Supply Code 2005 and its amendments and the UPERC Cost Data Book 2016 respectively.



### **3. TRUE-UP FOR FY 2015-16**

#### **3.1 INDEPENDENT AUDIT FOR FY 2015-16**

- 3.1.1 As regard with the demand of the stakeholders for a CAG Audit or any third-party audit, the Commission in its Tariff Order for FY 2014-15 had directed the Petitioner that from FY 2014-15 onwards it should get its accounts audited by an independent auditor. Such auditor should be appointed with the prior approval of the Commission. Apart from auditing of the financial accounts, the power purchase and the energy sales of the Licensee should also be audited on the regular basis so that deformities if any can be identified and removed. Accordingly, an independent auditor M/s. S. N. Kapur and Associates Chartered Accountants were appointed, who under the supervision of the Commission undertook the audit of the financial accounts of the company for FY 2015-16 along with audit of power purchase and energy sales for FY 2015-16 of the Petitioner.
- 3.1.2 The independent auditor submitted the audit report on August 29, 2017 with the following findings:
- As per audit report, the rates approved for purchase of power in FY 2015-16 was Rs. 5.03 / kWh whereas the actual purchase was made at a rate of Rs. 4.38 / kWh which resulted in saving of Rs. 87.93 Crore. NPCL has purchased power from the traders at a rate of Rs. 4.27 / kWh and power from renewable sources at a rate of Rs. 6.68 / kWh.
  - As per audit report, NPCL has purchased capital asset of Rs. 143.94 Crore.
  - As per audit report the Commission had approved O&M expense of Rs. 46.80 Crore for NPCL for FY 2015-16 while the actual O&M expense is to the tune of Rs. 57.70 Crore excluding employee cost capitalized of Rs. 6.90 crores.
- 3.1.3 The Commission takes cognizance of the comments of the independent auditor and the same have been considered while doing the true-up of FY 2015-16.
-





### 3.2 SALES APPROVAL:

- 3.2.1 The energy sales based on actual audited accounts for FY 2015-16 represent growth of 5.14 % over FY 2014-15 (1309.89 MUs). The Commission approves the actual energy sales based on the audited accounts at 1377.16 MUs.
- 3.2.2 The category-wise energy sales approved for FY 2015-16 is shown in the Table below:

**Table 3-1: CATEGORY WISE SALES FOR FY 2015-16 – APPROVED (MU)**

Sl. No.	Category	Approved vide T.O. 18/06/2015	True-up Petition	Approved upon Truing Up
1	LMV-1: Domestic Light, Fan & Power	269.81	253.36	253.36
2	LMV-2: Non-Domestic Light, Fan & Power	31.62	26.39	26.39
3	LMV-3: Public Lamps	19.10	30.00	30.00
4	LMV-4: Institutions	19.37	13.39	13.39
5	LMV-5: Private Tube Wells	16.38	28.77	28.77
6	LMV 6: Small and Medium Power	58.55	54.66	54.66
7	LMV-7: Public Water Works	17.12	14.73	14.73
8	LMV-8: STW and Pumped Canals	0.31	0.31	0.31
9	LMV-9: Temporary Supply	34.84	39.30	39.30
10	HV-1: Non-Industrial Bulk Power	119.34	97.54	97.54
11	HV-2: Large and Heavy Power	964.92	818.71	818.71
	<b>Total</b>	<b>1,551.37</b>	<b>1,377.16</b>	<b>1,377.16</b>

- 3.2.3 The category-wise Number of Consumers, Connected Load and energy sales approved / trued-up for FY 2015-16 are summarized in the Table below:

**Table 3-2: CATEGORY WISE CONSUMERS, LOAD & SALES – APPROVED**

Sl. No.	Category	No. of Consumers	Connected Load (MW)	Sales (MUs)
1	LMV-1: Domestic Light, Fan & Power	62,793.00	233.54	253.36
2	LMV-2: Non-Domestic Light, Fan & Power	2,792.00	19.03	26.39
3	LMV-3: Public Lamps	20.00	11.45	30.00
4	LMV-4: Institutions	342.00	5.19	13.39
5	LMV-5: Private Tube Wells	1,175.00	5.65	28.77
6	LMV 6: Small and Medium Power	2,113.00	47.00	54.66
7	LMV-7: Public Water Works	185.00	6.30	14.73
8	LMV-8: STW and Pumped Canals	1.00	0.13	0.31
9	LMV-9: Temporary Supply	913.00	30.33	39.30



Sl. No.	Category	No. of Consumers	Connected Load (MW)	Sales (MUs)
10	HV-1: Non Industrial Bulk Power	127.00	73.04	97.54
11	HV-2: Large and Heavy Power	533.00	275.87	818.71
	<b>Total</b>	<b>70,994</b>	<b>707.53</b>	<b>1,377.16</b>

### 3.3 DISTRIBUTION LOSSES:

- 3.3.1 Petitioner submitted that the actual Distribution loss for FY 2015-16 as per audited accounts was 8.04% as compared to the approved loss level of 8.00%
- 3.3.2 Petitioner submitted that the Company stands out in containing T&D losses at around 8% by devising techno-social solutions, drawing community solidarity (which also targets at inclusive growth and changes the landscape of distribution of electricity), in-spite of high voltage politically motivated farmer agitations, little administrative support, tardy legal procedure and increasing LT load.
- 3.3.3 Further the Petitioner added that upon signing of connectivity agreement with UPPTCL for 132kV Surajpur and 220kV RC Green Substation, a deviation account is prepared by UPSLDC at 33 kV levels. Therefore, the EHV losses between 400 / 220kV Pali Substation till 132/33 kV Surajpur and 220/33 kV R C Green Substation are not considered for the purpose of energy accounting and has not been provided / claimed in the ARR petition.
- 3.3.4 Regarding the segregation of interstate and intrastate losses for FY 2015-16, the Petitioner submitted that during FY 2015-16, the power purchase agreements signed by the Company had different delivery points i.e. NR-Bus, NR withdrawal point or NPCL bus. As a result, the transmission losses were different for different agreements. The transmission losses varied from 0.00% - 3.60%. However, the Inter-state & Intra- State transmission losses for FY 2015-16 were 2.21% & 3.60 % respectively.

#### Commission's Analysis

- 3.3.5 The actual Distribution Losses of the Petitioner are more than the losses approved by the Commission in its Tariff Order for FY 2015-16. Considering the submissions made by the Petitioner, the Commission for the purpose of Truing up approves the Distribution Losses as approved in the Tariff Order for FY 2015-16, as shown in the Table below:



**Table 3-3: DISTRIBUTION LOSSES AND EHV LOSSES APPROVED BY THE COMMISSION FOR FY 2015-16**

Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon Truing Up
Distribution Loss (%)	8.00%	8.04%	8.00%
EHV Losses (%)	0.60%	0.00%	0.00%

### 3.4 ENERGY BALANCE:

- 3.4.1 The Commission in the above sections has discussed about truing-up of energy sales and distribution losses. Based on above trued-up energy sales and distribution losses, the approved power purchase requirement and the energy balance for FY 2015-16 is as shown in the Table below:

**Table 3-4: ENERGY BALANCE APPROVED BY THE COMMISSION FOR FY 2015-16**

Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon Truing Up
Energy Sales (MU)	1,551.37	1,377.16	1,377.16
Distribution Loss %	8.00%	8.04%	8.00%
EHV Losses	0.60%	0.00%	0.00%
Distribution Loss including EHV losses (MU)	145.08	120.36	119.75
<b>Energy Purchase (MU)</b>	<b>1,696.45</b>	<b>1,497.53</b>	<b>1,496.92</b>

### 3.5 POWER PURCHASE QUANTUM & COST:

- 3.5.1 Based on the above trued-up energy balance for FY 2015-16, the power purchase requirement as worked out by the Commission is 1,496.92 MU.
- 3.5.2 The majority of power was procured by NPCL on short term basis through Open Access Route / Bilateral Trading. The details of power purchase quantum and power purchase cost approved vide Tariff Order dated June 18, 2015 and actually incurred by NPCL for FY 2015-16 is provided in the Table below:



**Table 3-5: ENERGY BALANCE APPROVED BY THE COMMISSION FOR FY 2015-16 AND POWER PURCHASE COST AS SUBMITTED BY THE PETITIONER FOR FY 2015-16**

Item	Approved vide T.O. 18/06/15			True-up Petition		
<b>Retail Sales (MUs)</b>	<b>1,551.37</b>			<b>1,377.16</b>		
<b>Losses</b>	<b>8.55%</b>			<b>8.04%</b>		
<b>Power Purchase</b>	<b>1,696.45</b>			<b>1,497.53</b>		
<b>Sources of Power Purchase</b>	<b>Energy</b>	<b>Rs. / kWh</b>	<b>Costs</b>	<b>Energy</b>	<b>Rs. / kWh</b>	<b>Costs</b>
Long Term Power	596.29	4.82	287.31			
Power Purchase from Traders	998.37	3.87	386.29	1,510.44	3.87	583.85
Power Purchase from RE	101.79	7.91	80.51	1.77	6.68	1.18
Unscheduled Interchange	0.00	0.00	0.00	-14.68	-1.47	2.15
<b>Sub-Total</b>	<b>1696.45</b>	<b>4.45</b>	<b>754.11</b>	<b>1497.53</b>	<b>3.92</b>	<b>587.18</b>
Underpaid / (Overpaid) Power purchase expenses for previous years			12.22			12.22
PGCIL charges			86.54			26.29
UPPTCL charges						29.63
<b>Total Transmission charges</b>			<b>86.54</b>			<b>55.92</b>
<b>Total Power Purchase</b>	<b>1696.45</b>	<b>5.03</b>	<b>852.87</b>	<b>1497.53</b>	<b>4.38</b>	<b>655.32</b>

3.5.3 The brief detail about the power purchase as submitted by the Petitioner is provided below:

- The total quantum as per Audited Annual Accounts for FY 2015-16 is 1497.53 MUs including 1510.44 MUs of power purchase from Short term Sources and 1.77 MUs of power purchase from Renewable Energy Sources and Captive generation.
- Actual landed cost of power purchased from Open Access is Rs. 3.87/ kWh as against the approved rate of Rs. 4.22/ kWh approved in Tariff Order for FY 2015-16.
- The Petitioner has submitted that it has incurred an amount of Rs. 2.15 Crore against net under-drawl of 14.68 MUs on account of variation in actual drawl and scheduled power i.e. on account of Unscheduled Interchange (UI) during FY 2015-16.



- The Commission in its Tariff Order for FY 2015-16, Trued-up the BST payable to UPPCL for FY 2012-13. The same has been considered while approving the ARR for FY 2015-16. Accordingly, the Company has claimed an amount of Rs. 12.22 Cr pertaining to UPPCL BST Arrear for the FY 2012-13 for True-up in FY 2015-16 based on actual drawl during the said years.
- 3.5.4 Further, the petitioner has submitted that the Commission, vide Tariff Order for FY 2016-17 dated August 1, 2016 has trued up UPPCL's BST for FY 2013-14 and considered the same in the ARR approved for FY 2016-17. However, as per Accounting Standards laid by ICAI (which is being mandatory for the Company to follow as per Section-211(3c) of the Companies Act 2013) and as per Regulation 1.3.1.2 of Distribution Tariff Regulations, the petitioner has accounted the UPPCL's BST arrears for the FY 2013-14 amounting to Rs. 9.76 Crore in its audited accounts for FY 2015-16 only. The petitioner further submits that in view the of ARR approved by the Commission for FY 2016-17, the petitioner shall claim the BST arrears during true – up of ARR for FY 2016-17.
- 3.5.5 The petitioner further submitted that the transmission charges as per Audited Accounts for FY 2015-16 are Rs. 55.92 Crore as against Rs. 86.54 Crore approved by the Commission. These charges are being paid on the baxisis of regional charges determined by CERC and State transmission charges being determined by the Commission from time to time.
- 3.5.6 In view of the above, a total transmission charge of Rs. 55.92 Crore has been considered for the purpose of Truing-up of ARR for FY 2015-16. Accordingly, the total power purchase cost incurred in FY 2015-16 is Rs. 655.32 Crore has been claimed by the Petitioner in the True up Petition.
- 3.5.7 The Commission observes that the UPPCL has stopped supplying power to the Petitioner w.e.f. February 12, 2014 sighting Hon'ble Allahabad High Court's Order dated July 1, 2013, therefore, the Petitioner's requirement of power has been met from Open Access Market. During FY 2015-16, the Petitioner has procured 1510.44 MUs from Short Term Sources at an average cost of Rs. 3.87/ kWh which is less than the average cost approved by the Commission in its Tariff Order dated June 18, 2015. Further, the average power purchase cost for power procured from Open Access of Rs. 3.87/ kWh and is competitive from all India average power purchase rate of Rs. 4.13 / kWh transacted under bilateral trade during FY 2015-16 (Source – Report on Short-term Power market in India, 2015-



16 by CERC). Hence, the Commission approves the actual cost power purchased from Short Term Sources actual at average rate of Rs. 3.87 / kWh.

3.5.8 The petitioner submitted that 1.35 MU solar power has been procured from GNIDA and 0.03 MU solar power generated from the solar generation plants at rooftops of its office buildings. Apart from above, the Company has also granted several connections under the net-metering policy approved by the Hon'ble Commission in its Roof-top Solar PV Regulation 2015. The Company has entered into Dual Supply Grid Connected arrangement with its consumers who have installed rooftop solar plants aggregating to 7.47 MWp capacities. The Generation from such rooftop during the year has been 2.38 MUs. Accordingly, NPCL has met its RPO Obligation to the extent of 3.76 MU for FY 2015-16.

3.5.9 In the Tariff Order dated June 18, 2015 the Commission had approved the power purchase quantum from renewable energy sources as 101.79 MU in FY 2015-16. However, the Petitioner has submitted to have procured only 1.77 MU from renewable energy sources in FY 2015-16. The Commission in its deficiency asked the Petitioner to submit an appropriate justification for not procuring power from renewable sources to comply with Renewable Purchase Obligation (RPO) and the status of RPO compliance from FY 2013-14 to FY 2016-17 (till November). The Petitioner, in its reply, submitted that renewable sector is at a very nascent stage in the country. The Company has been making following efforts to procure renewable power (both solar and non-solar):

- i. Bilateral discussions with various power trading companies / generators / potential generators;
- ii. Advertisement in widely published all India edition of leading national newspapers such as The Economic Times and The Times of India on 15.10.2014, 16.12.2014, 25.03.2015, 17.07.2015, 06.10.2015, 02.12.2015, 15.02.2016, 31.08.2016 and 23.12.2016;
- iii. Advertisements regularly on the Company's website.

3.5.10 Despite the fact that the Petitioner has been making all out efforts to purchase the renewable power, it has not received requisite offers apparently due to lack of generation capacities. Meanwhile, on February 9, 2015, the Company signed a long term PPA with Greater Noida Industrial Development Authority (GNIDA) for procurement of 1.0 MWp solar power from its Plant at Kasna for a period of

---



10 years w.e.f. March 1, 2015 @ Rs. 7.06 per kWh. The aforesaid PPA has been approved by the Commission vide order dated July 14, 2015. The power supply has commenced since March 1, 2015. The Petitioner further submitted that the Company has decided to set-up 8-10 MW Ground Mounted Solar PV Plant in Greater Noida.

3.5.11 The Petitioner further submitted that Greater Noida Area does not have any major renewable energy power generation plants except some small captive solar plants. The Company had contacted several waste management / sugar co-gen plants in and outside Uttar Pradesh to procure renewable power, however, either, their capacities are already tied-up with their respective Distribution Licensees or they are not able to supply due to non-availability of Open Access. Therefore, such sources were not available for the Company. Nevertheless, the Company is in discussion with GNIDA to procure power from its upcoming waste management plant in Noida/ Greater Noida to fulfill its Renewable Power Obligations (RPO).

3.5.12 Petitioner further submitted that, the Company is continuously exploring opportunities to procure RE Power within the prescribed tariff as per the UPERC Regulations. The Status of RP Obligation submitted by the petitioner as on 31st October, 2016 is provided below:-

**Table 3-6: STATUS OF RPO COMPLAINE AS SUBMITTED BY DISTRIBUTION LICENSEE**

Sl. No.	Financial Year	RPO Compliance Target	RPO Compliance Achieved	RPO Compliance Achieved (%)
<b>1</b>	<b>FY 2016-17 (Till Nov'16)</b>			
a)	Solar	10.51	1.82	17.3%
b)	Non Solar	52.56	7.70	14.6%
	<b>Total</b>	<b>63.07</b>	<b>8.61</b>	<b>13.7%</b>
<b>2</b>	<b>FY 2015-16</b>			
a)	Solar	13.77	1.77	12.9%
b)	Non Solar	68.86	-	0.0%
	<b>Total</b>	<b>82.63</b>	<b>1.77</b>	<b>2.1%</b>
<b>3</b>	<b>FY 2014-15</b>			
a)	Solar	13.10	0.15	1.1%
b)	Non Solar	65.49	13.85	21.1%
	<b>Total</b>	<b>78.59</b>	<b>14.00</b>	<b>17.8%</b>
<b>4</b>	<b>FY 2013-14</b>			
a)	Solar	11.29	0.02	0.2%
b)	Non Solar	56.43	5.12	9.1%
	<b>Total</b>	<b>67.72</b>	<b>5.14</b>	<b>7.6%</b>



3.5.13 The Commission has observed that inspite of the efforts being made by the Petitioner sufficient renewable energy is not being procured by the Petitioner to fulfill its RPO. The Petitioner should ensure that the RPO is met in the future years. The Petitioner is also directed to submit the source wise (generating source or Renewable Energy Certificate) detailed action plan to fulfill its RPO for future years. For the purpose of Truing up the Commission has approved the actual power procured through Renewable Energy sources.

3.5.14 The summary of power purchase cost as approved by the Commission for FY 2015-16 is as shown in the Table below:

**Table 3-7: POWER PURCHASE COST AS APPROVED BY THE COMMISSION - FY 2015-16**

Particulars	Approved upon Truing Up		
Retail Sales (MUs)	1,377.16		
Losses	8.00%		
	<b>Energy</b>	<b>Rs./kWh</b>	<b>Costs</b>
<b>Power Purchase</b>	<b>1496.92</b>	<b>3.92</b>	<b>586.94</b>
Underpaid / (Overpaid) Power purchase expenses for previous years			<b>12.22</b>
PGCIL charges			<b>26.29</b>
UPPTCL charges			<b>29.63</b>
<b>Total Transmission charges</b>			55.92
<b>Total Power Purchase</b>	<b>1496.92</b>	<b>4.38</b>	<b>655.08</b>

3.5.15 The Commission has approved 1496.92 MU of power purchase for FY 2015-16 with Distribution loss of 8.00% and the transmission charges for UPPTCL and PGCIL is approved at Rs. 29.63 Crore and Rs. 26.29 Crore respectively. Accordingly, the approved total power purchase cost upon truing up is Rs. 655.08 Crore for FY 2015-16.

### **3.6 OPERATION & MAINTENANCE (O&M) EXPENSES:**

3.6.1 Operation and Maintenance (O&M) expenses comprise of Employee related costs, Administrative and General (A&G) Expenses, and Repair and Maintenance (R&M) expenditure.

3.6.2 The Petitioner submitted that the Commission in Tariff Order dated June 18, 2015 had approved the O&M expenses at Rs. 46.80 Crore for FY 2015-16. The actual O&M expenses as per Audited Annual Accounts for the FY 2015-16 other than Statutory / Regulatory Expenses is Rs. 57.70 Crore.





3.6.3 The Petitioner submitted that the Commission has been approving the O&M expenses on normative basis in accordance with the Distribution Tariff Regulations, 2006, irrespective of the actual expenses incurred by it. However, for FY 2015-16 the Petitioner has requested the Commission to allow O&M expenses based on actual as per Audited Annual Accounts due to following reasons:

- a) Increase on Minimum wages by 30-35%: Under the Minimum Wages Act, 1948, the Government of U.P. revises the minimum wages twice in a year i.e. with effect from April and October of the year. In pursuance of the same, U.P. Government during FY 2013-14 vide notification no. 2848-77/Enforcement-(D.A.)/13 dated October 3, 2013 and no. 840-71/Enforcement-(D.A.)/15 and dated 24th March, 2015 has revised the minimum wages in the range of 30-35%.

The wages applicable as on April 1, 2015 were higher by 30-35% as compared to wages prevailing on April 2013. Thus, the wages applicable for full year i.e. FY 2015-16 were significantly higher as compared to the same applicable during FY 2013-14. Further the Petitioner submitted that the minimum wages has a direct and substantial impact on most of the components of O & M expenses e.g. breakdown gang, security charges, job costing of various repair assignments. All labour class of lower cadre staff are being governed by minimum wages which will have a cascading effect on the senior personnel as well.

Further the Petitioner also submitted that as per Distribution Tariff Regulations, 2006, the Commission has been allowing O&M Expenses on normative basis i.e. weighted average of WPI and CPI in the ratio of 60:40 which for FY 2015-16 works out to only 1.40%. It further stated that such inflationary allowance for the purpose of O & M expenses is highly insufficient to approve the O & M expenses of the Company when compared with such substantial and significant increase in minimum wages.

In addition to above the Petitioner submitted that all individuals, associations, partnership, body corporates, companies etc. are bound by the provisions of Minimum Wages act 1948 and the Company has no option but to comply with the same. Therefore, as per clause 4.3.5 of the Distribution



Tariff Regulations, 2006, the changes in minimum wages is nothing less than changes in law and the impact of the same should be approved on actuals.

- b) Incremental O & M Expenses @ 2.5 % are inadequate: The incremental O & M expenses for the financial year, if capped @ 2.5% of capital addition, would be grossly inadequate and would not be commensurate with the volume of the business. To illustrate, the Annual Maintenance Contract (AMC) cost of IT assets are ranging from 12.50% to 15.00% and on office equipment, it is generally @ 10%. Further the Petitioner stated that as the Commission is aware that the Petitioner is a process driven and IT-savvy company and it believes in automating most of its processes with least manual intervention. All these initiatives not only involve lots of efforts on implementation side but also costs heavily on the maintenance of the same for the ultimate convenience and benefit of the consumer only. Further the Petitioner added that apart from this, the R & M expenses would tend to go up with the ageing of the assets and fast obsolescence of the technology and may increase many folds in power deficit scenario due to increased wear & tear of electrical equipment in distribution system owing to frequent operation for load shedding, power cuts, tripping etc.
- c) Other Cost Drivers: Clause 4 to Regulations 4.3 of the Distribution Tariff Regulations 2006 states as under:

*"4. The O&M expenses shall be brought to an efficient level i.e. in equivalence with similarly placed efficient utilities. The Hon'ble Commission may fix norms based on the circuit kilometers of distribution lines and number of bays in substation and such other parameters, as may be determined by the Hon'ble Commission in due course of time."*



3.6.4 The Petitioner submitted that the Commission, in its various Orders, has time and again acknowledged the performance standards of the Petitioner and also in its Order dated September 1, 2008 observed that NPCL is the best performing utility in U.P. Having regard to observation of the Commission, it has been striving hard to control and optimize its O&M Expense primarily keeping the consumers interest in view. Petitioner submitted that the FOR-Model Regulations for Multi Year Distribution Tariff provides for benchmarking the O&M Expenses of any Distribution Utility with its peers in the same State or outside State. The Commission in its Tariff Order dated October 14, 2010 has mentioned as follows:

*“22 (j) In relative analysis, performance parameters of other Distribution Licensees within the same state or in other states, shall be considered by the Commission to estimate norms.”*

3.6.5 The Petitioner submitted that based on the above, the Commission in its Tariff Order dated October 14, 2010 had directed it to conduct a study to benchmark its O&M expenses and it has accordingly appointed ICRA Management Consultancy Services Private Limited to conduct the study after conducting competitive bidding and prior approval of the Commission. The Petitioner submitted that based on the study conducted, it is no more feasible to sustain the existing low cost operation without compromising with service and safety standards. Therefore, the denial of justified expenses allowance to the Company would jeopardize the operational efficiency achieved by it over past 23 years.

3.6.6 There is an urgent need for imminent allocation of higher O&M Cost to enable the Company to maintain and improve upon the service standards and prepare itself for growing requirement of the consumers servicing. The petitioner further submitted that all expenses have been duly audited by Statutory Auditors and approved by the Board of Directors of the Company. These expenses are allowed in full not only in the Companies Act, 1956 but also in the Income Tax Act, 1961.



3.6.7 The Petitioner submitted that its O&M Expenses are low as compared to other Distribution Utilities of U. P. as well as Discoms of other States. The petitioner submitted that it has become imperative to take additional and timely efforts to meet the upcoming demand growth in the area and to maintain a reliable and efficient power supply and it has already started initiative in this regard. Therefore, it has requested to allow the O&M expenses in full as per audited accounts for FY 2015-16.

- a) Capitalization of Employee Cost: The Petitioner has capitalized an amount of Rs. 6.90 Crore out of the total employee cost of Rs. 27.96 Crore incurred during FY 2015-16, as per past practice duly approved by the Commission. In brief, for the purpose of capitalization of employee costs, the Company at the time of execution of project, records actual man hours spent by each engineer/ executive into the system / SAP Software. These hours are then matched with the cost per hour of that employee by the software itself and actual employee cost so incurred, is capitalized along with the specific project. Further the petitioner added that the entire process of its project/financial accounting is through SAP, and there is least manual intervention in computation of expenses to be capitalized.

Further the Petitioner added that these man-hours and cost is duly verified by the statutory auditors of the Company in detail and is approved by the Board of directors of the Company subsequently.

In view of the above, the Petitioner requested the Commission to approve the O&M expenses at Rs. 57.70 Crore for FY 2015-16 based on its audited annual accounts.

#### **Commission's Analysis:**

3.6.8 The Clause No. 4.3 of the Distribution Tariff Regulations, 2006 stipulates:

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

*The O&M expenses comprise of employee cost, repairs & maintenance (R&M) cost and administrative & general (A&G) cost. The O&M expenses for the base year shall be calculated on the basis of historical/audited costs and past trend during the preceding five years. However, any abnormal variation during the preceding five years shall be excluded. For determination of the*

---



*O&M expenses of the year under consideration, the O & M expenses of the base year shall be escalated at inflation rates notified by the Central Government for different years. The inflation rate for above purpose shall be the weighted average of Wholesale Price Index and Consumer Price Index in the ratio of 60:40. Base year, for these regulations means, the first year of tariff determination under these regulations.*

*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 4.3 (1)..."*

- 3.6.9 The Commission in its deficiency note asked the Petitioner to submit the reconciliation of the O&M Expenses with the cost as per the audited accounts. The Petitioner in its reply submitted the reconciliation of the O&M Expenses claimed in the Petition with the audited accounts as shown in the Table below:

**Table 3-8: RECONCILIATION OF O&M EXPENSES AS SUBMITTED BY PETITIONER FOR FY 2015-16**

Sl. No.	Description	Amount (Rs. Crore)	Reference
1	Employee cost as shown in Audited Accounts for FY 2015-16	20.12	Note-25 of Audited Accounts
2	Other Expense as shown in Audited Accounts for FY 2015-16	56.49	Note-28 of Audited Accounts
3	<b>Total Operating Expenses as per Audited Accounts</b>	<b>76.61</b>	
4	<b>Less: Items dealt with separately in ARR as per Distribution Tariff Regulations, 2006</b>		
5	Bad debts written off & provision thereof	13.73	Note-28 of Audited Accounts
6	Loss on sale of Fixed Assets	0.40	Note-28 of Audited Accounts
7	CSR Expense	2.57	Note-28 of Audited Accounts
8	Expenses on Regulatory Compliance	2.23	RTF S-9 of True-up Petition
9	<b>O&amp;M Expenses as per True-up Petition</b>	<b>57.68</b>	



- 3.6.10 The Commission in the previous years has been allowing the O&M expenses as per the Distribution Tariff Regulation, 2006 as amended from time to time. As evident from the above, the O&M expenses allowed as per the Distribution Tariff Regulations, 2006 covers the O&M expenses incurred by the Licensee for the existing assets as well as new assets added during the year. The high O&M expenses on the IT assets and the office equipments as cited by the Petitioner, forms the small portion of the Gross Fixed Assets
- 3.6.11 The Commission is of the view that if the O&M expenses are allowed on the basis of actual O&M expenses as suggested by the Petitioner, there will be no sanctity of fixation of norms in Tariff Regulations. As per the Distribution Tariff Regulations, some of the elements of ARR are considered on normative basis and the actual expenses under some elements may be higher as compared to approved expenses, while the actual expenses under some elements may be lower as compared to approved expenses.
- 3.6.12 Hon'ble APTEL in its Judgment dated June 2, 2016 in the matter of NPCL Vs. UPERC has held that normative approach has to be followed while allowing O&M expense. The relevant extract of the said Judgment has been provided below.
- "The State Commission in the Impugned Tariff Order has allowed O&M expenses based on norms as per the provisions of the Distribution Tariff Regulations which has been followed by it in its earlier Tariff orders. We do not find any infirmity in this approach followed by the State Commission."*
- 3.6.13 Therefore, as per the reasons stated above, the Commission has allowed the O&M expenses as per the norms specified in the Distribution Tariff Regulation, 2006 as amended from time to time as detailed below.
- 3.6.14 In accordance with the Clause No. 4.3.1 of Distribution Tariff Regulations, 2006 the net O&M expenses would be computed based on Inflation Index over FY 2014-15 trued-up O&M expenses for FY 2015-16. The applicable inflation rate as per weighted average Inflation Index as computed by the commission is 1.41% for FY 2015-16 as given in the Table below:
-



**Table 3-9: INFLATION INDEXES FOR FY 2015-16**

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

3.6.15 The gross O&M expenses also include additional O&M expenses at 2.50% capitalization of assets in the preceding year. The capitalized assets in the preceding year include assets handed over by GNIDA and UPSIDC free of cost in the FY 2014-15. These assets have been considered on the basis of values declared by respective authorities. The Commission has also gone through the audited accounts of NPCL wherein, the value of those assets is ascertained by the auditor. Further the audited accounts mention that the assets have been handed over for maintenance purpose only while the ownership is yet to be transferred. Accordingly, the Commission has considered the additional O&M expenses for these assets to be allowed for O&M purposes only. Any other impact on other parameters like depreciation, capital expenditure, capitalization etc. is not being allowed till the company takes ownership of the assets.

3.6.16 Based on the above, the computation of O&M expenses Trued-up for FY 2015-15 is as shown in the Table below:

**Table 3-10: O&M EXPENSES FOR FY 2015-16 AS APPROVED BY THE COMMISSION (Rs. Crore)**

Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon Truing Up
Total additions to Fixed Assets	241.55	57.70	217.51



Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon Truing Up
Less: Assets Retired/Scrapped	3.10		2.25
Net Addition to Fixed Assets	<b>238.45</b>		<b>215.26</b>
Preceding Year Gross O&M	39.26		39.26
Incremental O&M @ 2.5%	5.96		5.38
Inflation Index Applicable	4.02%		1.41%
O&M Expenses escalated	<b>40.84</b>		<b>39.82</b>
<b>Total O &amp; M expenses</b>	<b>46.80</b>	<b>57.70</b>	<b>45.20</b>

### 3.7 STATUTORY & OTHER RELATED EXPENSES:

- 3.7.1 The Petitioner has claimed statutory and other related expenses of Rs. 2.23 Crore as per its audited accounts as against the approved statutory and other related expenses of Rs. 2.46 Crore for Truing up of ARR for FY 2015-16. These expenses are over and above the expenses incurred on fees and other UPERC related expenses. The Petitioner has requested to allow the same.

#### Commission's Analysis

- 3.7.2 Under the above head the Petitioner has claimed CGRF expense of Rs. 0.32 Crore in FY 2015-16. In this regard Regulation 22 of the Consumer Grievances Redressal Forum Regulations, 2007 is reproduced below:

*"Treatment of Expenses –*

*All reasonable costs incurred by the Distribution Licensee on the establishment and running of the Forum, shall be a pass through in the Aggregate Revenue Requirements filed by the Distribution Licensee after deducting the amount of fees collected by the Distribution Licensee under the regulations."*

- 3.7.3 In view of the above, the Commission approves CGRF expense of Rs. 0.32 Crore.
- 3.7.4 The Petitioner has also claimed expenses incurred towards competitive bidding process for long-term / short-term power procurement, demand side management, technical studies and other activities as directed by the Commission. In this regard, Regulations 4.3.5 of Distribution Tariff Regulations, 2006 is reproduced as below:



*“The Commission may consider additional O&M expenses on account of war, insurgency, and change in laws or like eventualities for a specified period.”*

- 3.7.5 Accordingly, the Commission approves the additional statutory expenses incurred towards competitive bidding process, demand side management activities and technical studies on actual basis. The table below highlights the approved statutory and other expenses approved by the Commission for FY 2015-16:

**Table 3-11: STATUTORY/OTHER REGULATORY EXPENSES (Rs. Crore)**

Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon Truing Up
Demand Side Management Expenses	0.45	0.36	0.36
CGRF Expenses	0.36	0.32	0.32
UPERC Expenses	0.00	0.00	0.00
Competitive Bidding Expenses	0.30	0.13	0.13
Technical studies as directed by Commission	0.40	0.01	0.01
Service Tax payable due to change in law	0.95	1.41	1.41
CSR Expense	0.00	0.00	0.00
<b>Total</b>	<b>2.46</b>	<b>2.23</b>	<b>2.23</b>

### 3.8 CAPITAL EXPENDITURE (CAPEX):

- 3.8.1 The Petitioner in the True-up petition has claimed capital investments of Rs. 143.94 Crore during FY 2015-16 as against Rs. 249.52 Crore (including interest capitalization) approved by the Commission in its Tariff Order dated June 18, 2015. The Petitioner has also claimed Rs. 1.19 Crore towards interest capitalized during FY 2015-16 against Rs. 3.78 Crore approved by the Commission in its Tariff Order dated June 18, 2015.

#### Commission's Analysis:

- 3.8.2 The actual capital expenditure for FY 2015-16 has been considered as per the audited accounts. The opening capital work in progress (CWIP) for FY 2015-16 is Rs. 1.25 Crore as against Rs. 12.25 Crore as approved in Tariff Order dated June 18, 2015. Total capitalization i.e. transfers to GFA as per the audited accounts is Rs. 134.68 Crore excluding interest capitalization for FY 2015-16 as per the Audited Accounts.



3.8.3 The interest capitalization for FY 2015-16 has been considered as Rs. 1.19 Crore. Consumer contribution of Rs. 17.54 Crore is taken as per the audited accounts for FY 2015-16.

3.8.4 The details of the capital expenditure claimed by the Petitioner and approved / true-up by the Commission for FY 2015-16 is provided in the table below:

**Table 3-12: CAPEX FOR FY 2015-16 - TRUE-UP (Rs. Crore)**

Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon Truing Up
Total Additions to Assets (excluding interest capitalisation)	243.48	134.68	134.68
Add: Closing CWIP	14.50	9.33	9.33
Less: Opening CWIP	12.25	1.25	1.25
Total Capex (excluding interest capitalisation)	<b>245.73</b>	<b>142.75</b>	<b>142.75</b>
Add: Interest Capitalisation	3.78	1.19	1.19
<b>Total Capex</b>	<b>249.52</b>	<b>143.94</b>	<b>143.94</b>
Consumer Contribution & GNIDA	14.33	17.54	17.54
<b>Net Capex</b>	<b>235.18</b>	<b>126.40</b>	<b>126.40</b>
Debt @ 70%	164.63	88.48	88.48
Equity @ 30%	70.55	37.92	37.92

### 3.9 INTEREST AND FINANCE CHARGES:

3.9.1 The Licensee has claimed Interest and Finance Charges which includes following components:

- Interest on Long Term Loans
- Finance Charges
- Interest on working capital
- Interest on consumer security deposits
- Carrying Cost of Regulatory Asset

3.9.2 Each of the above cost elements are discussed separately as under:

### 3.10 INTEREST ON LONG TERM LOANS:

3.10.1 In the True-up Petition, the Petitioner has claimed interest on loan as Rs. 37.91 Crore after considering loan additions of Rs. 137.29 Crore. Brief details of the interest on Term loan as submitted by the Petitioner are provided below.



- a) Opening balances of existing loans are considered as per closing balances of Term Loans as approved by the Commission vide its order dated August 1, 2016 in True-up of ARR for FY 2014-15.
- b) Repayments, rate of interest and interest for existing loans are considered as per the terms and conditions of the respective term loans agreements.
- c) The repayment of the Term loans has been aligned with the depreciation claimed in the ARR for the year.
- d) Normative loan of FY 2007-08 as approved by the Commission is continued in FY 2015-16 also as per the method followed by the Commission in Tariff Order dated August 1, 2016.
- e) The Company during FY 2015-16 prepaid its existing term loan facilities with Central Bank of India and replaced the same with term loans facilities of Rs. 20.00 Cr from State Bank of Mysore and Rs. 28.81 Cr from IDBI Bank both bearing lower cost and resulting in accrual of saving in interest cost of Rs. 1.14 Cr.
- f) The Company availed disbursement of Rs. 85 Cr from IDBI Bank. The said loan was partially utilized for prepayment of high cost debt from Central Bank of India as described above and remaining Rs.56.19 Cr has been utilized towards partial funding of debt requirement of Rs. 88.48 Cr for Capital Expenditure incurred during FY 2015-16..

### Commission's Analysis

3.10.2 The Commission has gone through the interest expenses claimed by the Petitioner for FY 2015-16. The interest on long term loans as submitted by NPCL for FY 2015-16 is given in Table below:

**Table 3-13: INTEREST ON LONG TERM LOANS AS SUBMITTED BY PETITIONER FOR FY 2015-16  
(Rs. Crore)**

Particulars	Opening Balance	Additions During the Year	Repayment	Closing Balance	Interest
Bank - Domestic (Long Term Loans)	-	-	-	-	-
Bank – Foreign	-	-	-	-	-
ICICI Car Loan (FY08)	-	-	-	-	-
Yes Bank (FY08)	-	-	-	-	-
Barclays Term Loan (FY09)	-	-	-	-	-
Normative Loans (FY10)	-	-	-	-	-
Bank of Maharashtra (FY 10)	12.47	-	7.12	5.34	1.06
Yes Bank (FY 10)	-	-	-	-	-
IDBI Bank(FY11)	24.86	-	11.05	13.81	2.18



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Particulars	Opening Balance	Additions During the Year	Repayment	Closing Balance	Interest
HDFC Car Loan	-	-	-	-	-
GNIDA	0.00	-	-	-	-
Normative Loans (FY08)	1.60	-	0.53	1.07	0.15
ICICI Bank (FY12)	23.64	-	6.75	16.88	2.38
Central Bank of India (FY 13)	49.89	-	49.88	0.00	0.65
ICICI Bank (FY 13)	20.96	-	2.04	18.92	2.28
Normative Loan (FY 13)	-	-	-	-	-
Normative Loans (FY14)/ ICICI bank (FY 14)	95.20	-	7.14	88.06	10.64
SBM (2014-15)	30.00	-	4.17	25.83	3.06
Normative Loans (FY 2014-15) / HDFC Bank (2014-15)	73.20	-	6.92	66.28	7.58
Normative Loans (FY 2015-16)	-	32.29	-	32.29	1.83
XYZ Bank	-	-	-	-	-
SBM (2014-15) for Swapping Central Bank	-	20.00	2.78	17.22	1.77
IDBI Bank (2015-16) for Swapping Central Bank	-	28.81	-	28.81	2.12
IDBI Bank (2015-16)	-	56.19	-	56.19	2.20
Proposed Loan (2016-17) (Normative)	-	-	-	-	-
<b>Total</b>	<b>331.81</b>	<b>137.29</b>	<b>98.39</b>	<b>370.71</b>	<b>37.91</b>

3.10.3 The opening balance of loan trued-up for FY 2015-16 are considered as per closing balances of true-up for FY 2014-15. The normative loan of FY 2007-08 is continued in FY 2015-16 with repayment considered based on 10-year repayment period.

3.10.4 The Commission in its deficiency directed the petitioner to submit the reconciliation of interest on long term loans for FY 2015-16 and as per Audited Accounts. In response, the petitioner submitted that the capital expenditure for a financial year is required to be funded by debt and equity in the ratio of 70:30, accordingly the Company negotiates term loan facility from banks as per its ARR/ projections. The petitioner submitted that however, the Commission approves the term loan so availed as per audited accounts @ 70% of the actual capital expenditure incurred during the year at the time of truing-up the ARR for that financial year irrespective of the actual term loans borrowed by the Company. Thus, the term loan actually borrowed and approved by the Commission varies



almost every year. The debt component has been considered at 70% and accordingly the additions during the year FY 2015-16 is at Rs. 137.29 Crore.

3.10.5 The repayments, rate of interest and interest on existing loans are approved as per actual loan portfolio for FY 2015-16.

**Table 3-14: INTEREST ON LONG TERM LOANS APPROVED BY THE COMMISSION FOR FY 2015-16**  
(Rs. Crore)

Particulars	Opening Balance	Additions During the Year	Repayment	Closing Balance	Interest
Bank - Domestic (Long Term Loans)	-	-	-	-	-
Bank - Foreign	-	-	-	-	-
ICICI Car Loan (FY08)	-	-	-	-	-
Yes Bank (FY08)	-	-	-	-	-
Barclays Term Loan (FY09)	-	-	-	-	-
Normative Loans (FY10)	-	-	-	-	-
Bank of Maharashtra (FY 10)	12.47	-	7.12	5.34	1.06
Yes Bank (FY 10)	-	-	-	-	-
IDBI Bank(FY11)	24.86	-	11.05	13.81	2.18
HDFC Car Loan	-	-	-	-	-
GNIDA	0.00	-	-	-	-
Normative Loans (FY08)	1.60	-	0.53	1.07	0.15
ICICI Bank (FY12)	23.64	-	6.75	16.88	2.38
Central Bank of India (FY 13)	49.89	-	49.88	0.00	0.65
ICICI Bank (FY 13)	20.96	-	2.04	18.92	2.28
Normative Loan (FY 13)	-	-	-	-	-
Normative Loans (FY14)/ ICICI bank (FY 14)	95.20	-	7.14	88.06	10.64
SBM (2014-15)	30.00	-	4.17	25.83	3.06
Normative Loans (FY 2014-15) / HDFC Bank (2014-15)	73.20	-	6.92	66.28	7.58
Normative Loans (FY 2015-16)	-	32.29	-	32.29	1.83
XYZ Bank	-	-	-	-	-
SBM (2014-15) for Swapping Central Bank	-	20.00	2.78	17.22	1.77
IDBI Bank (2015-16) for Swapping Central Bank	-	28.81	-	28.81	2.12
IDBI Bank (2015-16)	-	56.19	-	56.19	2.20
Proposed Loan (2016-17) (Normative)	-	-	-	-	-
<b>Total</b>	<b>331.81</b>	<b>137.29</b>	<b>98.39</b>	<b>370.71</b>	<b>37.91</b>



### **3.11 INTEREST ON WORKING CAPITAL:**

- 3.11.1 The Distribution Tariff Regulations, 2006 provides for normative interest on working capital based on the principles outlined and accordingly Licensee is eligible for interest on working capital worked out on this basis. Further the Clause No. 4.8 (2) (b) of the Distribution Tariff Regulations, 2006 provides for rate of interest on working capital borrowings at bank rate specified by RBI + appropriate margin decided by Commission.
- 3.11.2 The petitioner has considered Interest rate for interest on working capital as 14.28% as weighted average rate of SBI PLR for FY 2015-16.
- 3.11.3 In the truing up Petition for FY 2015-16, the Petitioner has considered the security deposit passed onto UPPCL amounting to Rs. 11.28 Crore. Such amount has been added while computing the total working capital requirement for the year as had been done in previous years. The total interest on working capital claimed by the Petitioner is Rs. 8.51 Crore.

#### **Commission's Analysis**

- 3.11.4 As per the Distribution Tariff Regulation, 2006 notified by the Commission, interest rate on the working capital loan shall be Bank Rate as specified by Reserve Bank of India for the relevant year plus a margin as decided by the Commission. The relevant provision of the regulation 4.8.2(b) of the U.P. Electricity Regulatory Commission (Terms and Conditions for determination of Distribution Tariff) Regulation-2006 is reproduced below:

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



- 3.11.5 The Commission in its earlier Tariff Orders, prior to FY 2015-16 has been considering the interest rate on working capital as per the SBI Prime Lending Rate i.e. being the bank rate plus the margin over the bank rate for calculation of interest on working capital. The Commission in its Truing up Order for FY 2013-14 and for determination of ARR for the FY 2015-16 approved rate of interest on working capital as 12.50% against 14.58% claimed by the Petitioner, in response to the replacement of BPLR with the Base Rate system for levying interest on loan vide “Master Circular - Interest Rates on Advances” dated July 2, 2012, of RBI which mandated all loans to be priced only with reference to base rate with effect from July 1, 2010, thereby changing the approach followed in the previous years. The Petitioner filed an appeal before the Hon’ble APTEL in this matter of changed approach of the Commission for consideration of interest on working capital.
- 3.11.6 The Hon’ble APTEL in its Judgment dated June 2, 2016 held that the Commission has deviated from the provisions of the applicable Distribution Tariff Regulations while computing the interest rate on working capital were of the opinion that the methodology adopted by the State Commission of considering SBI-PLR rate as ‘Bank Rate plus Margin’, since notification of Distribution Tariff Regulations 2006 should have been continued. Details of the Judgment of the Hon’ble APTEL have already been discussed in the revised True-up for FY 2013-14 chapter of this Order.
- 3.11.7 Therefore, the Commission, for the purpose of arriving at the appropriate margin over and above the bank rate notified by the RBI, has considered weighted average of SBI-PLR of 14.29 % in line with the earlier Tariff Orders of the Commission prior to FY 2015-16 and Judgment dated June 2, 2016 of the Hon’ble APTEL.
- 3.11.8 In the truing up Petition for FY 2015-16, the Petitioner has considered the security deposit passed onto UPPCL amounting to Rs. 11.28 Crore. Such amount has been added while computing the total working capital requirement for the year as had been done in previous years.
- 3.11.9 The Commission has worked out the working capital and interest on working capital for FY 2015-16 as given in Table below:
-



**Table 3-15: INTEREST ON WORKING CAPITAL AS APPROVED BY THE COMMISSION FOR FY 2015-16 (Rs. Crore)**

Particulars	Approved vide T.O. 18/06/2015	True-up Petition	Approved upon Truing Up
One Month's O&M Expenses	4.11	4.99	3.95
One-twelfth of the sum of the book value of materials in stores at the end of each month of such financial year.	17.28	11.39	11.39
Receivables equivalent to 60 days average billing on consumers	210.49	181.25	181.25
<b>Gross Total</b>	<b>231.88</b>	<b>197.63</b>	<b>196.59</b>
Total Security Deposits by the Consumers reduced by Security Deposits under section 47(1)(b) of the Electricity Act 2003			
Opening Balance	134.08	139.21	139.21
Received during the year	35.00	20.20	20.20
Closing Balance	169.08	159.41	159.41
Less: Security Deposit with UPPCL	11.28	11.28	11.28
Net Security Deposits by the Consumers reduced by Security Deposits under section 47(1)(b) of the Electricity Act 2003	140.30	138.03	138.03
<b>Net Working Capital</b>	<b>91.58</b>	<b>59.60</b>	<b>58.56</b>
Rate of Interest for Working Capital	<b>14.29%</b>	<b>14.28%</b>	<b>14.29%</b>
<b>Interest on Total Working Capital</b>	<b>13.08</b>	<b>8.51</b>	<b>8.37</b>

### 3.12 FINANCE CHARGE:

- 3.12.1 The Petitioner submitted that it had negotiated a term loan facility of Rs. 150 Cr with IDBI Bank Limited at a very attractive interest rate of 10.75% p.a. in Feb' 2015 itself for the purpose funding the capital expenditure for FY 2015-16.
- 3.12.2 Further the processing charges for the same were incurred and claimed by the Company in its Truing-up Petition for FY 2014-15 and has also been approved by the Commission and therefore the Petitioner is not claiming any amount toward processing charges for these loans.





3.12.3 Further the Petitioner submitted that during FY 2015-16, the Company has successfully negotiated Term Loan of Rs. 100 Cr from HDFC Bank Limited for the purpose of debt funding of Capital Expenditure for FY 2016-17. Since, the term loan facility has been sanctioned during FY 2015-16, the processing charges payable for sanction of the term loan facility has also been charged in the Profit and Loss account for FY 2015-16 as per the Accounting Standards (AS) and Generally Accepted Accounting Principles (GAAP). Accordingly, the processing charges for sanctioning the term loan facility of Rs. 100 Cr by HDFC Bank Limited for FY 2016-17 have been claimed by the Company in true-up petition for FY 2015-16.

3.12.4 The summary of processing charges as claimed by the Petitioner for FY 2015-16 is provided in Table below:

**Table 3-16: SUMMARY OF PROCESSING CHARGES AS CLAIMED BY THE PETITIONER (Rs. Crore)**

Sl. No.	Financing Activity	Facility Amount	Charges Paid	Charges as % of Facility
1	Fund Based WCF Renewal (including CP Issue)	215.00	1.50	0.70%
2	Non- Fund Based WCF Renewal & CP Issue	115.00	0.41	0.36%
3	Sanction of Term Loan from IDBI Bank for FY 16	100.00	1.72	1.72%
	<b>Total</b>	<b>430.00</b>	<b>3.63</b>	<b>0.84%</b>

3.12.5 In addition to the above, the Petitioner also claimed Credit Rating Charges, Collection Facilitation Charges and Other Finance Charges as Rs. 0.12 Crore, Rs. 0.27 Crore and Rs. 0.15 Crore respectively.

#### **Commission's Analysis**

3.12.6 As it can be observed from the above table, the Petitioner has claimed Rs. 3.63 Crore for processing charges which includes facilitation of short-term funding of regulatory asset and working capital requirement.

3.12.7 It may be observed that the Petitioner claims the carrying cost on the Regulatory Asset separately which is allowed by the Commission at the SBI PLR with monthly compounding. The Commission is of the view that any expense to fund the regulatory asset has to be borne from the carrying cost allowed by the Commission and should not be claimed additionally. Thus, it would not be



appropriate to allow the expenses to facilitate the funding of the regulatory asset (shortfall in cash-flow) and the same can be allowed only for the normative working capital requirement allowed by the Commission.

3.12.8 The Commission in deficiency note dated February 14, 2017 asked the Petitioner to submit the breakup of actual processing charges incurred for funding the normal working capital requirements and the shortfall due to regulatory asset.

3.12.9 The Petitioner in its reply dated April 7, 2017 submitted that in order to meet the day to day Working Capital requirements and also to part finance accumulated Regulatory Asset approved by the Commission, the Petitioner secured sanction/renewal of Fund Based Working Capital facilities of Rs. 215 Crore and Non fund based facilities of Rs. 115 Crore during FY 2015-16 from various commercial banks on which finance charges of Rs. 1.91 Crore were incurred and paid. The petitioner further submitted that it is availing the Working Capital facilities sanctioned by various Banks to meet its day to day operational requirements like Payment of Power Purchase Bills, Operational Expenses, Taxes, Interest and Loans Repayment etc. and regulatory asset created due to inadequate and delayed increase in tariffs. Such revenue gap consists of unrecovered cost of power purchase and other distribution expenses etc. Therefore, the working capital facility is required for funding both, its normal operational expenses and revenue gap incurred due to non-recovery full cost of distribution.

3.12.10 The Petitioner submitted the summary of processing charges paid for Term Loans sanctioned during FY 2014-15 as provided below:

**Table 3-17: PROCESSING CHARGES AS CLAIMED BY THE PETITIONER (Rs. Crore)**

Sl. No.	Financing Activity	Facility	Charges	Charges (%)
1	Fund Based WCF Renewal & CP Issue	215.00	1.50	0.70%
2	Non Fund Based WCF Renewal	115.00	0.41	0.36%
3	Sanction of Term Loan from IDBI	100.00	1.72	1.72%
	<b>Total</b>	<b>430.00</b>	<b>3.63</b>	<b>0.84%</b>

3.12.11 In view of the above, the Commission while approving the finance charges has considered the processing charges only for the normative working capital requirement which has been recomputed as Rs. 0.41 Crore.



- 3.12.12 The Commission has observed that the Licensee has got the sanctions of the loans in FY 2015-16 for the capital expenditure to be undertaken during FY 2016-17. Therefore, the Licensee has claimed the processing charges of Rs 1.72 Crore towards sanction of Fresh Term Loans for FY 2016-17 in the True-up Petition for FY 2015-16. The Commission is approving the processing charges of sanction of Fresh Term Loans as claimed by Licensee; however Licensee shall not be entitled to the processing charges for FY 2016-17 during truing up of FY 2016-17 as the same has been approved currently.

**Table 3-18: PROCESSING CHARGES APPROVED BY THE COMMISSION (Rs. Crore)**

Sl. No.	Financing Activity	Charges Paid	Approved
1	Fund Based WCF Renewal & CP Issue	1.50	0.41
2	Non Fund Based WCF Renewal	0.41	0.41
3	Sanction of Term Loan from IDBI	1.72	1.72
	<b>Total</b>	<b>3.63</b>	<b>2.54</b>

- 3.12.13 The summary of the Finance charges as claimed by the Petitioner and as approved by the Commission for FY 2015-16 are shown in the Table below:

**Table 3-19: FINANCE CHARGES APPROVED BY THE COMMISSION (Rs. Crore)**

Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon True Up
Credit Rating Charges	0.20	0.12	0.12
Processing Charges	1.63	3.63	2.54
Other Finance Charges	0.76	0.42	0.42
<b>Total Finance Charges</b>	<b>2.59</b>	<b>4.16</b>	<b>3.07</b>

### **3.13 INTEREST ON SECURITY DEPOSIT:**

- 3.13.1 The Commission in its Tariff Order dated June 18, 2015 approved the Interest on Security Deposit at 8.50%. The Petitioner in its True-up petition has claimed interest on security deposit as Rs. 13.11 Crore at 8.50%, based on the RBI's Bank Rate prevailing on the April 1, 2015 i.e. 8.50% p.a.
- 3.13.2 Clause No. 4.8.3 of the Distribution Tariff Regulation, 2006 provides that the Licensee shall pay interest equivalent to the bank rate or more on the consumer security deposits, as may be specified by the Commission.

### Commission's Analysis

- 3.13.3 In its Tariff Order for FY 2015-16, the Commission based on the submission of the Petitioner approved the rate of interest to be paid on security deposit at 8.50% which is same as the RBI Bank Rate prevailing as on April 1, 2015 and the Petitioner has paid the interest on security deposit at the rate of 8.50%.
- 3.13.4 The Commission has approved the actual interest on security deposit paid / provided for FY 2015-16 as per audited accounts for FY 2015-16. The details of the interest on security deposits claimed and trued-up by Commission for FY 2015-16 are given in the Table below:

**Table 3-20: INTEREST ON SECURITY DEPOSIT AS APPROVED BY THE COMMISSION (Rs. Crore)**

Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon Truing Up
Opening Balance of Security Deposit	134.08	139.21	139.21
Addition during the year	35.00	20.20	20.20
Closing Balance for Security Deposit	169.08	159.41	159.41
<b>Average Balance for Security Deposit</b>	<b>151.58</b>	<b>149.31</b>	<b>149.31</b>
<b>Interest payable on Security Deposit</b>	<b>12.88</b>	<b>13.11</b>	<b>13.11</b>

- 3.13.5 The company has paid interest on consumer security deposit @ 8.50% p.a. on its consumer security deposits. The interest on security deposit is trued-up at Rs. 13.11 Crore as per the Audited Accounts of FY 2015-16.

### 3.14 INTEREST CAPITALISATION:

- 3.14.1 The Petitioner submitted that as per the directions of the Commission and Hon'ble Appellate Tribunal of Electricity (ATE), from FY 2011-12, it has adopted the methodology for capitalization of actual interest cost incurred over new assets in accordance with "Accounting Standard 16 on Cost of Borrowing".
- 3.14.2 According to the methodology, interest expenses incurred on the purchase of materials is being computed from the date of supply and in case of labour expenses, it is being computed from the date of erection for each project. The Petitioner submitted that it is using SAP based ERP for the purpose of accounting and maintenance of Fixed Asset Register. Thus, the interest cost so computed is included in the project cost and is being capitalized along with the same for depreciation, RoE etc. purposes.



- 3.14.3 Considering the above methodology appropriate, the Commission has approved the Interest capitalization for FY 2015-16 as Rs. 1.19 Crore as per Audited Accounts of the Petitioner.

### 3.15 SUMMARY OF INTEREST & FINANCE CHARGES:

- 3.15.1 The Summary of Interest and Finance Charges trued-up by the Commission for FY 2015-16 are given in the Table below:

**Table 3-21: SUMMARY-INTEREST & FINANCE CHARGES APPROVED BY THE COMMISSION (Rs. Crore)**

Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon Truing Up
Interest on Long term loans	53.30	37.91	37.91
Interest on short term loans/working capital	13.08	8.51	8.37
Finance charges	2.59	4.16	3.07
Interest on security deposit	12.88	13.11	13.11
<b>Total Interest &amp; Finance charges</b>	<b>81.86</b>	<b>63.70</b>	<b>62.46</b>
Less: Interest capitalization	3.78	1.19	1.19
<b>Net Interest &amp; Finance charges</b>	<b>78.08</b>	<b>62.51</b>	<b>61.27</b>

### 3.16 EFFICIENCY GAINS DUE TO SWAPPING OF LOAN

- 3.16.1 The Petitioner submitted that to minimize the cost of borrowing, the company prepaid its existing term loan facilities with Central Bank of India and replaced the same with term loans facilities of Rs. 20.00 Cr from State Bank of Mysore and Rs. 28.81 Cr from IDBI Bank both bearing lower cost. This resulted in accrual of saving in interest cost of Rs. 1.54 Crore for FY 2015-16 to be shared with its consumers in accordance with Clause 4.8 and 4.11 of Distribution Tariff Regulations, 2006. The Petitioner has worked out the total savings in the interest cost for FY 2015-16 amounting to Rs. 1.54. Crore, of which Petitioner has claimed Rs 0.77 Crore as efficiency gain.

**Table 3-22: EFFICIENCY GAINS ON TERM LOAN SWAPPING FOR FY 2015-16 AS CLAIMED BY THE PETITIONER (RS. CRORE)**

Sl. No.	Bank	Loan Amount	FY 2015-16	
			Approved	Actual
1	ICICI Bank	125	0.45	0.45
2	ICICI Bank	40	0.17	0.17
3	IDBI Bank	75	0.29	0.29



Sl. No.	Bank	Loan Amount	FY 2015-16	
			Approved	Actual
4	Bank of Maharashtra	55	0.11	0.11
5	Central Bank of India	80	-	0.51
	<b>Total</b>		<b>1.03</b>	<b>1.54</b>
50% Efficiency Gain claimed			<b>0.51</b>	<b>0.77</b>

- 3.16.2 It is clear that the consumers as well as Licensee should be benefited by the swapping of the loans. The relevant provision of the regulation 4.8.1(f) of the U.P. Electricity Regulatory Commission (Terms and Conditions for determination of Distribution Tariff) Regulation, 2006 is reproduced below:

*“(f) The benefit on account of loan swapping / restructuring of debts shall be shared between the distribution licensee and the consumers/beneficiaries in the proportion specified in regulation 4.11.*

*Provided that interest and finance charges of renegotiated loans agreements shall not be considered, if they result in higher charges,*

*Provided further that the Commission will allow the cost of debt restructuring / swapping of loans while determining the Aggregate Revenue Requirement of the licensee.*

*Provided further that interest and finance charges on works in progress shall be excluded and shall be considered as part of the capital cost.*

*Provided further in case of any moratorium period is availed of by the Distribution licensee, depreciation provided for in the tariff during the years of moratorium shall be treated as loan repayment during those years and the interest on loan capital shall be calculated accordingly”*

- 3.16.3 The relevant provision of the regulation 4.11 of the U.P. Electricity Regulatory Commission (Terms and Conditions for determination of Distribution Tariff) Regulation, 2006 is reproduced below:

*“4.11 Profit Sharing*

*1. The licensee will be allowed an approved return for the ensuing financial year.*

*2. However, if the licensee makes more profit than the approved return on account of improved performance by way of reduction of Distribution*



*Losses, better collection efficiency etc., the Commission may treat the profit beyond the approved return in the following manner:*

- (i) Licensee shall be entitled to retain 50% of the additional profit earned on account of operational efficiencies*
- (ii) 25% shall be credited to the licensee's contingency reserve.*
- (iii) The remaining 25% shall be passed on to the consumers by way of reduction in ARR”*

- 3.16.4 In reply to the Commission’s query with regard to processing charge incurred with respect to swapping of term loans the Petitioner replied that, no processing charges has been incurred and claimed by the Petitioner in FY 2014-15 against swapping of these loans.
- 3.16.5 Further the petitioner submitted that during FY 2016-17 the applicable interest rates for the term loans availed from ICICI Bank Ltd have been renegotiated and accordingly the efficiency gains were computed from the reset of interest rates. The copies of Amendatory Credit Arrangement Letters issued by ICICI Bank Ltd are submitted by the petitioner.
- 3.16.6 The petitioner also submitted that apart from above the Company has claimed the efficiency gains on the loans renegotiated in the earlier years which has already been approved by the Commission in the respective Tariff Orders of the relevant years. Accordingly, efficiency gains on these loans outstanding during current year are claimed in the truing up for FY 2015-16
- 3.16.7 Since during the FY 2014-15 the reduction in interest is more than the processing cost of swapping of the loans, the Commission, in line with the provisions of the Distribution Tariff Regulation, 2006 stated above, has approved efficiency gain of Rs 0.77 Crore for the year FY 2015-16 on account of swapping of term loan undertaken during FY 2014-15 as claimed by the Petitioner.

### **3.17 CAPITALISATION OF ASSETS & COMPUTATION OF EQUITY:**

- 3.17.1 The Petitioner has claimed return on equity at 16.00% on the equity base determined as per clause 4.10.1 of the Distribution Tariff Regulations, 2006.



### Commission's Analysis:

- 3.17.2 As per Clause 1 of Regulation 4.10 of the Distribution Tariff Regulations, 2006, return on equity shall be allowed at 16.00% on the equity base determined in accordance with Regulation 4.7.
- 3.17.3 The Capitalisation of Assets or Capital Formation takes place from Opening Work in Progress (WIP) and investments / capex undertaken during the year. The truing-up computation of equity approved by the Commission for FY 2015-16 is given in the Table below:

**Table 3-23: CAPITALISATION OF ASSETS & COMPUTATION OF EQUITY APPROVED BY THE COMMISSION (Rs. Crore)**

Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon Truing Up
Opening CWIP	12.25	1.25	1.25
Capital Investment	249.52	143.94	143.94
Total capitalization=Transfer to GFA	247.27	135.87	135.87
Capitalization of Capex approved during the year	235.02	134.62	134.62
Consumer contribution	14.33	17.54	17.54
<b>Remaining investment</b>	<b>235.18</b>	<b>126.40</b>	<b>126.40</b>
Debt	164.63	88.48	88.48
Equity	70.55	37.92	37.92
<b>Portion of investment assumed to be capitalized through Consumer Contribution</b>	<b>13.50</b>	<b>16.41</b>	<b>16.41</b>
<b>Portion of remaining investment to be capitalized</b>	<b>221.52</b>	<b>118.21</b>	<b>118.21</b>
Debt	155.06	82.75	82.75
Equity	66.45	35.46	35.46
Portion of Opening CWIP	3.43	0.34	0.34
<b>Total Equity for RoE</b>	<b>69.89</b>	<b>35.80</b>	<b>35.81</b>

### 3.18 GROSS FIXED ASSETS (GFA) & WORK-IN-PROGRESS:

- 3.18.1 The petitioner has submitted the audited GFA for truing-up and the same is presented in the table below along with Commission's approval for FY 2015-16.



**Table 3-24: GROSS FIXED ASSETS APPROVED BY THE COMMISSION (Rs. Crore)**

Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon Truing Up
Opening Balance (GFA)	976.59	922.89	922.90
Addition during the Year	247.27	135.87	135.87
Retirement during the Year	4.15	2.63	2.63
<b>Closing Balance</b>	<b>1,219.70</b>	<b>1,056.13</b>	<b>1,056.15</b>

### 3.19 DEPRECIATION:

3.19.1 The Petitioner submitted that depreciation on plants, equipments and installations has been computed under separate categories in accordance with the rates prescribed under the Distribution Tariff Regulations, 2006. In case of Computers and IT assets, depreciation has been provided at the rates prescribed by the Commission in its Tariff Order dated September 1, 2008. The Petitioner submitted that the Depreciation corresponding to the consumer contribution has been reduced from depreciation on above GFA.

#### Commission's Analysis:

3.19.2 The Commission in its Distribution Tariff Regulations, 2006 has specified the rates to be utilized for the purposes of computing depreciation for different class of assets. The Commission in the Tariff Order dated September 1, 2008 para 4.16.3 had allowed the Licensee to charge higher depreciation on IT assets at 30% instead of 12.77%.

3.19.3 Considering the above submissions of the Petitioner, the depreciation expenses as claimed by the Petitioner and as approved by the Commission for FY 2015-16 are provided in the Table below:

**Table 3-25: DEPRECIATION APPROVED BY THE COMMISSION (Rs. Crore)**

Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon Truing Up
Depreciation	81.57	57.78	57.78
Less: Depreciation on Consumer Contribution	16.40	8.20	8.20
<b>Net Depreciation</b>	<b>65.17</b>	<b>49.58</b>	<b>49.58</b>
Average Normative GFA	1,098.15	989.51	989.53
Weighted average depreciation rate	7.43%	5.84%	5.84%



### 3.20 INCOME TAX:

3.20.1 Clause 4.13 of UPERC Distribution Tariff Regulations, 2006, specified as below:-

*“4.13 Tax on Income:*

*1. Tax on the income streams of the distribution licensee from core business shall be treated as an expense and shall be recovered in tariff.*

*2. Any under-recoveries or over-recoveries of tax on income shall be adjusted every year on the basis of income tax assessment under the Income Tax Act, 1961 as certified by the statutory Auditors”*

The Petitioner submitted that the Commission vide its Tariff Order dated June 26, 2007 provided that Taxes shall be allowed on actual basis. Further the Petitioner submitted that the Commission in its Tariff Order dated 18<sup>th</sup> June 2015 while approving the income tax liability for FY 2015-16 has stated that,

*“.... The Commission has computed the Income Tax Liability for the Petitioner at the corporate tax rate ....”*

Accordingly, the Petitioner claimed the income tax liability as as per Audited Annual Accounts at corporate tax rate of 34.61% under normal provisions of Income Tax Act, 1961, as Rs. 37.77 Crore (including Rs. 1.62 Crore as Interest on shortfall of advance tax for FY 2012-13). The Petitioner also submitted the copies of Income Tax challans along with the Petition.

#### Commission's Analysis:

3.20.2 The Petitioner has claimed the Income Tax as Rs. 37.77 Crore as against the approved income tax of Rs. 15.90 Crore for FY 2015-16. The Petitioner in its Petition has also submitted the challans for the income tax payments. The Income Tax claimed in the Petition approved by the Commission is shown in the Table below:

**Table 3-26: INCOME TAX AS CLAIMED BY THE PETITIONER AND AS PER CHALLANS (Rs. Crore)**

Sl.No.	Particulars	Approved	Actual
1	Corporate Tax	15.90	36.15
2	Income Tax Demand for earlier years	0.00	1.62
3	<b>Total Tax Expense</b>	<b>15.90</b>	<b>37.77</b>

3.20.3 For the purpose of Truing-up, the Commission, in line with the approach followed in previous years, has approved the actual Income Tax liability of Rs.37.77 Crore as per the Income tax challans submitted by the Petitioner.



### **3.21 CONTINGENCY RESERVE:**

- 3.21.1 Clause No. 4.14 of the Distribution Tariff Regulations, 2006 provides for creation of Contingency Reserve upto 0.5% of opening gross fixed assets to be included in ARR for meeting cost of replacement of equipment damaged due to force majeure situations. The Petitioner in its true-up petition has not claimed any contingency reserve for FY 2015-16.
- 3.21.2 Accordingly, the Commission for the truing up purpose for FY 2015-16 has not considered any contingency reserve.

### **3.22 PROVISION FOR BAD & DOUBTFUL DEBTS:**

- 3.22.1 The expense claimed by the Petitioner on account of bad and doubtful debts for FY 2015-16 is Rs. 13.20 Crore as against the approved amount of Rs. 16.81 Crore. The Petitioner submitted that any recovery around 97% - 98% of the sales should undoubtedly be considered as efficient collection and, therefore, the balance 2-3% may be provided as bad and doubtful debts.

#### **Commission's Analysis:**

- 3.22.2 As per clause 4.4 of the Distribution Tariff Regulations, 2006;
- "Bad and Doubtful Debts shall be allowed as a legitimate business expense with the ceiling limit of 2% of the revenue receivables provided the Distribution Licensee actually identifies and writes off bad debts as per the transparent policy approved by the Commission."*
- 3.22.3 Thus, from the above, bad debts subject to actual written off in the audited books shall be allowed upto 2% of the revenue for the year under consideration. The Petitioner has claimed bad debts for FY 2015-16 at 1.20% of revenue billed during the year as per transparent policy duly approved by the Commission.
- 3.22.4 The Commission considers it appropriate that since the Licensee has written off bad debts on actual basis after taking its Management's approval, the bad-debts may be trued-up at 1.20% level on revenue approved by Commission. The details of bad-debts trued-up by the Commission for 2015-16 are provided in the Table below:



**Table 3-27: BAD & DOUBTFUL DEBTS FOR FY 2015-16 (Rs. Crore)**

Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon Truing Up
Receivable from Customers at the beginning of the year	152.93	61.19	61.19
Revenue billed for the year	1,191.08	1,102.58	1,102.58
Collection for the year	1,140.03	1,067.25	1,067.25
Gross receivable from customer as at the end of the year	187.17	83.32	83.32
% of Provision	1.41%	1.20%	1.20%
Provision for Bad & Doubtful debts	<b>16.81</b>	<b>13.20</b>	<b>13.20</b>

### **3.23 MISCELLANEOUS EXPENSES:**

- 3.23.1 The Petitioner submitted that the Commission in its Tariff Order dated June 18, 2015, had approved a Miscellaneous Expenditure viz. loss on sale of fixed assets at Rs. 0.41 Crore. During, FY 2015-16, most of the assets retired comprised of meters which are largely funded through consumer contribution. Thus, though the loss on sale / retirement of these meters was Rs. 0.86 Crore, Rs. 0.46 Crore was set-off from consumer contribution and remaining Rs. 0.41 Crore on account of loss on sale of fixed assets is claimed as miscellaneous expenditure. The Petitioner requested the Commission to allow the same accordingly for FY 2015-16.
- 3.23.2 Considering that due to fast obsolescence and normal wear and tear, some of the assets are required to be scrapped before their useful life. Hence, the loss on sale of assets incurred due to disposal of such scrap assets is genuine and legitimate business expenditure and therefore, the Commission approves miscellaneous expenditure at Rs. 0.41 Crore as per Audited Accounts of the Petitioner for FY 2015-16.

### **3.24 RETURN ON EQUITY:**

- 3.24.1 The Licensee is entitled to earn Return on Equity as per Clause No. 4.10 of the Distribution Tariff Regulations, 2006.
- 3.24.2 The Petitioner based on its computations of equity after making adjustment for interest capitalization has claimed return of Rs. 41.39 Crore.



### Commission's Analysis:

3.24.3 The return on equity computed by Commission and approved for FY 2015-16 is provided in the Table below:

**Table 3-28: RETURN ON EQUITY APPROVED BY THE COMMISSION FOR FY 2015-16 (Rs. Crore)**

Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon Truing Up
Regulatory Equity Base at the beginning of the year	257.34	240.77	240.82
Assets Capitalised during the year	247.27	135.87	135.87
Equity portion of Assets Capitalised during the year	69.89	35.80	35.81
Regulatory Equity Base at the end of the year	327.22	276.58	276.62
<b>Computation of Return on Equity</b>			
Return on Opening Regulatory Equity Base @16%	41.17	38.52	38.53
Return on Addition to Equity Base during the year@ 16%	5.59	2.86	2.86
Total Return on Equity	<b>46.76</b>	<b>41.39</b>	<b>41.40</b>

3.24.4 The approved return on equity trued-up for FY 2015-16 is Rs. 41.40 Crore as against Rs. 46.76 Crore approved in Tariff Order dated June 18, 2015.

### 3.25 NON-TARIFF INCOME:

3.25.1 The Non-Tariff Income includes delayed payment surcharge, miscellaneous charges, income from investments, interest on fixed deposits and income from consultancy business. The non-tariff income claimed by NPCL for truing-up for FY 2015-16 is Rs. 3.24 Crore.

3.25.2 In order to appropriately compensate for the cost incurred for financing that deferred payment beyond the normative period, the Commission in its Tariff Order dated June 18, 2015 had reduced the amount of non-tariff income by the financing costs of DPS.

3.25.3 The financing cost of delayed payment surcharge is computed by the Commission based on the actual DPS for the year. The DPS is grossed up conservatively based on the highest applicable surcharge rate which is 1.5% per month. Further, the financing cost is arrived at on the grossed-up amount and interest rate of 14.29% as approved for working capital requirement. The computation of the financing cost for DPS is provided below:



**Table 3-29: COST OF BORROWING FOR DPS APPROVED BY THE COMMISSION FOR FY 2015-16**  
(Rs. Crore)

Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon Truing Up
Delayed Payment Surcharge (Rs. Crore)	2.75	1.81	1.81
DPS grossed up at 1.50% per month or 18% per annum	18%	18%	18%
Amount (Rs. Crores)	15.28	10.07	10.07
Financing cost @SBI PLR	14.29%	14.28%	14.29%
Cost of Borrowing (Rs. Crores)	<b>2.18</b>	<b>1.44</b>	<b>1.44</b>

- 3.25.4 The Commission approves the non-tariff income net of financing cost for DPS at Rs. 3.24 Crore for the truing-up for FY 2015-16.

### 3.26 REVENUE FROM SALE OF POWER:

- 3.26.1 NPCL in the true-up petition has submitted that the revenue from sale of power as per Audited Accounts is Rs. 1309.22 Crore. The Commission has approved the sales as per Audited Accounts and accordingly approves the revenue from sale of power at Rs. 1309.22 Crore. The category wise revenue from sale of power including regulatory surcharge for FY 2015-16 is provided in the Table below:

**Table 3-30: REVENUE APPROVED BY THE COMMISSION FOR FY 2015-16**

Particulars	Sales	Revenue	Average Realised
	(MU)	(Rs. Crore)	(Rs/kWh)
LMV-1: Domestic Light, Fan & Power	253.36	141.10	5.57
LMV-2: Non Domestic Light, Fan & Power	26.39	24.77	9.39
LMV-3: Public Lamps	30.00	23.87	7.96
LMV-4: Institutions	13.39	10.23	7.64
LMV-5: Private Tube Wells	28.77	4.07	1.41
LMV 6: Small and Medium Power	54.66	52.99	9.69
LMV-7: Public Water Works	14.73	13.37	9.08
LMV-8: STW and Pumped Canals	0.31	0.33	10.74
LMV-9: Temporary Supply	39.30	37.27	9.48
HV-1: Non Industrial Bulk Power	97.54	87.39	8.96
HV-2: Large and Heavy Power	818.71	643.83	7.86
<b>Total</b>	<b>1,377.16</b>	<b>1,039.22</b>	<b>7.55</b>



### **3.27 CARRYING COST:**

- 3.27.1 The Petitioner submitted that the carrying forward of Regulatory Assets should be resorted to only under exceptional circumstances, but if Regulatory Assets are created by the Commission, then the Licensee is entitled to the Carrying cost of Regulatory Assets.
- 3.27.2 The Petitioner submitted that in order to avoid tariff shock, the Commission has been creating regulatory assets, and in such a case, the financing costs / carrying costs on such regulatory assets needs to be necessarily and mandatorily be allowed to the Company. In fact, the Tariff Policy, 2006 provides that in such case the State Commissions should ensure appropriate return on equity in order to enable the utilities to borrow in future also. Keeping the above in view, the Commission, in its Tariff Order dated August 1, 2016 has allowed carrying cost of regulatory asset at weighted average SBI-PLR on monthly compounding basis. Accordingly, the Commission has approved a carrying cost of Rs. 83.16 Crore for FY 2015-16 in its aforesaid Tariff Order. Based on the same principles, the Petitioner claimed the carrying cost also for FY 2015-16 at 15.26%.

#### **Commission's Analysis**

- 3.27.3 Regulation 6.12 (3) of Distribution Tariff Regulations, 2006 provides for allowance of financing cost on regulatory assets. Further, the Hon'ble ATE has held that proper financing costs / carrying costs / interest charges on the regulatory assets has to be allowed by the Commission. In respect to the same, the Commission in its Order dated October 1, 2014 specified as follows:
- “Considering the same, the Commission while computing the carrying cost for FY 2014-15 has considered the adjustment of Rs. 72.00 Crore only from 1<sup>st</sup> April, 2014 to 3<sup>rd</sup> July, 2014. Further, as detailed earlier in Truing-up Section for FY 2012-13, the Commission has computed the carrying cost for FY 2014-15 at monthly compounded weighted average SBI PLR rate as shown in the Table below”
- 3.27.4 Further Hon'ble APTEL in its Judgment dated June 2, 2016 also held that the Commission must continue with the earlier practice of allowing interest rate on the basis of SBI-PLR rate on monthly compounding basis. Such interest must be same as that for Working Capital and delayed payment surcharge. The relevant extract of the same has been reproduced below:



*“g. We are in agreement with the views of Appellant that there is difficulty in finding resources to fund the Revenue Gap till the same is met in future year tariffs. Banks/financial institutions generally find it highly risky to provide funds for meeting such revenue gaps because of uncertainty attached to the recovery of the same.*

*h. We have ordered in favour of Appellant while deciding issues dealt above regarding Interest on working Capital and Interest on Delayed Payment Surcharge against the State Commission adopting Base Rate plus margin as the applicable interest rate. For the same reasons as detailed above, in this case of allowing interest rate for carrying cost of Regulatory Assets, we observe that **the State Commission should have continued the earlier practice adopted by it since notification of Distribution Tariff Regulations in Impugned Tariff Order too i.e. SBI-PLR rate as the Interest Rate with monthly compounding basis**” [Emphasis Supplied].*

3.27.5 Therefore, the Commission in line with the approach followed in its Tariff Orders prior to FY 2015-16 and the Judgment dated June 2, 2016 of Hon’ble APTEL has considered the monthly compounding of the interest for computation of carrying cost. The computation of carrying cost approved by the Commission is given in the table below:

**Table 3-31: CARRYING COST APPROVED BY THE COMMISSION FOR FY 2015-16**

Particulars	Formula	True-up Petition	Approved upon True Up
Revenue Gap (For FY 2015-16)	A	(121.59)	(135.56)
Revenue Gap (For previous year)	B	578.67	578.67
Interest rate	C	15.26%	15.26%
Carrying Cost on Revenue Gap for FY 2015-16	$D = C \times (A/2)$	(9.27)	(10.34)
Carrying Cost on Revenue Gap for previous years	$E = C \times B$	88.28	88.30
Total Carrying cost	$G = D + E$	79.00	77.96

### **3.28 SUMMARY OF ARR FOR FY 2015-16:**

3.28.1 Based on the above cost approvals, the summary of the ARR approved for FY 2015-16 is provided in the Table below:





**Table 3-32: SUMMARY OF TRUE UP FOR FY 2015-16 (Rs. Crore)**

Sr. No.	Particulars	Approved vide T.O. 18/06/15	True-up Petition	Approved upon True Up
1	Power Purchase Expenses	766.32	599.40	599.16
2	Transmission Charges (UPPTCL+PGCIL)	86.54	55.92	55.92
3	Gross O&M Expenses	<b>46.80</b>	<b>57.70</b>	<b>45.20</b>
4	Statutory & Other Regulatory Expenses	2.46	2.23	2.23
5	Net Interest charges	81.86	63.70	62.46
6	Depreciation	65.17	49.58	49.58
7	Taxes (Income Tax and FBT)	15.90	37.77	37.77
<b>8</b>	<b>Gross Expenditure</b>	<b>1,065.05</b>	<b>866.29</b>	<b>852.32</b>
9	Interest capitalized	3.78	1.19	1.19
<b>10</b>	<b>Net Expenditure</b>	<b>1,061.27</b>	<b>866.29</b>	<b>851.13</b>
11	Provision for Bad & Doubtful debts	16.81	13.20	13.20
12	Miscellaneous Expenses	0.41	0.41	0.41
13	Total net expenditure with provisions	<b>1,078.49</b>	<b>878.72</b>	<b>864.74</b>
14	Add: Reasonable Return / Return on Equity	46.76	41.39	41.40
15	Less: Non Tariff Income	2.10	3.24	3.24
16	Add: Efficiency Gains	0.51	0.77	0.77
<b>17</b>	<b>Aggregate Revenue Requirement (ARR)</b>	<b>1,123.67</b>	<b>917.63</b>	<b>903.66</b>
18	Revenue from Existing Tariff	<b>1,167.55</b>	<b>1039.22</b>	<b>1039.22</b>
19	Additional Revenue from Revised Tariff	-	-	-
<b>20</b>	<b>Revenue Gap/(Surplus)</b>	<b>(43.88)</b>	<b>(121.59)</b>	<b>(135.56)</b>
21	Revenue Gap/ Surplus from Prev. Year	578.67	578.67	578.67
22	Carrying cost	83.16	79.00	<b>77.96</b>
<b>23</b>	<b>Revenue Gap carried forward</b>	<b>617.96</b>	<b>536.09</b>	<b>521.07</b>

3.28.2 The Revenue surplus determined for FY 2015-16 upon truing-up is Rs. 135.56 Crore as against Rs.43.88 Crore provisionally approved in Order dated June 18, 2015. The Net Revenue Gap for FY 2014-15 after considering the revenue gap of Rs. 578.67 Crore from previous year as per the revised True-up Order of the Commission and carrying cost of Rs. 77.96 Crore is Rs. 521.07 Crore. The same is carried forward in the ARR approval of FY 2017-18.



## 4. BUSINESS PLAN

### 4.1 INTRODUCTION

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

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

4.1.3 Regulation 5 of the Distribution MYT Regulations, 2014 stipulates that

*“Business Plan*

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

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

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



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

4.1.4 Regulation 7 of the Distribution 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) Supply availability and wires availability;*

*(b) Distribution losses and Collection efficiency;*

*(c) Operation and Maintenance expense norm;*

*(d) Achieving 100% metering”*

4.1.5 Regulation 9 of the Distribution 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 Aggregate Technical & Commercial (AT&C) losses which shall be measured as the difference between the units input into the distribution system and the units realized (units billed and collected) wherein the units realized shall be equal to the product of units billed and collection efficiency (where Collection Efficiency shall be measured as ratio of total revenue realized to the total revenue billed for the same year);*

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

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

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

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

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

*(g) Variation in Wires Availability and Supply Availability.*

*Unquote*

---



- 4.1.6 Further, Regulation 10 of the Distribution MYT Regulations, 2014, provides for mechanism for sharing of Gains and Losses on account of controllable and uncontrollable parameters. The relevant extract of the Distribution MYT Regulations, 2014 are as follows:

*Quote*

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

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

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

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

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

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

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

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

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

*Unquote*



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

## 4.2 SALES

4.2.1 The petitioner submitted that for the purpose of estimating sales for the control period, the Company has considered CAGR of sales over 3 years i.e. FY 2011-12 to FY 2014-15. The petitioner submitted that, the sales for FY 2015-16 does not represent the past trend, hence the same has not been considered while forecasting / projecting the demand for control period under consideration.

4.2.2 The petitioner submitted that the percentage increase in the sales on year on year basis over previous 5 years is as follows:

**Table 4-1: SALES OF FY 2011-12 TO FY 2015-16 AS SUBMITTED BY THE PETITIONER**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Total Energy Sales (MU)	876.36	980.64	1,128.67	1,309.89	1,377.17
YOY Growth (%)		12%	15%	16%	5%

4.2.3 The petitioner submitted that it can be seen from above table that while the sales growth was in the vicinity of 15 to 16% from 2011-12 to 2014-15, however it was rather exceptionally low during FY 2015-16, therefore, not reflective of the actual trend of increase in demand as being witnessed by the company over so many years. Also as stated above, due to various initiatives of the State Government especially Metro connectivity and immense growth in Greater Noida (W), it is considered to be more appropriate to project sales for MYT period on the basis of 3 years' month-wise CAGR for the period commencing from FY 2011-12 till FY 2014-15 over the latest estimated sales of FY 2016-17 which is likely to be very proximate to the sales estimate of ARR for FY 2016-17 and duly approved by the Hon'ble Commission vide Order dated 1st August 2016. Therefore, based on the above, the Company estimates a rise of 8.41%, 9.23% and 9.32% in its consumer base and 10.71%, 11.80% and 12.02% in connected load for the respective ensuing years 2017-18, 2018-19 and 2019-20 over the respective previous years.



4.2.4 Based on the above stated reasons and month wise CAGR of past three years, the demand estimates as submitted by the petitioner is as follows:

**Table 4-2 DEMAND ESTIMATES FOR FY 2017-18 TO FY 2019-20 AS SUBMITTED BY THE PETITIONER**

Particulars	FY 2017-18			FY 2018-19			FY 2019-20		
	No. of Consumers	Connected Load (kW)	Units Sold (MU)	No. of Consumers	Connected Load (kW)	Units Sold (MU)	No. of Consumers	Connected Load (kW)	Units Sold (MU)
LMV-1: Domestic	74470	273381	342.66	80982	311474	409.45	87384	356558	493.55
LMV-2: Non-Domestic	3548	21988	33.60	4000	24914	38.01	4510	28228	43.06
LMV-3: Public Lamps	20	10841	33.51	20	10841	33.51	20	10841	33.51
LMV-4: Institutions	385	8361	19.67	409	9377	23.98	436	10528	29.33
LMV-5: Private Tube Wells	966	4205	23.83	788	3455	19.75	635	2809	16.24
LMV 6: Small and Medium Power	2706	45800	75.93	3064	47662	89.59	3469	49604	105.85
LMV-7: Public Water Works	277	6246	18.73	340	6555	21.30	416	6879	24.37
LMV-8: State Tube Wells	1	152	0.31	1	152	0.31	1	152	0.31
LMV-9: Temporary Supply	862	39648	56.24	838	47784	67.43	1530	57590	80.96
HV-1: Non-Industrial Bulk Loads	177	92675	142.54	209	110041	172.90	247	130661	210.10
HV-2: Large and Heavy Power	600	291201	1033.97	637	315370	1165.67	676	341545	1316.78
<b>GRAND TOTAL</b>	<b>84014</b>	<b>794500</b>	<b>1780.99</b>	<b>91289</b>	<b>887625</b>	<b>2041.88</b>	<b>99323</b>	<b>995396</b>	<b>2354.07</b>

4.2.5 Regulation 16 of the Distribution MYT Regulations, 2014, provides as follows:

**“16.1 Forecasting Methodology**

*Metered sales shall be treated as an uncontrollable parameter.*

*Provided that open access transactions shall not form part of the sales.*

*Provided further that sales forecast shall be based on past trends in each of the slabs of consumer categories. The compounded annual growth rate (CAGR) of past 2 to 3 years of sales within each of the slabs of a consumer category as per audited books of account shall be used to forecast up to short and medium (3 years) time range.*

.....



*Provided also that in case of following occurrences, prudent adjustment of forecasted metered sales shall be carried out:*

*a) Abnormal variation in consumer mix in any given area (on the basis of proposed city plan, tax holidays, Government incentives for industrial establishments, migration of consumers due to open access, etc.).*

*b) Inflection point in economic cycle (boom, slowdown, recession or expansion.*

*c) Variations in weather conditions.*

*d) Materially significant findings during audit check as per Regulation 16.2:*

*Provided also that in cases where slab-wise sales to each consumer category are not available in audited books of accounts and only consolidated sales are available, the Distribution Licensee shall include the slab-wise sales in annexure to its Annual Report from next year onwards.*

*Provided also that if Audited books of accounts are not available, the Distribution Licensee shall get the accounts audited within a year of roll out of these tariff regulations so as to ensure that audited sales figures, by slab by consumer category, for last three preceding years are available for sales estimation from next year onwards.”*

4.2.6 The Commission observed that the sales for FY 2015-16 have shown drastic change from its previous trend. Hence, the Commission finds it appropriate not to consider the sales data of FY 2015-16 for demand projection for the control period. Accordingly, the Commission has considered CAGR over FY 2011-12 to FY 2014-15 for computation of demand estimates for the MYT period.

4.2.7 The Commission in its deficiency note dated December 13, 2016 enquired the petitioner that CAGR considered for April, May is negative however, no. of consumers and load are constant from FY 2012-13 to FY 2014-15 and Demand is showing increasing trend for LMV-6 projections by the petitioner. In response, the petitioner submitted that in LMV-6 (Rural) consumer category when the consumption load increases beyond a stipulated norm, then the Consumer's category is converted into HV-1. Since the past 2-3 years, in view of steady power supply, many consumers in LMV-6 (Rural) Category have reached their maximum stipulated consumption and consequently were converted into HV-1 category. Hence the CAGR for number of Consumers in LMV-6 (Rural) has shown

---



negative trend in past. However, it is pertinent to mention here that the number of Consumers in LMV-6 (Rural) is very low and even one conversion/disconnection changes the CAGR computation. Therefore, based on the existing customer base and their observed load, the Company does not expect further reduction in consumer under LMV-6 (Rural) category. Accordingly, the licensee has forecasted Demand for LMV-6 Category consumer on the basis of existing consumer profile with slight increase in supply hours hence the increasing trend in demand. The Commission has considered the same as projected by the petitioner.

4.2.8 Further, the Commission observed that the petitioner has forecasted unmetered consumers, connected load and Sales for the control period as under:

**Table 4-3 NUMBER OF UNMETERED CONSUMERS, CONNECTED LOAD AND SALES FOR FY 2017-18 TO FY 2019-20 AS SUBMITTED BY THE PETITIONER**

Particulars	FY 2017-18			FY 2018-19			FY 2019-20		
	Number of Consumers	Load	Sales	Number of Consumers	Load	Sales	Number of Consumers	Load	Sales
LMV-1: Domestic Light, Fan & Power	2346	4.85	6.45	1521	3.14	4.99	696	1.40	2.65
LMV-5: Small Power for Private Tubewell	575	2.44	13.36	382	1.62	8.88	214	0.91	4.97
LMV-8: State Tube Wells	1	0.13	0.31	1	0.13	0.31	1	0.13	0.32

4.2.9 In this regard, the Commission vide its deficiency note, directed the petitioner to submit the detailed workable metering Plan to achieve 100% metering in the MYT control Period. In response, the petitioner submitted that the Company has not released a single connection in unmetered category since FY 2003-04. The petitioner submitted the reasons for slow conversion, as mentioned in the report submitted vide letter number P77A/2014/012 dated 27th August 2015 and P77A/2015/050 dated 23rd February 2016 is the opposition and reluctance of the villagers to get meters installed as there will be an increase in their monthly electricity bills. The petitioner further submitted that this was apparent when the consumers requested the Hon'ble Commission to let them continue to be in the unmetered category in the Public Hearing held on 15th April 2015 at Ghaziabad on the ARR Petition for determination of ARR/Tariff for FY 2015-16, True Ups and other matters of all the Distribution and Transmission Licensees of the state of U.P.

4.2.10 As regards metering of the consumers, Section 55 of the Electricity Act, 2003 stipulates as follows:



*“55. (1) No licensee shall supply electricity, after the expiry of two years from the appointed date, except through installation of a correct meter in accordance with regulations to be made in this behalf by the Authority:”*

4.2.11 Further, Chapter 5 ‘Metering’ of the U.P. Electricity Supply Code 2005, specifies as follows:

*“5.1 Licensees obligation to give supply on meters: Requirement of Meters*

*(a) 2 [No new connection shall be given without a Meter and Miniature Circuit Breaker(MCB) or Circuit Breaker (CB) of appropriate specification from the date of issue of this code.*

*(b) All unmetered connections including PTW, streetlights shall be metered by the licensee.*

*(c) The Licensee shall not supply electricity to any person, except through installation of a correct meter in accordance with the regulations to be made by the Central Electricity Authority under Electricity Act, 2003.]*

*Provided that the Commission may, by notification, extend the said period for a class or classes of persons or for such area as may be specified in that notification.*

*2 [Provided also that if a person makes default in complying with the provisions contained in the clauses 5.1(a), (b) and (c), UPERC may make such order as it thinks fit for requiring the default to be made good by the generating company or licensee or by any officer of a company or other association or any person who is responsible for the default.”*

4.2.12 From the above, it is evident that metering of consumers is necessary. However, by not complying with the above, the Distribution Licensee is contravening and is in default of above provisions / Regulations. The Distribution Licensee must demonstrate on best effort basis, their will and intent to comply, failing which they are liable for being dealt with appropriately as per provisions of the Act / Regulations.

4.2.13 It is observed that the Petitioner has projected 2922, 1904, 911 unmetered consumers for FY 2017-18, FY 2018-19 and FY 2019-20 respectively, however the petitioner has proposed a very slow pace of metering the unmetered consumers. The petitioner must put in sincere efforts and achieve 100% metering in the MYT Control Period. **The Commission directs the petitioner to**

---



**submit the 100% metering action plan at the time of Annual Performance Review and must target to achieve 100% metering within the MYT Control Period.**

- 4.2.14 The Commission after close scrutiny of the methodology adopted by the petitioner finds it fair and equitable and hence approves the Number of Consumers, Sales and Connected Load for the control period. The same shall be reviewed at the time of Annual Performance Review.

#### **4.3 DISTRIBUTION LOSS**

- 4.3.1 The distribution losses approved by Commission for FY 2016-17 was 8.00% based on past trends. The Petitioner submitted that in-spite of several path-breaking initiatives, due to socio-economic environment prevailing in the State; it has become arduous and daunting task for the Company to contain T&D loss at 8.00%. As per the internal technical loss study, at 33 kV level itself technical losses are more than 1%. It has therefore requested the Commission to consider ground realities and approve the distribution losses as projected at 8.32%, 8.43% and 8.52% for FY 2017-18, FY 2018-19 and FY 2019-20 respectively, which is much lower as compared to the rest of the State.
- 4.3.2 The distribution losses projected by NPCL for FY 2017-18, FY 2018-19 and FY 2019-20 are 8.32%, 8.43% and 8.52% respectively. The Commission would reiterate that there has been no significant improvement in loss levels, despite huge capital expenditure / system improvements undertaken by NPCL every year.
- 4.3.3 The Commission acknowledges the fact that the Greater Noida area was largely a rural area and with development on year-to-year basis, more of the area is being urbanized. Hence, it requires a huge capital expenditure to cater to the demand of existing and new consumers. However, still the Distribution losses have been constant and are around 8.00% from so many years.
- 4.3.4 Apart from network improvement issues, there are other issues such as social agitation, theft etc. The Commission acknowledges the fact that petitioner has been taking various steps to curb these Commercial losses. The Commission is of the view that any improvement in the metering status of the Licensee would assist the Licensee to curtail the losses at below or at least contain losses at 8.00% levels. The Commission recognizing the fact that the distribution loss of



8.00% is one of the lowest in comparison to similarly placed Discoms, the distribution losses for the control period are being approved at 8.00%, however the Licensee should make best of its efforts to reduce the losses from the exiting level.

- 4.3.5 In this regard, the Petitioner had made an appeal before the Hon'ble APTEL for approval of distribution loss at 8.00% level for FY 2015-16 on the basis of ever increasing loss-prone rural load, sparsely populated, hence, low density of load per square kilometer, absence of separate Police Station and dedicated Special Court to deal with the Electricity Theft Cases, rampant political interference etc.
- 4.3.6 Hon'ble APTEL in its Judgment dated June 2, 2016 also agreed with the Commission's contention of setting the distribution loss target at 8.00% level for FY 2015-16 and opined that there can be no going back to set the loss reduction target to such higher level of 8.41% considering the fact that the Commission is allowing the capital expenditure required to sustain/lower the losses and the fact of growing urbanization of the consumer mix, increasing HT:LT sales ratio and also considering the capability and achievement of the Petitioner in previous years. The relevant extract of the Judgment of Hon'ble APTEL is reproduced below:

*"g. We have observed that the Appellant is consistently maintaining Distribution losses at a very efficient level. Even during the FY 2013-14 it had over achieved the Distribution loss reduction target set by the State Commission. The target set by the State Commission for Distribution loss has not been further reduced to below 8% in the Impugned Tariff Order. There can be no going back to set the loss reduction target to such higher level of 8.41% considering the fact that the State Commission is allowing the capital expenditure required to sustain/lower the losses and the fact of growing urbanization of the consumer mix, increasing HT:LT sales ratio and also considering the capability and achievement of the Appellant in previous years.*

*h. The distribution losses are to be brought down and there is always scope for improvement and the fact that the Appellant has been achieving these targets, hence we are in agreement with the State Commission on the issue*



*of T&D loss reduction target being set at 8% for FY 2015-16. Accordingly, this issue is decided against the Appellant.” [Emphasis Supplied]*

- 4.3.7 Thus, in line with the approach adopted by the Commission in its previous tariff orders for NPCL and considering that NPCL during this control period will convert all unmetered consumers to metered consumers, the Commission approves distribution loss of 8.00% for FY 2017-18 to FY 2019-20.

#### 4.4 ENERGY BALANCE

- 4.4.1 The Commission in the above Sections has discussed about approval of sales and distribution losses. Based on these elements, the power purchase requirement and the energy balance for FY 2017-18 to FY 2019-20 is given in the Table below:

**Table 4-4 APPROVED ENERGY BALANCE FOR FY 2017-18 TO FY 2019-20**

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Proposed Energy Sales (MU)	1,780.99	1,780.99	2,041.89	2,041.89	2,354.08	2,354.08
Distribution Loss %	8.32%	8.00%	8.43%	8.00%	8.52%	8.00%
Distribution Loss (MU)	161.70	154.87	188.08	177.56	219.32	204.70
Energy Available for Sale	1,942.69	1,935.86	2,229.96	2,219.44	2,573.40	2,558.78
System Losses at 220kV/33kV (MU)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Proposed Energy Purchase (MU)</b>	<b>1,942.69</b>	<b>1,935.86</b>	<b>2,229.96</b>	<b>2,219.44</b>	<b>2,573.40</b>	<b>2,558.78</b>

#### 4.5 COLLECTION EFFICIENCY

- 4.5.1 The petitioner in its petition for approval of business plan submitted that Regulation 7.1 of MYT Regulation, 2014 inter-alia provides for stipulation of trajectory for Collection efficiency. The details of actual Collection efficiency for past five years are as shown below:

**Table 4-5 COLLECTION EFFICIENCY FOR LAST FIVE YEARS AS SUBMITTED BY THE PETITIONER**

Sl. No.	Financial Year	Collection Efficiency (%)
1	FY 2011-12	98.37%
2	FY 2012-13	99.59%
3	FY 2013-14	98.74%

Sl. No.	Financial Year	Collection Efficiency (%)
4	FY 2014-15	99.11%
5	FY 2015-16	97.99%

4.5.2 The petitioner has further submitted that it has become difficult for the petitioner to maintain the collection efficiency at the existing level considering the various socioeconomic factors prevailing in its area of operations. Considering above the petitioner has requested the Commission to approve collection efficiency of around 97% to 98% of the sales. Further, the petitioner submitted that overall recovery around 97 - 98% of the sales should be considered as efficient collection and, balance 2 - 3% should be provided as bad and doubtful debts.

4.5.3 Regulation 7 of the Distribution MYT Regulations, 2014, provides as follows:

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

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

*(a) Supply availability and wires availability;*

*(b) Distribution losses and Collection efficiency;*

*(c) Operation and Maintenance expense norm;*

*(d) Achieving 100% metering”*

4.5.4 The Commission is of the view that collection efficiency is a critical parameter to evaluate the performance of a Distribution Licensee. Accordingly, the Discom should strive to achieve 100% collection efficiency. Further, the submission of the petitioner that after the recovery of 98-99%, the remaining 2-3% should be provided as bad and doubtful debts does not hold valid, since it is observed that the petitioner has claimed a provisioning of 1.50% for bad and doubtful debts in the first control period on the basis of projected revenue billed during the year and the projected receivable from the consumers, which is allowed by the Commission, as discussed in the subsequent paragraphs.

---



#### 4.6 POWER PURCHASE QUANTUM AND COST

4.6.1 The Petitioner submitted that it has prepared its power procurement plan for the Control Period in line with the demand projections, sales estimate based on CAGR of previous 3 years audited sales (FY 2011-12 to FY 2014-15) and its present long-term contract and proposed long-term contracts for base load and procurement through short-term contracts for meeting requirement over base load / exigencies etc. to optimize power purchase cost. The power requirement of the petitioner is met from various sources includes:

a. Long Term Contracts:

- i. Long Term Power Purchase Agreement for 187 MW with M/s Dhariwal Infrastructure Ltd as per the PPA approved by the Hon'ble Commission vide its order dated April 20, 2016.
- ii. Long Term Power Purchase Agreement for 200 MW with M/s Dhariwal Infrastructure Ltd from Unit-I as per the PPA submitted to the Hon'ble Commission on September 2, 2016 and proposed to commence power supply from April 1, 2018.
- iii. Long Term Power Purchase Agreement for 1 MWp Solar power with Greater Noida Industrial Development Authority (GNIDA) as per the PPA approved by the Hon'ble Commission vide its order dated July 14 2015.

- b. To meet remaining Renewable Power Obligations by procurement of power from Bilateral Traders/ by setting-up 8-10 MWp solar plant by the Company.
- c. To meet remaining energy requirement during Peak Hours and exigencies through Short Term and Medium-Term power purchase agreements through traders.

4.6.2 Based on above the summary of Power Purchase cost as projected by the Petitioner for control period is as follows: -

**Table 4-6 POWER PURCHASE COST AS SUBMITTED BY PETITIONER FOR FY 2017-18**

Sl. No.	Source of Power Purchase	MU's	Rs./kWh	Amount Rs. Cr.
1	M/s Dhariwal Infrastructure Limited, Maharashtra (Unit-II)	1,267.09	4.02	509.37
2	Power Purchase from Traders (Short Term)	964.18	3.98	383.59
3	Power Purchase from Renewable Energy	120.01	5.21	62.57
4	Sale of energy during off-peak hours	(175.58)	3.00	(52.67)
5	Unscheduled Interchange	(76.83)	(1.00)	7.68
6	<b>Gross Power Purchase</b>	<b>2,098.87</b>	<b>4.34</b>	<b>910.54</b>





*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Sl. No.	Source of Power Purchase	MU's	Rs./kWh	Amount Rs. Cr.
7	Less: Transmission Losses	(156.18)	-	-
<b>8</b>	<b>Net Energy Available for Distribution</b>	<b>1,942.69</b>	<b>4.69</b>	<b>910.54</b>
9	Add: Intra-state Transmission Charges	-	-	45.41
10	Add: Inter-state Transmission Charges	-	-	96.24
<b>11</b>	<b>Total Power Purchase Cost</b>	<b>1,942.69</b>	<b>5.42</b>	<b>1,052.19</b>

**Table 4-7 POWER PURCHASE COST AS SUBMITTED BY PETITIONER FOR FY 2018-19**

Sl. No.	Source of Power Purchase	MU's	Rs./kWh	Amount Rs. Cr.
1	M/s Dhariwal Infrastructure Limited, Maharashtra (Unit-II)	1,267.09	4.07	515.70
2	M/s Dhariwal Infrastructure Limited, Maharashtra (Unit-I)	1,355.17	4.17	565.11
3	Power Purchase from Traders (Short Term)	186.59	4.16	77.70
4	Power Purchase from Renewable Energy	128.47	5.36	68.92
5	Sale of energy during off-peak hours	(357.39)	3.00	(107.22)
6	Unscheduled Interchange	(93.84)	(1.00)	9.38
<b>7</b>	<b>Gross Power Purchase</b>	<b>2,486.09</b>	<b>4.54</b>	<b>1,129.59</b>
8	Less: Transmission Losses	(256.13)	-	-
<b>9</b>	<b>Net Energy Available for Distribution</b>	<b>2,229.96</b>	<b>5.07</b>	<b>1,129.59</b>
10	Add: Intra-state Transmission Charges	-	-	66.88
11	Add: Inter-state Transmission Charges	-	-	244.48
<b>12</b>	<b>Total Power Purchase Cost</b>	<b>2,229.96</b>	<b>6.46</b>	<b>1,440.95</b>

**Table 4-8 POWER PURCHASE COST AS SUBMITTED BY PETITIONER FOR FY 2017-18**

Sl. No.	Source of Power Purchase	MU's	Rs./kWh	Amount Rs. Cr.
<b>1</b>	M/s Dhariwal Infrastructure Limited, Maharashtra (Unit-II)	1,270.56	4.13	524.74
<b>2</b>	M/s Dhariwal Infrastructure Limited, Maharashtra (Unit-I)	1,358.88	4.22	573.45
<b>3</b>	Power Purchase from Traders (Short Term)	535.60	4.36	233.58
<b>4</b>	Power Purchase from Renewable Energy	150.38	5.56	83.67
<b>5</b>	Sale of energy during off-peak hours	(358.37)	3.00	(107.51)
<b>6</b>	Unscheduled Interchange	(106.33)	(1.00)	10.63
<b>7</b>	<b>Gross Power Purchase</b>	<b>2,850.73</b>	<b>4.63</b>	<b>1,318.56</b>
<b>8</b>	Less: Transmission Losses	(277.33)	-	-
<b>9</b>	<b>Net Energy Available for Distribution</b>	<b>2,573.40</b>	<b>5.12</b>	<b>1,318.56</b>
<b>10</b>	Add: Intra-state Transmission Charges	-	-	78.55
<b>11</b>	Add: Inter-state Transmission Charges	-	-	266.66
<b>12</b>	<b>Total Power Purchase Cost</b>	<b>2,573.40</b>	<b>6.47</b>	<b>1,663.77</b>





## Commission's Analysis

4.6.3 The Commission while projecting the quantum of energy available from various sources for FY 2017-18 to FY 2019-20 has made the assumptions as detailed below.

### Long Term Contracts:

4.6.4 The petitioner has submitted that it has had entered into a 25-year Power Purchase Arrangement with M/s Dhariwal Infrastructure Limited (DIL) for a period of 25 years for supply of 187 MW (Net 170 MW at Plant Bus after 9% Auxiliary Consumption) under Section-62 of the Electricity Act, 2003 for which the PPA was approved by the Commission vide Order dated April 20, 2016. As per the approval, the power supply under the above PPA was to be commence from May 21, 2016, for the purpose, the Company has applied to UPSLDC for grant of NOC for Long-term access which has been duly provided. As the generating station has already achieved its Commercial operations, the Company further requested UPSLDC to provide NOC for applying Open Access on Medium term basis, which was received on October 20, 2016. Accordingly, the above power supply would commence with effect from April 1, 2018.

4.6.5 The energy availability from DIL during the Control Period along with Fixed and Variable Cost components has been claimed by the petitioner as under:

**Table 4-9 PROJECTED QUANTUM FROM DIL (UNIT II) (MU) AS SUBMITTED BY PETITIONER**

Plant Capacity	Contracted Quantum – 187 MW	FY 2017-18	FY2018-19	FY 2019-20**
2X300 MW	Net Generation	1,267.09	1,267.09	1,270.56
	155 MW *	1170.53	1,170.53	1,173.74

\* Approx. delivered at NPCL bus after Auxiliary Consumption and Transmission Losses

\*\* Leap Year

**Table 4-10 PROJECTED COST FROM DIL (UNIT II) (Rs. Crore) AS SUBMITTED BY PETITIONER**

Particulars#	FY 2017-18	FY 2018-19	FY 2019-20
Fixed Charges	261.02	255.95	251.57
Energy Charges	248.35	259.75	273.17
Transmission Charge	104.27	111.67	120.23
<b>Total Power Purchase Cost</b>	<b>613.64</b>	<b>627.37</b>	<b>644.97</b>



**#Note:** a. Fixed Charges are approved by Hon'ble Commission vide Order dated 20.04.2016.

b. Energy Charges are based on coal prices prevailing at the time of preparation of power this petition with applicable escalation. The same may vary when supply commence.

c. Transmission Charges are also based on the figures prevailing at the time of preparation of this petition actual with applicable escalation. The same may vary when actual power supply commence.

4.6.6 The Commission vide its letter dated November 6, 2017, directed NPCL to submit the details of Tariff for the complete term of PPA of Unit-II of the DIL i.e. revenue stream for the complete term of 25 years and establish that the levelized tariff for the 25 years will not exceed Rs. 4.79 (at NPCL bus bar) as approved in its order dated 15.1.2016 read with order dated 20.04.2016. NPCL submitted its reply on November 6, 2017. However, the same is not clear. The Commission observed that NPCL had promised that their levelized tariff shall not exceed Rs. 4.79 per unit. To arrive at the cost applicable during the MYT Control Period, NPCL should have submitted the year wise tariff for 25 years. Since, this detail is not submitted even after the directions of the Commission, therefore the per unit power purchase cost from DIL Unit-II (187 MW) is restricted at Rs. 4.79 per unit at UP periphery. The Commission observes that since Case-I bidding in tariff was inclusive of interstate transmission charges therefore interstate transmission charges are included in Rs. 4.79/unit.

4.6.7 The petitioner has further submitted that considering the current load growth and estimated power demand in the coming years, it has executed another PPA for 200 MW from Unit-I of M/s Dhariwal Infrastructure Limited (DIL) and a petition has also been filed on September 2, 2016 before UPERC for approval of above PPA for 200 MW (Unit – I) (Net capacity of 182 MW at interconnection point after auxiliary consumption) of power under Section 62 of the Electricity Act, 2003. The power supply has been considered w.e.f. April 1, 2018. The transmission capacity in the intra-state network is to be allocated to the petitioner only upon signing of BPTA & grant of LTA by UPPTCL for which signing of LT PPA is pre-requisite. The signing of new PPA for 200 MW capacities has been submitted to the STU seeking Long Term Access on Intra-state transmission network. Accordingly, the petitioner has claimed the power purchase as per above PPA for FY 2018-19 and FY 2019-20. The details are as follows:



**Table 4-11 PROJECTED QUANTUM FROM DIL (UNIT I) (MU) AS SUBMITTED BY PETITIONER**

Plant Capacity	Contracted Quantum – 200 MW*	FY 2017-18	FY 2018-19	FY 2019-20
2X300 MW	Net Generation	N.A.	1,355.17	1,358.88
	166 MW *	N.A.	1,212.07	1,215.39

\*Approx. delivered at NPCL bus after Auxiliary Consumption and Transmission Losses

**Table 4-12 PROJECTED QUANTUM FROM DIL (UNIT I) (Rs. Crore) AS SUBMITTED BY PETITIONER**

Particulars#	FY 2017-18	FY 2018-19	FY 2019-20
Fixed Charges	N.A.	287.30	281.29
Energy Charges	N.A.	277.81	292.16
Transmission Charge	N.A.	188.05	198.98
Total Power Purchase Cost	N.A.	753.16	772.43

**#Note:** The above projected charges based on the indicative tariff given by M/S Dhariwal Infrastructure Ltd. subject to the approval by Hon'ble Commission.

- 4.6.8 The Commission in its deficiency / query had asked the petitioner to submit the fixed charges and energy charges considered for the above LTPPA with DIL Unit I. The petitioner submitted that for supply of power from DIL Unit I, it has considered Fixed Charges have been taken as per the Petition No.1130 of 2016 for approval of PPA for procurement of 182 MW (net Contracted Capacity) currently pending before the Commission. The break-up of fixed charges submitted by the petitioner are as follows:

**TABLE 4-13 COMPONENTS OF FIXED CHARGES (DIL UNIT-I) AS SUBMITTED BY PETITIONER**

Description	FY 2018-19	FY 2019-20
Depreciation	0.50	0.50
Interest on long term loan	0.77	0.70
O&M Charges	0.29	0.31
Return on equity	0.43	0.43
Interest on working capital	0.13	0.13
<b>Total Fixed Charges</b>	<b>2.12</b>	<b>2.07</b>

- 4.6.9 The Commission vide its order dated 13.11.2017 has disposed of the Petition No.1130 of 2016 for approval of LTPPA for DIL Unit I stating as under:

*"7. The Commission heard NPCL on 10.11.2017. NPCL's counsel Ms. Divya Chaturvedi reiterated the arguments taken in their original petition and*

subsequent submissions. She stressed that the Electricity Act Permits procurement of power through MOU route under Section 62. On this the Commission pointed out that more than 10000 MW capacity is lying idle for the want of PPAs then why NPCL has come with a single proposal of M/S. Dhariwal Infrastrure only, which is a related party to NPCL. Ms. Chaturvedi clarified that they can explore other proposals also. But she kept on stressing that the capital cost of Dhariwal Infrastrucrure is quite competitive and if they go for other developers also then it would virtually amount to competitive bidding. The Commission pointed out that this ground is not tenable and cannot be accepted to approve the proposal of NPCL. NPCL's arguments of delay in completing the bidding process are not well founded. In the Tariff Policy 2016 under para 6.1 it has been provided that procurement of power for future requirement should be through a transparent competitive bidding mechanism as per the guidelines issued by the Central Government from time to time. These guidelines provide for procurement of electricity separately for base load requirements and for peak load requirements.

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 not honoring 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 initiate 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."

- 4.6.10 It can be seen form the above that NPCL has to initiate competitive bidding process immediately and then can file a fresh petition for consideration of the
-

Commission, if NPCL finds that the lowest rates discovered under competitive bidding process are higher than the prices offered by DIL. Also, for the intervening period, the Commission has allowed the petitioner to procure power from the short-term sources.

- 4.6.11 Accordingly, the Commission has not considered the power purchase from DIL Unit I for FY 2018-19 and FY 2019-20 and has assumed that the same quantum shall be purchased by NPCL from the short-term sources. Accordingly, the Fixed and Energy charges for the Long Term PPAs with DIL Unit II considered for computation of power purchase cost are as under:

**TABLE 4-14 APPROVED POWER PURCHASE COST FROM DIL-II**

Sl. No.	Source of Power Purchase	FY 2017-18			FY 2018-19			FY 2019-20		
		MU's	Amount Rs. Cr.	Rs./ kWh*	MU's	Amount Rs. Cr.	Rs./ kWh	MU's	Amount Rs. Cr.	Rs./ kWh
1	M/s Dhariwal Infrastructure Limited, Maharashtra (Unit-II)	1170.53	492.55	4.21	1170.53	487.34	4.16	1173.74	483.13	4.12

*\*Note: at NPCL bus inclusive of transmission losses but excluding transmission charges*

- 4.6.12 The Commission has considered the rate of power at NPCL bus, same as projected by the Petitioner. Any variation between the approved power purchase costs and the actual power purchase costs for the period FY 2017-18 to FY 2019-20 would be considered at the time of APR and / or true up.

#### **Procurement of Renewable Power:**

- 4.6.13 The petitioner has submitted that in order to step up RE power obligations, it is promoting roof-top solar power connected with the grid among its consumers and has satisfactorily reached to a target of 7.0 MWp in the current year. Apart from this the petitioner had signed a PPA for 1.0 MWp of solar power plant of GNIDA which has been approved by the Commission and the petitioner further proposes to set-up 8.0 MWp of solar power plant on its own land to meet the RE Power obligations and would file a separate petition.
- 4.6.14 As regards the renewable power purchase, the Commission has estimated total power purchase at 6.00% of the total requirement in accordance with the RPO Regulations as under:



**TABLE 4-15 RENEWABLE POWER PURCHASE COST APPROVED FOR FY 2017-18 TO FY 2019-20**

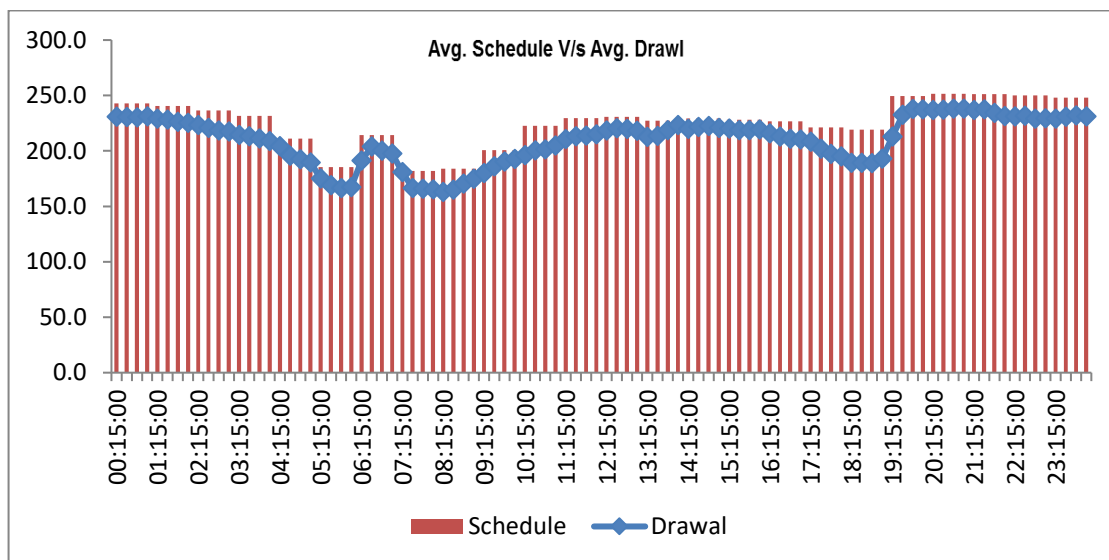
Particular	FY 2017-18	FY 2018-19	FY 2019-20
Total Energy (MU)	1935.86	2219.44	2558.78
Total RE (MU)*	116.15	133.17	153.53
Tariff (Rs./kWh)	5.47	5.63	5.84
Total Cost of Power from RE Sources (Rs. Cr.)	63.59	74.96	89.63

\* at NPCL bus

- 4.6.15 The Commission has considered the rate of power from renewable sources at NPCL bus, same as projected by the petitioner. Any variation between the approved power purchase costs and the actual power purchase costs for the control period would be considered at the time of truing up.

**Short Term / Medium Term Contracts (Excluding Renewable Power):**

- 4.6.16 The petitioner has submitted that to meet the demand it procures additional power on short/medium term basis to fully meet the demand and in order to match its daily demand curve, the additional quantum if remained unused in the distribution system due to various factors like holidays, industrial strikes, weather abnormalities etc., the same is proposed to be sold on power exchange / bilateral contracts either by petitioner directly or through power trading companies to optimize its power purchase cost.
- 4.6.17 Further the petitioner has submitted that the demand from the consumers varies drastically in a typical day. The variation in demand sometimes ranges from -20% to +20% therefore, it is difficult for the system operator to remain close to schedule all the time and requires high level of precision in demand forecasting. Still with all measures, sometimes abrupt changes in weather or local factors like strike in a big industrial unit, deviation crosses the permissible limit causing loss of revenue to Discom. It has submitted its load curve as under:



- 4.6.18 From the above graph it is noted that the petitioner is able to manage its demand/drawl within the schedule. The Commission has observed that the petitioner has proposed purchase of short term RTC power from traders at NPCL bus at the rate of Rs. 4.18 / kWh, Rs. 4.40 / kWh and Rs. 4.61 / kWh for FY 2017-18 to FY 2019-20 respectively and short-term peaking power (wherein Peak Hours: 1900-2400 Hrs based on the trend of last 5 years submitted by the petitioner) from traders at NPCL bus at the rate of Rs. 4.50 / kWh, Rs. 4.61 / kWh and Rs. 4.82 / kWh for FY 2017-18 to FY 2019-20 respectively during the control period. It is to mention that the prices of short term power from traders/market has reduced reasonably in the past few years and the actual landed cost of power purchased by the petitioner FY 2015-16 from traders/Open Access is Rs. 3.87/ kWh as against the approved rate of Rs. 4.22 / kWh in Tariff Order dated August 1, 2016. Also, the landed cost of power purchased from traders allowed by the Commission for FY 2016-17 in Order dated August 1, 2016 dated was Rs. 3.53 / kWh. Accordingly, for the control period FY 2017-18 to FY 2019-20, the power purchase cost from traders has been considered as Rs 3.87 / kWh at NPCL bus being the higher cost between FY 2015-16 and FY 2016-17. Any variation between the approved power purchase costs and the actual power purchase costs for the control period would be considered at the time of Annual Performance Review / true up.
- 4.6.19 Further it is observed that the petitioner had proposed purchase of power from second LTPPA from DIL Unit- I (200 MW) at Rs. 4.66/kwh from FY 2018-19 to



meet its base demand in coming years and has also proposed sale of excess power i.e. 175.58 MU, 357.39 MU and 358.37 MU in all the three years at the rate of Rs. 3.00 per kWh respectively. As discussed in above paras, the Commission has rejected the approval of LTTPA between NPCL and DIL Unit I and has directed the petitioner to procure power through short term sources in the intervening period, accordingly the same quantum of power has been considered to be procured through short term sources to meet the remaining demand along with the short-term peaking power purchase from traders. Further the petitioner's claim on UI and sale of excess power has been disallowed.

4.6.20 Further, the Commission has considered the transmission charges (PGCIL charges) as projected by the petitioner and UPPTCL transmission tariff as approved in the UPPTCL MYT Tariff Order, by proportionately decreasing the transmission charges with respect to the adjustment in total power purchase. Any variation between the approved and the actual transmission charges for the control period would be considered at the time of Annual Performance Review / True-Up.

4.6.21 Accordingly, there has been a decrease in the approved power purchase cost of FY 2017-18 to FY 2019-20 which is shown as under:

**TABLE 4-16 APPROVED POWER PURCHASE COST FOR FY 2017-18**

Particulars	Petition			Approved		
	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)
Long Term Power-DIL (Unit-II)	<b>1170.53</b>	<b>4.35</b>	<b>509.37</b>	<b>1170.53</b>	<b>4.21</b>	<b>492.55</b>
Unscheduled Interchange	-76.83	-1.00	7.68	0.00	0.00	0.00
<b>Power Purchase from Traders</b>	<b>910.29</b>	<b>4.21</b>	<b>383.59</b>	<b>649.18</b>	<b>3.87</b>	<b>251.23</b>
Power Purchase from Traders (RTC)	824.14	4.18	344.81	563.03	3.87	217.89
Power Purchase from Traders (Peak)	86.15	4.50	38.78	86.15	3.87	33.34
Power Purchase from RE	114.28	5.47	62.57	116.15	5.47	63.59
Excess power for sale	-175.58	3.00	-52.67	0.00	3.00	0.00
<b>Sub-Total</b>	<b>1942.70</b>	<b>4.69</b>	<b>910.54</b>	<b>1935.86</b>	<b>4.17</b>	<b>807.38</b>
Transmission Charges for Open Access (Inter State including Long-term Transmission Charges)			141.65			135.54
<b>Total Transmission charges</b>		<b>0.73</b>	<b>141.65</b>		<b>0.70</b>	<b>135.54</b>





*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Particulars	Petition			Approved		
	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)
Underpaid / (Overpaid) Power purchase expenses for previous years						
<b>Total Power Purchase Cost</b>	<b>1942.70</b>	<b>5.42</b>	<b>1052.19</b>	<b>1935.86</b>	<b>4.87</b>	<b>942.91</b>

**TABLE 4-17 APPROVED POWER PURCHASE COST FOR FY 2018-19**

Particulars	Petition			Approved		
	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)
<b>Long Term Power</b>	<b>2382.60</b>	<b>4.54</b>	<b>1080.81</b>	<b>1170.53</b>	<b>4.16</b>	<b>487.34</b>
Long Term Power- DIL (Unit II)	1170.53	4.41	515.70	1170.53	4.16	487.34
Long Term Power- DIL (Unit I)	1212.07	4.66	565.11	0.00	0.00	0.00
Unscheduled Interchange	-93.84	-1.00	9.38	0.00	0.00	0.00
<b>Power Purchase from Traders</b>	<b>176.16</b>	<b>4.41</b>	<b>77.70</b>	<b>915.74</b>	<b>3.87</b>	<b>354.39</b>
Power Purchase from Traders (RTC)	163.75	4.40	71.98	901.78	0.00	369.65
Power Purchase from Traders (Peak)	12.41	4.61	5.72	13.96	3.87	5.40
Power Purchase from RE	122.44	5.63	68.92	133.17	5.63	74.96
Excess power for sale	-357.39	3.00	-107.22	0.00	3.00	0.00
<b>Sub-Total</b>	<b>2229.96</b>	<b>5.07</b>	<b>1129.59</b>	<b>2219.44</b>	<b>4.22</b>	<b>937.35</b>
Transmission Charges for Open Access (Including Long-term Transmission Charges)			311.36			158.57
<b>Total Transmission charges</b>		<b>1.40</b>	<b>311.36</b>		<b>0.71</b>	<b>158.57</b>
Underpaid / (Overpaid) Power purchase expenses for previous years						
<b>Total Power Purchase Cost</b>	<b>2,229.96</b>	<b>6.46</b>	<b>1,440.96</b>	<b>2,219.44</b>	<b>4.94</b>	<b>1,095.92</b>

**TABLE 4-18 APPROVED POWER PURCHASE COST FOR FY 2019-20**

Sources of Power Purchase	Petition			Approved		
	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)
<b>Long Term Power</b>	<b>2389.13</b>	<b>4.60</b>	<b>1098.19</b>	<b>1173.74</b>	<b>4.12</b>	<b>483.13</b>
Long Term Power- DIL (Unit II)	1173.74	4.47	524.74	1173.74	4.12	483.13
Long Term Power- DIL (Unit I)	1215.39	4.72	573.45	0.00	0.00	0
Unscheduled Interchange	-106.33	-1.00	10.63	0.00	0.00	0.00
<b>Power Purchase from Traders</b>	<b>505.66</b>	<b>4.62</b>	<b>233.58</b>	<b>1231.51</b>	<b>3.87</b>	<b>476.59</b>



Sources of Power Purchase	Petition			Approved		
	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)
Power Purchase from Traders (RTC)	477.68	4.61	220.09	1203.52	3.87	465.76
Power Purchase from Traders (Peak)	27.99	4.82	13.49	27.99	3.87	10.83
Power Purchase from RE	143.31	5.84	83.67	153.53	5.84	89.63
Excess Power for Sale	-358.37	3.00	-107.51	0.00	3.00	0.00
<b>Sub-Total</b>	<b>2573.40</b>	<b>5.12</b>	<b>1318.56</b>	<b>2558.78</b>	<b>4.10</b>	<b>1049.35</b>
Transmission Charges for Open Access (Including Long-term Transmission Charges)			345.21			183.70
<b>Total Transmission charges</b>		<b>1.34</b>	<b>345.21</b>		<b>0.72</b>	<b>183.70</b>
Underpaid / (Overpaid) Power purchase expenses for previous years						
<b>Total Power Purchase Cost</b>	<b>2,573.40</b>	<b>6.47</b>	<b>1,663.77</b>	<b>2,558.78</b>	<b>4.82</b>	<b>1,233.05</b>

4.6.22 Further, for the purpose of computation of Transmission Tariff for UPPTCL for the MYT control period, the short-term power of NPCL has not been considered by the Commission, as no confirmation on the same was submitted by the transmission licensee. However, the Commission has considered the power purchase quantum as proposed by NPCL (from the Long-term sources i.e DIL Unit I and DIL Unit II) for computation of Transmission Tariff for UPPTCL for the MYT control period 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.

#### 4.7 FUEL AND POWER PURCHASE COST ADJUSTMENT / INCREMENTAL POWER PROCUREMENT COST

4.7.1 The Commission in the Review Petition No. 893/2013 filed by UPPCL, MVVNL, PVVNL, PuVVNL, DVVNL & KESCo in the matter of “Review of the Mechanism for Fuel & Power Purchase Cost Adjustment formulated by the Commission”, had approved the revised formula / procedure with respect to the applicability and recovery of Fuel and Power Purchase Cost Adjustment (FPPCA) in its Tariff Order dated June 18, 2015 for FY 2015-16 as detailed below:



## **6.9 Fuel and Power Purchase Cost Adjustment (FPPCA):**

### **1. Recovery Periodicity (Cycle):**

The cycle will be quarterly. The FPPCA for the quarter ending March will be calculated in next quarter i.e. up to June when the data / bills from generators / suppliers and sale of energy data for the quarter under consideration are available and the same will be applicable to all categories w.e.f. July.

### **2. Fuel & Power Purchase Cost Adjustment Formula (FPPCA):**

1. The distribution licensee shall recover FPPCA amount with effect from a date which would be issued by a separate Commission's order from all consumers. The formula is as follows:

#### **Step (A) Determination of Difference between Actual and Approved Power Purchase Cost in a quarter**

$$P_D = (P_{\text{actual}} - P_{\text{approved}})$$

Where,

$P_D$  = Difference in Actual and Approved Power Purchase Cost (Rs. Crore)

$P_{\text{actual}}$  = Actual Cost of Power Purchase (Rs. Crore)

$P_{\text{approved}}$  = Approved Cost of Power Purchase (Rs. Crore)

#### **Step (B) Determination of (E) Energy billed (in MUs) in a quarter after considering approved T&D losses.**

Actual power purchased during the quarter (MUs) : X (MUs)

Approved T&D losses : Y%

Approved MUs billed after T&D losses (E) :  $X * (1 - Y / 100)$

#### **Step (C) Determination of Category wise Fuel & Power Purchase Cost Adjustment per unit based on approved T&D losses to be charged from consumers each month of the quarter**

$$\text{Category wise FPPCA (Rs. / unit)} = ABR_C / ABR_D * FPPCA_A$$

Where,

**FPPCA<sub>A</sub>** is Average Fuel and Power Purchase Cost Adjustment (in Rs. / kWh)  
 $= (P_D/E) * 10$

**ABR<sub>C</sub>** is Average Billing Rate or through rate of Consumer Category (in Rs. / kWh) as approved in Tariff Order for the year

**ABR<sub>D</sub>** is Average Billing Rate or through rate of Distribution Licensee (in Rs. / kWh) as approved in Tariff Order for the year

2. The variation in power purchase cost due to UI and other unapproved purchases from short term sources shall not be covered under FPPCA-

3. For the purpose of recovery of FPPCA, power purchase cost shall include all the bills received by the distribution licensee, from the suppliers of the power, during the previous FPPCA cycle irrespective of the period to which they pertain. This shall include arrears and refunds, if any, not settled earlier.

4. The total FPPCA recoverable, as per the formula specified above, shall be recovered from the actual sales and in case of unmetered consumers, it shall be recoverable based on estimated sales to such consumers, calculated in accordance with such methodology / mechanism as may be stipulated by the Commission.

5. Per unit rate of FPPCA shall be worked out in paisa after rounding off to the unit place.

6. In case of negative FPPCA, the credit shall be given to the consumers under the FPPCA head, so that the base tariff determined by the Commission effectively remains the same.

7. The Distribution licensee shall submit details to the Commission on a quarterly basis towards the computation of the FPPCA, which shall include the source wise power purchase quantum, power purchase cost incurred and power purchase rate, details of the FPPCA incurred and the FPPCA chargeable from the consumers for each month in such quarter, along with the detailed computations and supporting documents as may be required for approval by the Commission.

Provided that the above submission made to the Commission must be certified by a Chartered Accountant.



*Provided further that the FPPCA applicable for each month shall be displayed prominently at the collection centres and the offices dealing with consumers and on the internet website of the Distribution Licensee.*

*Provided that the Distribution Licensee shall put up on his internet website such details of the FPPCA incurred and the FPPCA charged to all consumers for each month along with detailed computations.*

*8. In case of Minimum Charges, FPPCA shall be charged only on actual units consumed by the consumer during the relevant month in addition to the Minimum Charges amount.*

*9. In case Government of Uttar Pradesh decided to provide subsidy on FPPCA to a particular consumer category then, it should do the same as per the provisions of Section 65 of Electricity Act 2003. It shall be the responsibility of the licensee to seek prior approval of the State Government in this regard and maintain appropriate record of the same.*

*10. The Commission may however suitably modify / change the proposed formula / procedure or adopt a different formula / procedure for the assessment of fuel surcharge if it considers it to be more appropriate.*

- 4.7.2 Further, the Commission, through its various Tariff Orders Directions / Letters / Deficiency notes (during ARR processing) had been repeatedly asking the Licensee to file FPPCA in a timely and regular manner. In view of the above, the Commission vide its Letter dated July 26, 2017 directed NPCL to file the FPPCA for the FY 2016-17.
- 4.7.3 In view of the above directions, NPCL vide its Letter dated September 6, 2017 submitted the FPPCA for 1st, 2nd, 3rd and 4th Quarter of FY 2016-17. A preliminary analysis of the Petition was done by the Commission, wherein certain deficiencies / discrepancies were observed. In view of the deficiencies / discrepancies in the submission made by NPCL, the Commission will deal the same at the time of truing of FY 2016-17.
- 4.7.4 It is to be noted that the power purchase expenses being an uncontrollable expense, is pass-through to the consumers, however, the difference between the actual cost of power procurement and the approved power purchase expenses, is being recovered by the Distribution Licensee at the time of truing
-

up. The time lag in recovery of the variation in power purchase expenses adversely affects the cash flow of the Distribution Licensee and also puts additional burden on consumers on account of Carrying Cost.

- 4.7.5 For the purpose of Fuel & Power Purchase Cost Adjustment (FPPCA) / Incremental Power Procurement Cost (Incremental Cost) the projected monthly power purchase requirement is provided in this Order, which is derived from the monthly power purchase submitted by the Licensee.
- 4.7.6 Failure to file FPPCA / Incremental Cost in a timely manner has many repercussions such as higher accumulated Aggregate Revenue Requirement (ARR) on account of variation in Power Purchase Expenses and the carrying cost and higher increase in Tariff or allowance in the form of Regulatory Surcharge, leading to Tariff shock. Further, the delayed filing of the FPPCA / Incremental Cost and claiming of the additional power purchase expenses during the Truing-up process also put the burden of such additional power purchase expenses on the new consumers, who may not have been consumers during the respective year.
- 4.7.7 The Commission once again directs the licensee that they should file FPPCA / Incremental Cost in a timely and regular manner failing which the Commission may have to resort to take strict action against the Licensees like disallowance of additional power purchase expenses and the associated carrying cost on account of additional Power Purchase expenses or any other action that the Commission may deem fit while doing the Truing up of the said year.
- 4.7.8 For the purpose of Fuel & Power Purchase Cost Adjust (FPPCA) / Incremental Cost, the projected monthly power purchase requirements approved by the Commission are provided in the Table below.

**TABLE 4-19 MONTHLY POWER PURCHASE COST APPROVED FOR FY 2017-18 TO FY 2019-20**

Month	FY 2017-18		FY 2018-19		FY 2019-20	
	Volume (MU)	Cost (Rs. Crore)	Volume (MU)	Cost (Rs. Crore)	Volume (MU)	Cost (Rs. Crore)
Apr	156.33	76.14	181.91	89.82	209.65	101.03
May	162.38	79.09	189.22	93.44	217.85	104.98
Jun	158.38	77.14	182.02	89.88	210.26	101.32
Jul	164.89	80.31	189.33	93.49	218.68	105.38
Aug	166.46	81.08	189.91	93.77	218.56	105.32



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Month	FY 2017-18		FY 2018-19		FY 2019-20	
	Volume (MU)	Cost (Rs. Crore)	Volume (MU)	Cost (Rs. Crore)	Volume (MU)	Cost (Rs. Crore)
Sep	161.70	78.76	183.18	90.45	210.09	101.24
Oct	165.55	80.63	190.55	94.09	217.62	104.87
Nov	165.29	80.51	182.03	89.88	208.50	100.47
Dec	165.50	80.61	188.48	93.07	215.97	104.07
Jan	162.00	78.91	188.48	93.07	215.21	103.71
Feb	143.90	70.09	165.93	81.94	198.26	95.54
Mar	163.48	79.63	188.42	93.04	218.12	105.11
<b>Total</b>	<b>1,935.85</b>	<b>942.91</b>	<b>2,219.45</b>	<b>1,095.93</b>	<b>2,558.77</b>	<b>1,233.05</b>



## **5. AGGREGATE REVENUE REQUIREMENT FOR MYT PERIOD FOR FY 2017-18 TO FY 2019-20**

### **5.1 INTRODUCTION**

- 5.1.1 The Commission in the earlier chapters has undertaken Truing-up of ARR for FY 2015-16 based on the audited accounts submitted by the Petitioner. Further, as there has been no significant change in FY 2016-17, the Commission has not revised the ARR for FY 2016-17. In this Section the Commission has discussed in detail each of the component of ARR for FY 2017-18 to FY 2019-20.

### **5.2 POWER PURCHASE COST**

- 5.2.1 As discussed in the Business Plan chapter, the petitioner has claimed the power purchase cost for power procurement to meet energy requirement during the first control period from following sources:
- a. Long Term Power Purchase Agreement for 187 MW with M/s Dhariwal Infrastructure Ltd as per the PPA approved by the Hon'ble Commission vide its order dated April 20, 2016.
  - b. Long Term Power Purchase Agreement for 200 MW with M/s Dhariwal Infrastructure Ltd from Unit-I as per the PPA submitted to the Hon'ble Commission on 02nd September, 2016 and proposed to commence power supply from April 1, 2018.
  - c. Long Term Power Purchase Agreement for 1 MWp Solar power with Greater Noida Industrial Development Authority (GNIDA) as per the PPA approved by the Hon'ble Commission vide its order dated July 14, 2015.
  - d. To meet remaining Renewable Power Obligations by procurement of power from Bilateral Traders/ by setting-up 8-10 MWp solar plant by the Company.
  - e. To meet remaining energy requirement during Peak Hours and exigencies through Short Term and Medium-Term power purchase agreements through traders.
- 5.2.2 The Commission has dealt with the approval of the power purchase cost including transmission charges in detail in Business Plan chapter, which is as follows:
-





Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16

**TABLE 5-1 APPROVED POWER PURCHASE COST FOR FY 2017-18**

Sources of Power Purchase	Petition			Approved		
	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)
Long Term Power-DIL (Unit-II)	1170.53	4.35	509.37	1170.53	4.21	492.55
Unscheduled Interchange	(76.83)	(1.00)	7.68	0.00	0.00	0.00
<b>Power Purchase from Traders</b>	<b>910.29</b>	<b>4.21</b>	<b>383.59</b>	<b>649.18</b>	<b>3.87</b>	<b>251.23</b>
Power Purchase from Traders (RTC)	824.14	4.18	344.81	563.03	3.87	217.89
Power Purchase from Traders (Peak)	86.15	4.50	38.78	86.15	3.87	33.34
Power Purchase from RE	114.28	5.47	62.57	116.15	5.47	63.59
Excess power for sale	(175.58)	3.00	(52.67)	0.00	3.00	0.00
<b>Sub-Total</b>	<b>1942.70</b>	<b>4.69</b>	<b>910.54</b>	<b>1935.86</b>	<b>4.17</b>	<b>807.38</b>
Transmission Charges for Open Access (Inter State including Long-term Transmission Charges)			141.65			135.54
<b>Total Transmission charges</b>		<b>0.73</b>	<b>141.65</b>		<b>0.70</b>	<b>135.54</b>
Underpaid / (Overpaid) Power purchase expenses for previous years						
<b>Total Power Purchase Cost</b>	<b>1942.70</b>	<b>5.42</b>	<b>1052.19</b>	<b>1935.86</b>	<b>4.87</b>	<b>942.91</b>

**TABLE 5-2 APPROVED POWER PURCHASE COST FOR FY 2018-19**

Sources of Power Purchase	Petition			Approved		
	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)
<b>Long Term Power</b>	<b>2382.60</b>	<b>4.54</b>	<b>1080.81</b>	<b>1170.53</b>	<b>4.16</b>	<b>487.34</b>
Long Term Power- DIL (Unit II)	1170.53	4.41	515.70	1170.53	4.16	487.34
Long Term Power- DIL (Unit I)	1212.07	4.66	565.11	0.00	0.00	0.00
Unscheduled Interchange	(93.84)	(1.00)	9.38	0.00	0.00	0.00
<b>Power Purchase from Traders</b>	<b>176.16</b>	<b>4.41</b>	<b>77.70</b>	<b>915.74</b>	<b>3.87</b>	<b>354.39</b>
Power Purchase from Traders (RTC)	163.75	4.40	71.98	901.78	0.00	369.65
Power Purchase from Traders (Peak)	12.41	4.61	5.72	13.96	3.87	5.40
Power Purchase from RE	122.44	5.63	68.92	133.17	5.63	74.96
Excess power for sale	(357.39)	3.00	(107.22)	0.00	3.00	0.00
<b>Sub-Total</b>	<b>2229.96</b>	<b>5.07</b>	<b>1129.59</b>	<b>2219.44</b>	<b>4.22</b>	<b>937.35</b>
Transmission Charges for Open Access (Including Long-term Transmission Charges)			311.36			158.57
<b>Total Transmission charges</b>		<b>1.40</b>	<b>311.36</b>		<b>0.71</b>	<b>158.57</b>
Underpaid / (Overpaid) Power purchase expenses for previous years						
<b>Total Power Purchase Cost</b>	<b>2,229.96</b>	<b>6.46</b>	<b>1,440.96</b>	<b>2,219.44</b>	<b>4.94</b>	<b>1,095.92</b>



**TABLE 5-3 APPROVED POWER PURCHASE COST FOR FY 2019-20**

Sources of Power Purchase	Petition			Approved		
	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)	Energy (MU)	Avg. (Rs. /kWh)	Costs (Rs. Crore)
<b>Long Term Power</b>	<b>2389.13</b>	<b>4.60</b>	<b>1098.19</b>	<b>1173.74</b>	<b>4.12</b>	<b>483.13</b>
Long Term Power- DIL (Unit II)	1173.74	4.47	524.74	1173.74	4.12	483.13
Long Term Power- DIL (Unit I)	1215.39	4.72	573.45	0.00	0.00	0
Unscheduled Interchange	(106.33)	(1.00)	10.63	0.00	0.00	0.00
<b>Power Purchase from Traders</b>	<b>505.66</b>	<b>4.62</b>	<b>233.58</b>	<b>1231.51</b>	<b>3.87</b>	<b>476.59</b>
Power Purchase from Traders (RTC)	477.68	4.61	220.09	1203.52	3.87	465.76
Power Purchase from Traders (Peak)	27.99	4.82	13.49	27.99	3.87	10.83
Power Purchase from RE	143.31	5.84	83.67	153.53	5.84	89.63
Excess Power for Sale	(358.37)	3.00	(107.51)	0.00	3.00	0.00
<b>Sub-Total</b>	<b>2573.40</b>	<b>5.12</b>	<b>1318.56</b>	<b>2558.78</b>	<b>4.10</b>	<b>1049.35</b>
Transmission Charges for Open Access (Including Long-term Transmission Charges)			345.21			183.70
<b>Total Transmission charges</b>		<b>1.34</b>	<b>345.21</b>		<b>0.72</b>	<b>183.70</b>
Underpaid / (Overpaid) Power purchase expenses for previous years						
<b>Total Power Purchase Cost</b>	<b>2,573.40</b>	<b>6.47</b>	<b>1,663.77</b>	<b>2,558.78</b>	<b>4.82</b>	<b>1,233.05</b>

### 5.3 OPERATION AND MAINTENANCE EXPENSE

5.3.1 The Petitioner submitted that the O&M expenses comprise of Employee costs, Administrative & General (A&G) Expenses and Repair & Maintenance (R&M) expenses. Regulation 25 of the Distribution MYT 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 submitted that it has computed the norms for O&M expense considering the Base Year as FY 2016-17.

5.3.2 The Commission sent the detailed computation of O&M Expense computed as per the methodology provided in Distribution MYT Regulations, 2014 for the petitioner's comment. The petitioner in reply submitted its revised submission on computation of O&M Expense and raised some of the objections on the methodology adopted by the Commission. For the sake of brevity, the



Commission has shown the detailed methodology adopted by the Commission for computation of O&M expense in the subsequent paragraphs along with the petitioner's submission.

- 5.3.3 The Distribution 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 relevant extract of the Regulations is as follows:

***"25. Operation & Maintenance Expenses***

*(a) The Commission shall stipulate a separate trajectory of norms for each of the components of O&M expenses viz., Employee cost, Repairs and maintenance (R&M) expense and Administrative and General Expense (A&G) expense. Provided that such norms may be specified for a specific Distribution Licensee or a class of Distribution Licensees.*

*(b) Norms shall be defined in terms of combination of number of personnel per 1000 consumers and number of personnel per substation along with annual expenses per personnel for Employee cost; combination of A&G expense per personnel and A&G expense per 1000 consumers for A&G expenses and R&M expense as percentage of gross fixed assets for estimation of R&M expenses:*

*(c) One-time expenses such as expense due to change in accounting policy, arrears paid due to pay commissions etc., shall be excluded from the norms in the trajectory.*

*(d) The expenses beyond the control of the Distribution Licensee such as dearness allowance, terminal benefits etc. in Employee cost etc., shall be excluded from the norms in the trajectory.*

*(e) The One-time expenses and the expenses beyond the control of the Distribution Licensee shall be allowed by the Commission over and above normative Operation & Maintenance Expenses after prudence check.*

*(f) The norms in the trajectory shall be specified over the control period with due consideration to productivity improvements.*



(g) The norms shall be determined at constant prices of base year and escalation on account of inflation shall be over and above the baseline.

(h) The Distribution Licensee specific trajectory of norms shall be identified by the Commission on the basis of simple average of previous five years audited figures, duly normalized for any abnormal variation.

(i) For new Distribution Licensee whose date of commercial operation is within the tariff period (i.e. April 1, 2015 to March 31, 2020), detailed project report shall be used by the Commission to estimate values of norms.”

### **25.1 Employee Cost**

Employee cost shall be computed as per the approved norm escalated by consumer price index (CPI), adjusted by provisions for expenses beyond the control of the Licensee and onetime expected expenses, such as recovery/adjustment of terminal benefits, implications of pay commission, arrears, Interim Relief etc., governed by the following formula:

$$EMP_n = (EMP_b * CPI \text{ inflation}) + \text{Provision}$$

Where:

$EMP_n$ : Employee expense for the year  $n$ .

$EMP_b$ : Employee expense as per the norm CPI inflation: is the average increase in the Consumer Price Index (CPI) for immediately preceding three financial years.

Provision: Provision for expenses beyond control of the Distribution Licensee and expected one-time expenses as specified above.”

### **25.2 Repairs and Maintenance Expense**

Repairs and Maintenance expense shall be calculated as percentage (as per the norm defined) of Average Gross Fixed Assets for the year governed by following formula:

$$R\&M_n = K_b * GFAn$$

Where:

$R\&M_n$ : Repairs & Maintenance expense for  $n$ th year

$GFAn$ : Average Gross Fixed Assets for  $n$ th year

$K_b$ : Percentage point as per the norm.”

### **25.3 Administrative and General Expense**

*A&G expense shall be computed as per the norm escalated by wholesale price index (WPI) and adjusted by provisions for confirmed initiatives (IT etc. initiatives as proposed by the Distribution Licensee and validated by the Commission) or other expected one-time expenses, and shall be governed by following formula:*

$$A\&G_n = (A\&G_b * WPI \text{ inflation}) + \text{Provision}$$

*Where:*

*A&G<sub>n</sub>: A&G expense for the year n*

*A&G<sub>b</sub>: A&G expense as per the norm*

*WPI inflation: is the average increase in the Wholesale Price Index (WPI) for immediately preceding three financial years*

*Provision: Cost for initiatives or other one-time expenses as proposed by the Distribution Licensee and validated by the Commission. “*

- 5.3.4 The Commission in its Order dated February 23, 2017, issued under Clause 42 (Power to Remove Difficulties) of Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014 has clarified the base year as submitted below:

*“.....Now whereas, Clause 3.1 (5) and Clause 4.12.1 of the Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014 relates to the Base Year. Clause 3.1 (5) provides that “Base Year” means the financial year immediately preceding first year of the Control Period (FY 2017-18 to FY 2019-20) i.e. FY 2016-17 and used for the purposes of these regulations;” and Clause 4.12.1 provides that “The values for the Base Year of the Control Period will be determined based on the audited accounts available, best estimate for the relevant years and other factors considered relevant by the Commission, and after applying the tests for determining the controllable or uncontrollable nature of various items.”*

*And whereas, from above it can be observed that as per the Clause 3.1 (5) the Base Year should be FY 2016-17. However, as per clause 4.12.1, the values for the Base Year of the Control Period will be determined based on the audited accounts available best estimate for the relevant years and other factors considered relevant by the Commission, and after applying the tests for determining the controllable or uncontrollable nature of various items. It is for sure that the audited accounts for FY 2016-17 cannot be made available at time of filing of the petition (i.e. November 1, 2016) for MYT first control period (i.e. FY 2017-18 to FY 2019-20). The available audited accounts will be*

---



*for FY 2015-16 and its preceding years. Hence, the 'Base Year' must be taken to be as FY 2015-16 and in case audited accounts of FY 2015-16 are not available, then immediately preceding previous year i.e. FY 2014-15 must be taken as 'Base Year'."*

- 5.3.5 The audited data for NPCL is available up to FY 2015-16. Accordingly, the base year has been considered as FY 2015-16. Accordingly, the Commission has computed the norms as described in Regulation 25(b) of the Distribution MYT Regulations, 2014. Considering these norms, subsequently the O&M Expense for FY 2017-18 to FY 2019-20 is computed, whose component wise detailed computation is shown as follows:

**Computation of Employee Cost:**

- 5.3.6 In response to the Commission's note (depicting the methodology for computation of O&M Expense as per Distribution MYT Regulations, 2014), the petitioner revised its submission on computation of O&M Expenses and requested the Commission as follows:

- i. Consider the year wise percentage increase in O&M expense till previous five years for computation of base year expenses.
- ii. Allow one-time expenses for considering the revised minimum wages.

- 5.3.7 Considering the methodology provided in MYT Distribution Tariff Regulations, 2014, the detailed computation of Employee Expense is as follows:

- 5.3.8 Step-1: The norms for preceding five years for which audited accounts is available i.e. FY 2011-12 to FY 2015-16 is calculated by using following formulae:

Sl No	Formulae
(A)	Norms per 1000 consumers = (Employee Expense for year / Number of Consumers) * 1000
(B)	Norms per substation= (Net Employee expense for a year / Number of substation)
(C)	Average of (A) from FY 2011-12 to FY 2015-16. (5 years)
(D)	Average of (B) from FY 2011-12 to FY 2015-16. (5 years)

- 5.3.9 Step-2: It is observed that the value of (C) & (D) is nearest to the value for FY 2013-14 which is also the mid-point in this calculation. Hence, C & D are escalated using CPI escalation for FY 2013-14 to FY 2015-16 to arrive at value for FY 2017-18.



Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Average of FY 2011-2016
Gross Employee Expenses (Audited) (A1) (Rs Crore)	8.82	10.68	15.78	22.19	27.95	
Number of consumers (A2) (nos.)	54939	56982	60485	64981	70994	
Number of substations (A3) (nos.)	4617	4759	5142	5516	5660	
<b>Norms per 1000 consumers (A)= (A1/A2)*1000 (RsCrore)</b>	0.161	0.187	0.261	0.342	0.394	<b>0.269 (C)</b>
<b>Norms per substation (B)= (A1/A3) (RsCrore)</b>	0.002	0.002	0.003	0.004	0.005	<b>0.003 (D)</b>

5.3.10 Step-3: CPI escalation for a year is calculated considering CPI inflation of preceding three years from the Base year (i.e. FY 2013-14 to FY 2015-16) 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
<b>CPI Indices*</b>	194.83	215.17	236.00	250.83	265.00	275.92	-	-	-
<b>Percentage increase over previous year-CPI Inflation</b>		<b>10.44%</b> = (215.17-194.83)/194.83	<b>9.68%</b> = (236-215.17)/215.17	<b>6.29%</b> = (250.83-236/236))	<b>5.65%</b> = (265-250.83/250.83)	<b>4.12%</b> = (275.92-265)/265)	<b>7.21%</b> (Avg of previous 3 years from the base year) (= 9.68%+6.29%+5.65%)/3)		

\*Source: <http://labourbureau.nic.in/indtab.html>

5.3.11 Step-4: Then year wise i.e. FY 2017-18, FY 2018-19 and FY 2019-20 Employee Expense (Consumers) and Employee Expense (Substation) is calculated considering norms per 1000 consumers and norms per substation (calculated above) using following formulae:

*Employee Expense (Consumers)= (Norms per 1000 consumers \* Number of consumers) / 1000*

*Employee Expense (Substation)= (Norms per substation \* Number of consumers)*

Particulars	Base Value	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
CPI Inflation		4.12%	7.21%	7.21%	7.21%
<b>Norms per 1000 consumers(RsCrore)</b>	<b>0.269</b>	0.314*	0.337	0.361	0.387
No of consumers		77672	84016	91602	99328
<b>Employee Expense (F)(RsCrore)</b>		<b>24.41</b>	<b>28.31</b>	<b>33.09</b>	<b>38.46</b>





*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Particulars	Base Value	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>Norms per substation(RsCrore)</b>	<b>0.003</b>	0.004*	0.004	0.004	0.005
No of sub-stations		5967	6211	6453	6641
<b>Employee Expense (G)(RsCrore)</b>		<b>22.58</b>	<b>25.20</b>	<b>28.07</b>	<b>30.97</b>

*\*Note-0.314 and 0.004 is arrived after escalating the base values by applying CPI inflation for FY 2014-15, FY 2015-16 and FY 2016-17.*

5.3.12 Step-5: The computation of total Employee Expense is calculated by taking the average of Employee Expense (Consumers) and Employee Expense (Substation), as shown under:

	Particulars	FY 2017-18 (n+1)	FY 2018-19 (n+2)	FY 2019-20 (n+3)
<b>A</b>	Norms per 1000 consumers (RsCrore)	0.337	0.361	0.387
<b>B</b>	Number of consumers (nos)	84016	91602	99328
<b>C</b>	<b>Employee Expenses (consumers) (F) (RsCrore)</b>	<b>28.31</b>	<b>33.09</b>	<b>38.46</b>
<b>D</b>	Norms per substation(RsCrore)	0.004	0.004	0.005
<b>E</b>	Number of substations (nos)	6211	6453	6641
<b>F</b>	<b>Employee Expenses (substation) (G) (RsCrore)</b>	<b>25.20</b>	<b>28.07</b>	<b>30.97</b>
<b>G</b>	<b>Gross Employee Expenses (F+G)/2 (RsCrore)</b>	<b>26.75</b>	<b>30.58</b>	<b>34.71</b>
<b>H</b>	<b>Less: Employee Expenses Capitalized** (RsCrore)</b>	5.99	7.19	8.16
<b>I</b>	<b>Net Employee Expenses (G-H) (RsCrore)</b>	<b>20.76</b>	<b>23.39</b>	<b>26.55</b>

*\*\* Employee Expenses capitalized for the year has been reduced in proportion to the gross employee expenses claimed and gross employee expenses allowed as per norms*

#### **Computation of Repair & Maintenance (R&M) Cost:**

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





### 5.3.14 Step-1:

K<sub>b</sub> is calculated considering audited figures for the preceding five years (i.e. FY 2011-12 to FY 2015-16) as follows:

$$K_b = \% \text{ of (Actual R\&M Expense / Average GFA)}$$

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Average GFA (A) (Rs Crore)	511.50	630.78	778.83	953.11	1132.46
R&M Expenses (B) (Rs Crore)	11.03	17.76	21.99	23.47	29.52
<b>K<sub>b</sub> (D= B/A)</b>	2.16%	2.82%	2.82%	2.46%	2.61%

5.3.15 Step-2: Average of K<sub>b</sub> is calculated for the preceding five years is calculated. This is considered as value of K<sub>b</sub> for FY 2015-16 (base year). Thereafter the value is escalated by using increase in WPI for the corresponding years.

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
<b>K<sub>b</sub> (D= B/A)</b>	2.16%	2.82%	2.82%	2.46%	2.61%
<b>Average of 5 years</b>					<b>2.57%</b>

5.3.16 Step-3: WPI escalation for a year is calculated by considering the average increase in WPI for preceding three years.

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>WPI Indices*</b>	<b>100</b>	<b>107</b>	<b>113</b>	<b>114</b>	<b>110</b>	<b>112</b>			
<b>Percentage increase over previous year-WPI Inflation</b>		<b>6.90%</b> = (107-100)/100	<b>5.53%</b> = (113-107)/107	<b>0.94%</b> = (114-113)/113	<b>-3.65%</b> = (110-114)/114	<b>1.73%</b> = (112-110)/110	<b>0.94%</b> (Avg of previous 3 years from the base year) (= 5.53%+0.94%-3.65%)/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.

5.3.17 Step-4: K<sub>b</sub> for control period has been computed by considering the audited figures of the preceding five years (i.e FY 2011-12 to FY 2015-16) with the formulae as follows:



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

$$K_b = \% \text{ of (R\&M Expenses / Average GFA)}$$

Particulars	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
WPI Inflation		1.73%	<b>0.94%</b>	<b>0.94%</b>	<b>0.94%</b>
<b>Kb</b>	<b>2.57%</b> = Avg. of previous 5 years	2.62% = 2.57% *(1+ 1.73%)	<b>2.64%</b> = 2.62%*(1+ 0.94%)	<b>2.67%</b> = 2.72%*(1+ 0.94%)	<b>2.69%</b> = 2.77%*(1+ 0.94%)

5.3.18 The calculation of R&M Expense for NPCL is as follows:

Sr. No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
1	Average GFA (Rs Crore)	1495.85	1721.97	1950.20
2	Kb	<b>2.64%</b>	<b>2.67%</b>	<b>2.69%</b>
3	<b>R&amp;M Expense (Rs Crore)</b>	<b>39.53</b>	<b>45.93</b>	<b>52.50</b>

**Computation of Administrative & General (A&G) Cost:**

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

5.3.20 Step-1: The norms for five years (i.e. for last five years for which audited accounts are available i.e. from FY 2011-12 to FY 2015-16) are calculated by using formulae as follows:

Sl No	Formulae
(A)	Norms per 1000 consumers= (Net A&G expense for a year / Number of consumers) * 1000
(B)	Norms per Employee= (Net A&G expense for a year / Number of employee)
(C)	Average of (A) from FY 2011-12 to FY 2015-16 (5 years)
(D)	Average of (B) from FY 2011-12 to FY 2015-16 (5 years)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Average of FY 2011- 2016
A&G Expenses including statutory expenses(Audited) (A1) (RsCrore)	<b>7.69</b>	<b>5.31</b>	<b>6.86</b>	<b>7.98</b>	<b>9.36</b>	
Number of consumers (A2) (nos.)	54939	56982	60485	64981	70994	
Number of employees (A3) (nos.)	170	206	241	284	317	
<b>Norms per 1000 consumers (A)= (A1/A2)*1000 (RsCrore)</b>	0.140	0.093	0.113	0.123	0.132	<b>0.120 (C)</b>



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Average of FY 2011-2016
<b>Norms per employee (B)= (A1/A3) (RsCrore)</b>	0.045	0.026	0.028	0.028	0.030	<b>0.0314 (D)</b>

5.3.21 Step-2: It is observed that the value of (C) & (D) is nearest to the value for the year FY 2013-14 which is also the mid-point in this calculation. Hence, (C) & (D) are escalated using WPI escalation for FY 2013-14 to FY 2015-16 to arrive at value for FY 2017-18.

5.3.22 Step-3: WPI escalation for a year is calculated considering WPI inflation of preceding three years.

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>WPI Indices*</b>	<b>100</b>	<b>107</b>	<b>113</b>	<b>114</b>	<b>110</b>	<b>112</b>	-	-	-
<b>Percentage increase over previous year-WPI Inflation</b>		<b>6.90%</b> = (107-100)/100	<b>5.53%</b> = (113-107)/107	<b>0.94%</b> = (114-113)/113	<b>-3.65%</b> = (110-114)/114	<b>1.73%</b> = (112-110)/110	<b>0.94%</b> (Avg of previous 3 years from base year) ((=5.53%+ 0.94%-3.65%)/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.

5.3.23 Step-4: Then the year wise i.e. FY 2017-18, FY 2018-19 and FY 2019-20 total A&G Expenses are calculated considering A&G Expense (Consumers) and A&G Expense (Employee) per 1000 consumers as shown below:

A&G Expense (Consumers)= (Norms per 1000 consumers \* Number of consumers) / 1000

A&G Expense (Employee)= (Norms per employee \* Number of employee)



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Particulars	Base Value	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>Norms per 1000 consumers (Rs Crore)</b>	<b>0.120</b>	0.119	*0.120	0.121	0.122
No of consumers (nos.)		77672	84016	91602	99328
<b>A&amp;G Expense (F) (Rs Crore)</b>		<b>9.24</b>	<b>10.09</b>	<b>11.10</b>	<b>12.15</b>
<b>Norms per substation (Rs Crore)</b>	<b>0.0314</b>	0.0311	*0.0314	0.0317	0.0320
No of employees (nos.)		362	440	500	574
<b>A&amp;G Expense (G) (Rs Crore)</b>		<b>11.25</b>	<b>13.81</b>	<b>15.84</b>	<b>18.35</b>

*Note- \*0.120 & 0.0314 is arrived after escalating the base values by applying WPI inflation for FY 2014-15, FY 2015-16 and FY 2016-17.*

5.3.24 Step-5: Total A&G expense for NPCL is calculated by taking the average of A&G Expense (Consumers) and A&G Expense (Employee), as follows:

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Norms per 1000 consumers (Rs Crore)	0.120	0.121	0.122
Number of Consumers (nos)	84016	91602	99328
Administration & General Expenses (consumers) (F) (Rs Crore)	<b>10.09</b>	<b>11.10</b>	<b>12.15</b>
Norms per Employee (Rs Crore)	0.0314	0.0317	0.0320
Number of Employee (nos)	440	500	574
Administration & General Expenses (Employee) (G) (Rs Crore)	<b>13.81</b>	<b>15.84</b>	<b>18.35</b>
<b>Total Administration &amp; General Expenses (F+G)/2 (Rs Crore)</b>	<b>11.95</b>	<b>13.47</b>	<b>15.25</b>

5.3.25 **Note:** The MYT Distribution Tariff Regulations, 2014 provides for a 'provision' in addition to the A&G expenses, provided the Commission finds this extra cost prudent and validates the same. NPCL has in its MYT Petition claimed this provision under uncontrollable expenses as follows:

(Rs Crore)

A&G Expenses	FY 2017-18	FY 2018-19	FY 2019-20
Legal Charges	4.00	4.50	5.00
DSM Expenses	0.40	0.45	0.50
CGRF Expenses	0.60	0.67	0.75
Competitive Bidding & PPA Approvals	0.50	0.50	0.50



<b>A&amp;G Expenses</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>	<b>FY 2019-20</b>
Research & Studies	0.60	0.60	0.60
<b>Total Un-Controllable A&amp;G Expenses</b>	<b>6.10</b>	<b>6.72</b>	<b>7.35</b>

5.3.26 The Regulation says that A&G expense shall be computed as per the norm escalated by wholesale price index (WPI) and adjusted by provisions for confirmed initiatives (IT etc. initiatives as proposed by the Distribution Licensee and validated by the Commission) or other expected one-time expenses.

5.3.27 Legal charges are not one-time expenses and have been included in the past years as a part of A&G expenses and hence shall not be allowed separately. The other expenses like DSM Expenses, CGRF Expenses, competitive bidding and PPA Approvals, Research and studies have been allowed in order dated August 1, 2016 under statutory and other Regulatory expenses and hence have been currently included in the A&G Expenses.

5.3.28 It is observed that the expenses like DSM, CGRF, Competitive Bidding, PPA Approvals, Research & Studies approvals have been allowed by the Commission in its earlier orders under the head of statutory expenses. Since there is no separate provision for these expenses in the MYT Distribution Tariff Regulations, 2014, hence such expenses in the MYT control period have been included under the A&G Expenses. The norms have been derived considering these expenses. However, we have not considered the legal expenses since there is no point in claiming the same under a separate head and such expenses have been included in the past years as a part of A&G expenses.

5.3.29 Thus, the approved O&M Expenses for FY 2017-18 to FY 2019-20 is as follows:

**TABLE 5-4 APPROVED O&M EXPENSE FOR FY 2017-18 TO FY 2019-20**

<b>Particulars</b>	<b>FY 2017-18</b>		<b>FY 2018-19</b>		<b>FY 2019-20</b>	
	<b>Petition</b>	<b>Approved</b>	<b>Petition</b>	<b>Approved</b>	<b>Petition</b>	<b>Approved</b>
Repair & Maintenance Expenses	45.50	39.53	53.15	45.93	61.60	52.50
Employee Expenses	47.76	26.75	55.98	30.58	63.96	34.71
Administrative and General Expenses	19.31	11.95	24.13	13.47	28.40	15.25
Less: Expenses Capitalized	10.69	5.99	13.17	7.19	15.04	8.16
<b>Net O&amp;M Expenses</b>	<b>123.27</b>	<b>72.24</b>	<b>146.43</b>	<b>82.78</b>	<b>169.00</b>	<b>94.31</b>



## 5.4 CAPITAL EXPENDITURE

5.4.1 The petitioner submitted that it has provided the details of the capital expenditure as per Regulation 21 of the Distribution MYT Regulations, 2014. Further, it has projected the capital expenditure of Rs. 229.26 Crore, 237.46 Crore and Rs. 234.75 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

5.4.2 The details of the capital expenditure claimed by the petitioner for the control period are as follows:

**TABLE 5-5 BREAK UP OF CAPITALISATION AS CLAIMED BY THE PETITIONER FOR FY 2017-18 TO FY 2019-20**

S.No.	New Schemes	FY 2017-18	FY 2018-19	FY 2019-20
1	New Connection	13.09	14.66	16.34
2	Replacement Stock	1.97	2.08	2.31
3	Metering	2.66	2.94	3.25
4	220/33 and 33/11 kV Substation	84.84	111.30	99.75
5	33 kV Network Development	4.16	4.29	5.12
6	11 kV Network Development	14.72	15.18	14.22
7	LT Network Development	3.62	4.01	4.24
8	Network at Villages	4.21	4.34	4.34
9	Network Renovation	1.40	1.44	1.32
10	Process System Automation	14.78	18.21	19.79
11	Civil Works, Office Infrastructure Facility & Customer Care Center	39.96	13.53	14.19
12	IT Projects	13.00	9.00	10.00
13	Tools / Testing Equipment, Vehicles etc.	1.99	2.47	3.00
14	Demand Side Management	2.00	3.00	3.00
15	Land	4.00	4.50	5.00
16	Misc/ Contingent Works	6.50	7.50	8.00
17	<b>Total</b>	<b>212.89</b>	<b>218.44</b>	<b>213.87</b>
18	Add: Interest Capitalised	5.67	5.86	5.84
19	Add: Employee Cost Capitalised	10.69	13.17	15.04
20	<b>Total</b>	<b>229.26</b>	<b>237.46</b>	<b>234.75</b>

5.4.3 The Regulation 21 of the Distribution MYT Regulations, 2014, provides as follows:



***“21 Capital Cost of the Project***

*21.1 The capital cost of the project shall include the following:*

*a) Expenditure incurred or projected to be incurred on original scope of work, including the interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation, during construction, on the loan – (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check shall form the basis for determination of Tariff;”*

5.4.4 Further, Regulation 23 of Distribution MYT Regulations, 2014, provide as follows:

***“ 23 Debt-Equity Ratio***

*For all capital expenditure incurred after April 1, 2015, debt equity ratio shall be 70:30. Where equity employed is more than 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as loan.*

*Provided that in case actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of tariff.*

*Provided that in case of existing projects, the actual debt equity shall be used for tariff determination. However any additional capital expenditure shall be in the abovementioned ratio.*

*The debt and equity amounts arrived at in accordance with clause (a) above shall be used for calculating interest on loan and return on equity.”*

5.4.5 The capital expenditure for the first control period i.e. from FY 2017-18 to FY 2019-20 has been considered as per the Petitioner’s submission after deducting the assets (Rs. 1.00 Crore) transferred from UPSIDC and considering the employee as computed by the Commission and interest capitalisation as submitted by the petitioner. The opening capital work in progress (CWIP) for the first control period is Rs. 2.00 Crore. As Greater Noida area has been developing at a very fast rate which is resulting in the higher electricity requirement and network coverage in the area, and seeing that the petitioner in past has been

able to capitalise the allowed capital expenditure, the Commission has allowed total capitalization i.e. transfers to GFA for the control period after making the appropriation as mentioned above.

- 5.4.6 The Commission while working out debt and equity has considered 70% of the capital expenditure financed through loan and 30% of capital expenditure financed through equity after deducting consumer contribution from the total capital expenditure in accordance to the Regulations 23 of the Distribution MYT Regulations, 2014. The details of the capital expenditure allowed by the Commission are as follows:

**TABLE 5-6 CAPEX DETAILS FOR FY 2017-18 TO FY 2019-20 AS APPROVED BY THE COMMISSION (Rs. Crore)**

	FY 2017-18		FY 2018-19		FY 2019-20	
Particulars	Petition	Approved	Petition	Approved	Petition	Approved
Total Additions to Assets (excluding interest capitalisation)	223.59	218.88	231.60	225.63	232.99	226.12
Add: Closing CWIP	2.00	2.00	2.00	2.00	2.00	2.00
Less: Opening CWIP	2.00	2.00	2.00	2.00	2.00	2.00
Total Capex (excluding interest capitalisation)	<b>223.59</b>	<b>218.88</b>	<b>231.60</b>	<b>225.63</b>	<b>232.99</b>	<b>226.12</b>
Add: Interest Capitalisation	5.67	5.67	5.86	5.86	1.76	1.76
<b>Total Capex</b>	<b>229.26</b>	<b>224.55</b>	<b>237.46</b>	<b>231.49</b>	<b>234.75</b>	<b>227.87</b>
Consumer Contribution	15.41	15.41	16.90	16.90	18.41	18.41
<b>Net Capex</b>	<b>213.85</b>	<b>209.14</b>	<b>220.56</b>	<b>214.58</b>	<b>216.34</b>	<b>209.46</b>
Debt @ 70%	149.69	146.40	154.39	150.21	151.44	146.62
Equity @ 30%	64.15	62.74	66.17	64.37	64.90	62.84

## 5.5 INTEREST CHARGES

### Interest on Long Term Loans

- 5.5.1 The petitioner submitted that it has calculated the interest on long term as per the provision of Regulation 27 of the Distribution MYT Regulations, 2014 and the planned capital expenditure for the first control period. The petitioner submitted that it has calculated interest on long term loans on following basis:

- (i) The opening balance for FY 2016-17 have been arrived by adjusting the accumulated depreciation of Rs. 211.22 Cr from Gross Normative Loan of Rs. 505.09 Cr.





- (ii) Depreciation till FY 2016-17 has been considered at the rates as determined in UPERC Distribution Tariff Regulation, 2006 and the Tariff Order dated September 1, 2008 as per straight line method.
- (iii) Depreciation for control period has been determined on the basis of written down values of assets as on April 1, 2017 by applying depreciation rates as prescribed under MYT Regulation, 2014 on WDV method.
- (iv) Weighted average rate of interest on existing term loans have been computed on the basis of actual interest rates of term loans approved by the Commission and the same has been utilized for loans availed during the control period.
- (v) Interest and Finance Charges on the loans availed during the control period has been capitalized alongwith the assets capitalized during the year.
- (vi) Irrespective of moratorium period availed by the Company, the repayment has been considered based upon the depreciation computed based on the rates provided in the MYT Regulations, 2014.

5.5.2 Based on above, the petitioner claim on interest on long term loan is shown as under:

**TABLE 5-7 INTEREST ON LONG TERM LOANS AS CLAIMED BY THE PETITIONER FOR FY 2017-18 TO FY 2019-20**

Particulars		FY 2017-18	FY 2018-19	FY 2019-20
<b>Gross Normative Loan (Opening)</b>	<b>a</b>	<b>398.95</b>	<b>494.57</b>	<b>582.72</b>
Addition due to Capital expenditure during the year	b	147.63	152.39	150.00
Less: Depreciation for the year	c	-52.01	-64.24	-76.74
<b>Gross Normative Loan (Closing)</b>	<b>d=a+b-c</b>	<b>494.57</b>	<b>582.72</b>	<b>655.98</b>
Average Gross Normative Loan	e=(a+d)/2	446.76	538.64	619.35
Weighted Average Rate of Interest (%)	f	10.34%	10.20%	10.18%
<b>Interest on Term Loans</b>	<b>g=e x f</b>	<b>46.18</b>	<b>54.97</b>	<b>63.08</b>

5.5.3 Regulation 27 of the Distribution MYT Regulations, 2014, specifies as under:

***“ 27. Treatment of Interest on loan***



a) *The Distribution Licensee shall provide detailed loan-wise, project-wise and utilization-wise details of all of the pending loans.*

b) *If the equity actually deployed is more than 30 % of the capital cost, equity in excess of 30 % shall be treated as normative loan.*

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

c) *Actual loan or normative loan, if any, shall be referred as gross normative loan in these regulations.*

d) *The normative loan outstanding as of April 1 of transition period/control period shall be computed by deducting the cumulative repayment as approved by the Commission (basis as mentioned below) up to March 31 of current period (year before transition period / control period as applicable) from the gross normative loan.*

e) *The repayment for the transition / control period as applicable shall be deemed to be equal to the depreciation allowed for the year.*

f) *Notwithstanding any moratorium period availed by the Distribution Licensee, the repayment of the loan shall be considered for the transition / control period, as applicable, as per annual depreciation allowed.*

g) *The rate of interest shall be the weighted average rate of interest calculated on the basis of actual loan portfolio at the beginning of each year of the transition / control period, in accordance with terms and conditions of relevant loan agreements, or bonds or non-convertible debentures:*

*Provided that if no actual loan is outstanding but normative loan is still outstanding, the last available weighted average rate of interest shall be applicable.*

*Provided further that the interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*

*.....”*

5.5.4 It is observed that the Commission in its previous orders has been allowing Interest on Long Term Loan on actual loan availed by the Licensee as per provision of the Distribution Tariff Regulations, 2006. However, Distribution MYT Regulations, 2014 provide for normative interest on long term loans. Hence, in order to calculate the normative interest on loan as per the Regulation 27 of the Distribution MYT Regulations, 2014, the Commission has considered following basis for the computation of Gross Opening loan for FY 2017-18:

(i) 70% of the Net Closing Gross Block of FY 2014-15 has been considered to arrive at the Normative Gross Opening Loan for FY 2015-16.

(ii) Thereafter Normative loan addition for FY 2015-16 and FY 2016-17 considered to arrive at the Normative Gross Loan for FY 2017-18

5.5.5 On the basis of above and as per the provision of Distribution MYT Regulations, 2014, Interest on Long Term Loan as approved by the Commission is as follows:

**TABLE 5-8 INTEREST ON LONG TERM LOANS AS APPROVED BY THE COMMISSION FOR  
FY 2017-18 TO FY 2019-20**

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Gross Normative loan – Opening	741.66	885.99	1034.21
Cumulative repayment of Normative Loan upto previous year	319.88	374.51	439.82
Net Normative loan – Opening	421.78	511.48	594.38
Increase/Decrease due to ACE during the Year	144.33	148.21	145.19
Repayments of Normative Loan during the year	54.63	65.31	75.76
Net Normative loan – Closing	511.48	594.38	663.81
Average Normative Loan	466.63	552.93	629.10
Weighted average Rate of Interest on actual Loans	10.34%	10.20%	10.18%
<b>Interest on Normative loan</b>	<b>48.23</b>	<b>56.42</b>	<b>64.07</b>

5.5.6 Further, the petitioner has projected the finance charges including the processing charge, credit rating charge, collection facilitation charges to be Rs. 4.07 Crore, Rs. 4.42 Crore and Rs. 4.87 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

5.5.7 The petitioner in petition has proposed processing charge of Rs. 2.17 Crore for each year of the MYT control period, which is shown as follows:



**TABLE 5-9 PROCESSING CHARGE AS SUBMITTED BY THE PETITIONER (Rs. Crore)**

Financing Activity	Facility Amount	Charges as % of Facility	FY-2017-18	FY 2018-19	FY 2019-20
Fund Based WCF Renewal & CP Issue	145.00	0.86%	1.25	1.25	1.25
Renewal of LC facility for PPA and other purposes	160.00	0.58%	0.92	0.92	0.92
<b>Total</b>	<b>305.00</b>	<b>0.71%</b>	<b>2.17</b>	<b>2.17</b>	<b>2.17</b>

5.5.8 The petitioner has submitted that it has claimed processing charges for the various facilities availed and projected to be availed during the first control period from banks.

5.5.9 In view of the above, the Commission approves processing charge of Rs. 1.52 Crore, Rs. 1.94 Crore, Rs. 2.16 Crore following the same approach as explained in the True Up section for FY 2015-16. However, the same shall be subject to true-up based on the Audited Accounts of the Petitioner.

**TABLE 5-10 PROCESSING CHARGE AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)**

Financing Activity in Rs Cr	Facility Amount	Charges as % of Facility	FY 2017-18		FY 2018-19		FY 2019-20	
			Petition	Approved	Petition	Approved	Petition	Approved
Fund Based WCF Renewal & CP Issue	145	0.86%	1.25	0.42	1.25	0.57	1.25	0.72
Renewal of LC facility for PPA and other purposes	160	0.58%	0.92	0.92	0.92	0.92	0.92	0.92
<b>Total</b>	<b>305</b>	<b>0.71%</b>	<b>2.17</b>	<b>1.34</b>	<b>2.17</b>	<b>1.49</b>	<b>2.17</b>	<b>1.64</b>

5.5.10 The summary of the finance charge as approved by the Commission is as follows:

**TABLE 5-11 FINANCE CHARGES AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)**

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Processing Charges on Term Loan	2.17	1.34	2.17	1.49	2.17	1.64
Collection Facilitation Charges	0.60	0.60	0.75	0.75	1.00	1.00
Credit Rating Charges	0.15	0.15	0.15	0.15	0.15	0.15
LC and Other Bank Charges	1.15	1.15	1.35	1.35	1.55	1.55
<b>Cost of raising finance and bank charges</b>	<b>4.07</b>	<b>3.24</b>	<b>4.42</b>	<b>3.74</b>	<b>4.87</b>	<b>4.34</b>



### Interest on Working Capital

5.5.11 The petitioner submitted that it has computed the Interest on Working Capital in accordance to Regulation 28 of the Distribution MYT Regulations, 2014. The petitioner submitted that it has considered the security deposit passed onto UPPCL amounting to Rs. 11.28 Crore.

5.5.12 Regulation 28 of the Distribution MYT Regulation, 2014, provide as follows:

#### ***“28 Interest on Working Capital***

*The Distribution Licensee shall be allowed interest on estimated level of working capital for the financial year, computed as follows:*

- a) O&M expenses for one month.*
- b) Two months equivalent of expected revenue.*
- c) Maintenance spares @ 40% of R&M expenses for two months.*

*Less:*

*Security deposits from consumers, if any.*

*Provided that the interest on working capital shall be on normative basis and rate of interest shall be equal to the State Bank Advance Rate (SBAR) as of the date on which petition for determination of tariff is accepted by the Commission.*

*Provided further that interest shall be allowed on consumer security deposits as per the provisions of the Electricity Supply Code, 2005 and its subsequent amendments / addendums & the new regulations made after repeal of the same.”*

5.5.13 The Commission has calculated the interest on working capital based on the methodology provided in the Distribution MYT Regulations, 2014 as shown above. The Commission has considered interest rate of 14.05% (SBAR as on the date on which petition is accepted by the Commission) for computation of interest on working capital. Thus, the approved interest on working capital is as follows:



**TABLE 5-12 INTEREST ON WORKING CAPITAL AS APPROVED BY THE COMMISSION FOR FY  
2017-18 TO FY 2019-20**

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
One month's O & M Expenses	10.27	6.02	12.20	6.90	14.08	7.86
Maintenance spares @ 40% of R&M expenses for two months	3.03	2.64	3.54	3.06	4.11	3.50
Receivables equivalent to 60 days expected revenue	252.57	220.21	292.34	258.16	336.48	297.28
<b>Gross Total</b>	<b>265.87</b>	<b>228.86</b>	<b>308.08</b>	<b>268.12</b>	<b>354.67</b>	<b>308.64</b>
Total Security Deposits by the Consumers reduced by Security Deposits under section 47(1)(b) of the Electricity Act 2003						
Opening Balance	180.91	180.90	202.41	202.40	224.41	224.40
Received during the year	21.50	21.50	22.00	22.00	22.50	22.50
Closing Balance	202.41	202.40	224.41	224.40	246.91	246.90
Less: Security Deposit with UPPCL	11.28	11.28	11.28	11.28	11.28	11.28
Net Security Deposits by the Consumers reduced by Security Deposits under section 47(1)(b) of the Electricity Act 2003	180.38	180.37	202.13	202.12	224.38	224.37
<b>Net Working Capital</b>	<b>85.50</b>	<b>48.49</b>	<b>105.95</b>	<b>66.00</b>	<b>130.30</b>	<b>84.26</b>
Rate of Interest for Working Capital	14.05%	14.05%	14.05%	14.05%	14.05%	14.05%
<b>Interest on Total Working Capital</b>	<b>12.01</b>	<b>6.81</b>	<b>14.89</b>	<b>9.27</b>	<b>18.31</b>	<b>11.84</b>

## INTEREST ON SECURITY DEPOSITS

- 5.5.14 Regulation 28 of the Distribution MYT Regulations, 2014, provide for the interest on security deposit amount at bank rate or more, as may be specified by the Commission. The petitioner in its petition has claimed interest on security deposit at interest rate of 7.75%.
- 5.5.15 The Commission has computed the Interest on Security deposit in accordance to Regulation 28 of the Distribution MYT Regulations, 2014, which is shown as follows:



**TABLE 5-13 INTEREST ON SECURITY DEPOSITS AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)**

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Balance	180.91	180.90	202.41	202.40	224.41	224.40
Received during the year (Net of Refund)	21.50	21.50	22.00	22.00	22.50	22.50
<b>Closing Balance</b>	<b>202.41</b>	<b>202.40</b>	<b>224.41</b>	<b>224.40</b>	<b>246.91</b>	<b>246.90</b>
Security Deposit passed on to UPPCL	11.28	11.28	11.28	11.28	11.28	11.28
<b>Total Security Deposits by the Consumers reduced by Security Deposits under section 47(1)(b) of the Electricity Act 2003</b>	<b>180.38</b>	<b>180.37</b>	<b>202.13</b>	<b>202.12</b>	<b>224.38</b>	<b>224.37</b>
<b>Average Security Deposit</b>	<b>191.66</b>	<b>191.65</b>	<b>213.41</b>	<b>213.40</b>	<b>235.66</b>	<b>235.65</b>
<b>Rate of Interest</b>	<b>7.75%</b>	<b>7.75%</b>	<b>7.75%</b>	<b>7.75%</b>	<b>7.75%</b>	<b>7.75%</b>
<b>Interest on security deposit</b>	<b>14.85</b>	<b>14.85</b>	<b>16.54</b>	<b>16.54</b>	<b>18.26</b>	<b>18.26</b>

5.5.16 The petitioner is required to pay interest on consumer security deposit to the consumers at the rate of 7.75% per annum during the MYT Control Period. However, the same shall be reviewed based on actual figures during APR and truing up.

#### SUMMARY OF INTEREST CHARGES

5.5.17 The Summary of Interest and Finance Charges approved by the Commission for FY 2017-18 to FY 2019-20 are as follows:

**TABLE 5-14 SUMMARY OF INTEREST CHARGES AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)**

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Interest on Long term loans	46.18	48.23	54.97	56.42	63.08	64.07
Interest on short term loans/working capital	12.01	6.81	14.89	9.27	18.31	11.84
Finance charges	4.07	3.24	4.42	3.74	4.87	4.35
Interest on security deposit	14.85	14.85	16.54	16.54	18.26	18.26
<b>Total Interest &amp; Finance charges</b>	<b>77.11</b>	<b>73.13</b>	<b>90.81</b>	<b>85.97</b>	<b>104.52</b>	<b>98.52</b>
Less: Interest capitalization	0.00	5.67	0.00	5.86	0.00	5.84
<b>Net Interest &amp; Finance charges</b>	<b>77.11</b>	<b>67.47</b>	<b>90.81</b>	<b>80.12</b>	<b>104.52</b>	<b>92.67</b>



## **5.6 EFFICIENCY GAIN DUE TO SWAPPING OF LOANS**

- 5.6.1 The petitioner submitted that in order to minimize the cost of borrowing, during FY 2013-14 the Company renegotiated its existing term loan facilities with ICICI Bank, IDBI Bank and Bank of Maharashtra for swapping of these loan facilities with new facilities bearing lower cost. Such, swapping of loans resulted in accrual of saving in interest cost of Rs. 4.31 Cr. to be shared with its consumers in accordance with regulation 4.8 and 4.11 of UPERC Distribution Tariff Regulations, 2006 and also Regulation 27 (h) of Distribution MYT Regulations 2014.
- 5.6.2 The petitioner further submitted that during FY 2015-16 the Company prepaid its existing term loan facilities with Central Bank of India and replaced the same with term loans facilities of Rs. 20.00 Cr from State Bank of Mysore and Rs. 28.81 Cr from IDBI Bank both bearing lower cost and resulting in accrual of saving in interest cost of Rs. 1.14 Cr. to be shared with its consumers. The petitioner has worked out the savings in the interest cost amounting to Rs. 0.47 Crore, 0.24 Crore and 0.12 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively.
- 5.6.3 In accordance to Regulation 27(h) of the Distribution MYT Regulations, 2014, the Commission has provisionally considered the efficiency gain of Rs. 0.47 Crore, 0.24 Crore and 0.12 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively, due to loan swapping as claimed by the Petitioner which shall be subject to True-up as per the Audited Accounts of the Petitioner.

## **5.7 CAPITALISATION OF ASSETS AND COMPUTATION OF EQUITY**

- 5.7.1 The petitioner submitted that it has computed the Equity base and Return on Equity based on the Capital base as on April 30, 2015 and expenditure during transition period and control period.
- 5.7.2 Regulation 31 of the Distribution MYT Regulations, 2014 provides for return on equity @16%. The Capitalisation of Assets or Capital Formation takes place from Opening Work-in-Progress (WIP) and investments/ capex undertaken during the year. The equity approved by the Commission for FY 2017-18 to FY 2019-20 is given in the Table below:





**TABLE 5-15 CAPITALISATION OF ASSETS AND COMPUTATION OF EQUITY AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)**

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
	Approved	Approved	Approved
Opening CWIP	2.00	2.00	2.00
Capital Investment	224.55	231.49	227.87
Total capitalization=Transfer to GFA	224.55	231.49	227.87
Capitalisation of Capex approved during the year in the year	222.55	229.49	225.87
Consumer contribution	15.41	16.90	18.41
<b>Remaining investment</b>	209.14	214.58	209.46
Debt	146.40	150.21	146.62
Equity	62.74	64.37	62.84
<b>Portion of Inv. Assumed to be capitalised through CC</b>	15.27	16.76	18.25
<b>Portion of remaining investment to be capitalized</b>	207.28	212.73	207.62
Debt	145.10	148.91	145.34
Equity	62.18	63.82	62.29
Portion of Opening CWIP	0.55	0.56	0.56
<b>Total Equity for RoE</b>	62.73	64.38	62.84

## 5.8 GROSS FIXED ASSETS (GFA) & WORK-IN-PROGRESS

- 5.8.1 The capitalization and transfer to GFA is approved as projected by the Petitioner; however, the interest and employee capitalised is considered as computed by the Commission in the previous Section. Accordingly, the approved GFA is shown in the Table below:

**TABLE 5-16 GROSS FIXED ASSETS AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)**

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Balance	1235.48	1235.50	1461.79	1457.10	1696.40	1685.73
Addition during the Year	229.26	224.55	237.46	231.49	234.75	227.87
Retirement during the Year	2.95	2.95	2.85	2.85	2.05	2.05
Closing Balance	1461.79	1457.10	1696.40	1685.73	1929.10	1911.56

## 5.9 DEPRECIATION

- 5.9.1 The petitioner submitted that it has worked out depreciation for the first control period on the basis of following assumptions:



- a) Depreciation till FY 2016-17 has been considered at the rates as determined in UPERC Distribution Tariff Regulation, 2006 and the Commissions tariff order dated September 1, 2008 following straight line method.
- b) Depreciation for control period has been determined on the basis of written down values of assets as on April 1, 2017 by applying depreciation rates as prescribed under Distribution MYT Regulation, 2014 on WDV method.
- c) Depreciation on assets equivalent to Capital Contribution received has not been considered for determination of ARR for MYT Control Period in accordance with Regulation 26(b) of the MYT Regulation, 2014.

5.9.2 Further, the petitioner has requested the Commission to approve depreciation on IT assets at 30% as against 15% provided under depreciation schedule of the Distribution MYT Regulations, 2014 and consider straight line method for computation of depreciation on office equipments.

5.9.3 Depreciation as claimed by the petitioner for FY 2017-18 to FY 2019-20 is as follows:

**TABLE 5-17 DEPRECIATION AS CLAIMED BY THE PETITIONER FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)**

Sl. No.	Particulars	FY-2017-18	FY-2018-19	FY-2019-20
1	Opening GFA	1,233.40	1,459.70	1,694.32
2	Addition during the Year	229.26	237.46	234.75
3	Assets retired during the year	-2.95	-2.85	-2.05
4	Closing GFA	1,459.70	1,694.32	1,927.02
5	Average GFA	1,346.55	1,577.01	1,810.67
6	Depreciation for the year	52.01	64.24	76.74
7	% of Average GFA	3.86%	4.07%	4.24%

5.9.4 Regulation 26 of the Distribution MYT Regulations, 2014, specifies as under:

*“26. Treatment of Depreciation:*

*a) Depreciation shall be calculated for each year of the control period on the written down value of the fixed assets of the corresponding year.*

*b) Depreciation shall not be allowed on assets funded by consumer contributions or subsidies / grants.*



c) Depreciation shall be calculated annually on the basis of rates as detailed in Annexure – C or as may be notified by the Commission vide a separate order.

d) The residual value of assets shall be considered as 10% and depreciation shall be allowed to a maximum of 90% of the original cost of the asset.

Provided that Land shall not be treated as a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset.

e) Depreciation shall be charged from the first year of operation of the asset.

Provided that in case the operation of the asset is for a part of the year, depreciation shall be charged on proportionate basis.

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

5.9.5 The Commission in line with the Regulation 26 of the Distribution MYT Regulations, 2014, has computed the depreciation for the petitioner. Detailed methodology adopted for computation of depreciation for NPCL is as follows:

5.9.6 Step 1- The GFA projected for the year FY 2017-18 to FY 2019-20 is as shown under:

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petitioner	Approved	Petitioner	Approved	Petitioner	Approved
Opening GFA	1235.48	1,235.50	1461.79	1,457.10	1696.40	1685.73
Additions	229.26	224.55*	237.46	231.49*	234.75	227.87*
Deductions	2.95	2.95	2.85	2.85	2.05	2.05
Closing GFA	1461.79	1457.10	1696.40	1,685.73	1929.10	1911.56

\*Note- Additions adjusted considering allowed employee capitalization

5.9.7 Step 2- The Closing GFA base has been considered as opening gross block for FY 2017-18, which is classified into various assets classes, which in turn has been considered in line with the petitioner submission, as it is correct and equitable. Further the additions during the year has been considered as allowed by the Commission.



5.9.8 Step 3-The MYT Distribution 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 MYT Distribution Regulations, 2014 as shown under:

Particulars	Depreciation Rates Considered
Land & Land Rights	0.00%
Buildings	3.02%
Plant & Machinery	7.84%*
Lines, Cables, Network etc.	6.71%*
Furniture & Fixtures	12.77%
Meters and other metering equipment	12.77%
Communication / Office Equipment	12.77%
Jeeps, Motor Car	33.40%
Intangible Assets	15.00%
Assets taken over & pending valuation	15.00%

*\*Note- Weighted average rate of depreciation is computed considering opening GFA (as per Fixed Asset Register) and individual rates of depreciation as per Depreciation schedule in MYT Distribution Tariff Regulations, 2014 for various sub-components for Plant & Machinery, Lines, cables etc. is considered.*

5.9.9 Step 4-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 upto FY 2014-15. The net value cumulative depreciation as on April 1, 2015 is Rs. 211.22 Crore.

5.9.10 Step 5- Thereafter, the full year depreciation was computed on the opening written down value of fixed assets of individual assets like land & land rights, buildings etc. and on the additions during the year, considering the depreciation rates as stated in Step-3. Depreciation has been calculated only on the depreciable asset base excluding the non-depreciable assets such as land, land rights, etc. as shown under:

(Rs. In Crore)			
Land and rights	FY 2017-18	FY 2018-19	FY 2019-20
Opening GFA	138.47	142.39	146.78
Cumulative Depreciation	5.05	5.05	5.05
Written Down Opening	133.42	137.34	141.73
Additions to GFA	3.92	4.39	4.85
Deductions to GFA	-	-	-
Closing GFA	137.34	141.73	146.58
Rate of Depreciation (%)	0.00%	0.00%	0.00%
<b>Gross Allowable Depreciation</b>	-	-	-



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

(Rs. In Crore)

<b>Building &amp; Civil Works</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>	<b>FY 2019-20</b>
Opening GFA	144.64	183.54	196.29
Cumulative Depreciation	11.68	16.28	21.53
Written Down Opening	132.96	167.25	174.76
Additions to GFA	38.89	12.75	13.05
Deductions to GFA	-	-	-
Closing GFA	171.86	180.00	187.81
Rate of Depreciation (%)	3.02%	3.02%	3.02%
<b>Gross Allowable Depreciation</b>	<b>4.60</b>	<b>5.24</b>	<b>5.47</b>

(Rs. In Crore)

<b>Plant and Machinery</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>	<b>FY 2019-20</b>
Opening GFA	18.10	18.10	18.10
Cumulative Depreciation	6.20	7.13	7.99
Written Down Opening	11.90	10.97	10.11
Additions to GFA	-	-	-
Deductions to GFA	-	-	-
Closing GFA	11.90	10.97	10.11
Rate of Depreciation (%)	7.84%	7.84%	7.84%
<b>Gross Allowable Depreciation</b>	<b>0.93</b>	<b>0.86</b>	<b>0.79</b>

(Rs. In Crore)

<b>Transmission and Distribution system (Lines, cable network etc.)</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>	<b>FY 2019-20</b>
Opening GFA	780.98	923.64	1,097.52
Cumulative Depreciation	243.00	283.89	332.65
Written Down Opening	537.97	639.76	764.87
Additions to GFA	143.67	174.98	167.03
Deductions to GFA	1.00	1.10	0.80
Closing GFA	680.64	813.63	931.11
Rate of Depreciation (%)	6.71%	6.71%	6.71%
<b>Gross Allowable Depreciation</b>	<b>40.88</b>	<b>48.76</b>	<b>56.90</b>

(Rs. In Crore)

<b>Meters and other Metering Equipment</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>	<b>FY 2019-20</b>
Opening GFA	51.03	53.56	56.42
Cumulative Depreciation	25.61	29.02	32.33
Written Down Opening	25.42	24.55	24.09
Additions to GFA	3.19	3.46	3.76
Deductions to GFA	0.65	0.60	0.40
Closing GFA	27.96	27.41	27.45
Rate of Depreciation (%)	12.77%	12.77%	12.77%
<b>Gross Allowable Depreciation</b>	<b>3.41</b>	<b>3.32</b>	<b>3.29</b>

(Rs. In Crore)



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Communication equipment	FY 2017-18	FY 2018-19	FY 2019-20
Opening GFA	30.47	44.94	62.69
Cumulative Depreciation	8.37	12.12	17.44
Written Down Opening	22.09	32.82	45.25
Additions to GFA	14.47	17.75	19.21
Deductions to GFA	-	-	-
Closing GFA	36.57	50.57	64.46
Rate of Depreciation (%)	12.77%	12.77%	12.77%
<b>Gross Allowable Depreciation</b>	<b>3.75</b>	<b>5.32</b>	<b>7.00</b>

(Rs. In Crore)

Vehicles	FY 2017-18	FY 2018-19	FY 2019-20
Opening GFA	3.07	4.09	5.67
Cumulative Depreciation	2.06	2.56	3.34
Written Down Opening	1.01	1.53	2.33
Additions to GFA	1.02	1.58	2.08
Deductions to GFA	-	-	-
Closing GFA	2.03	3.10	4.41
Rate of Depreciation (%)	33.40%	33.40%	33.40%
<b>Gross Allowable Depreciation</b>	<b>0.51</b>	<b>0.77</b>	<b>1.13</b>

(Rs. In Crore)

Furniture and fixtures	FY 2017-18	FY 2018-19	FY 2019-20
Opening GFA	10.09	9.94	9.79
Cumulative Depreciation	2.81	3.73	4.51
Written Down Opening	7.28	6.21	5.28
Additions to GFA	-	-	-
Deductions to GFA	0.15	0.15	0.15
Closing GFA	7.13	6.06	5.13
Rate of Depreciation (%)	12.77%	12.77%	12.77%
<b>Gross Allowable Depreciation</b>	<b>0.92</b>	<b>0.78</b>	<b>0.66</b>

(Rs. In Crore)

Office equipments	FY 2017-18	FY 2018-19	FY 2019-20
Opening GFA	18.25	24.71	30.40
Cumulative Depreciation	3.43	5.73	8.52
Written Down Opening	14.83	18.97	21.88
Additions to GFA	7.05	6.19	6.55
Deductions to GFA	0.60	0.50	0.30
Closing GFA	21.28	24.66	28.13
Rate of Depreciation (%)	12.77%	12.77%	12.77%
<b>Gross Allowable Depreciation</b>	<b>2.31</b>	<b>2.79</b>	<b>3.19</b>

(Rs. In Crore)

Intangible Assets	FY 2017-18	FY 2018-19	FY 2019-20
Opening GFA	27.97	38.36	45.82
Cumulative Depreciation	15.27	17.95	21.57



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

<b>Intangible Assets</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>	<b>FY 2019-20</b>
Written Down Opening	12.71	20.40	24.25
Additions to GFA	10.38	7.47	8.42
Deductions to GFA	-	-	-
Closing GFA	23.09	27.87	32.67
Rate of Depreciation (%)	15.00%	15.00%	15.00%
<b>Gross Allowable Depreciation</b>	<b>2.68</b>	<b>3.62</b>	<b>4.27</b>

(Rs. In Crore)

<b>Assets taken over &amp; pending final valuation</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>	<b>FY 2019-20</b>
Opening GFA	7.92	7.37	6.87
Cumulative Depreciation	5.91	6.17	6.32
Written Down Opening	2.01	1.20	0.55
Additions to GFA	-	-	-
Deductions to GFA	0.55	0.50	0.40
Closing GFA	1.46	0.70	0.15
Rate of Depreciation (%)	15.00%	15.00%	15.00%
<b>Gross Allowable Depreciation</b>	<b>0.26</b>	<b>0.14</b>	<b>0.05</b>

(Rs. In Crore)

<b>Solar Power Generation Equipments</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>	<b>FY 2019-20</b>
Opening GFA	0.37	2.33	5.25
Cumulative Depreciation	0.07	0.17	0.46
Written Down Opening	0.30	2.15	4.80
Additions to GFA	1.96	2.92	2.91
Deductions to GFA	-	-	-
Closing GFA	2.25	5.08	7.71
Rate of Depreciation (%)	7.84%	7.84%	7.84%
<b>Gross Allowable Depreciation</b>	<b>0.10</b>	<b>0.28</b>	<b>0.49</b>

5.9.11 Step 6- The gross allowable depreciation for each component is sum totalled and the equivalent depreciation on assets created out of consumer contributions, capital grants and subsidies are deducted as shown under:

(Rs. In Crore)

<b>Particulars</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>	<b>FY 2019-20</b>
Opening GFA	1,231.37	1,452.97	1,681.61
Cumulative Depreciation	329.46	389.81	461.71
Written Down Opening	901.91	1,063.16	1,219.90
Additions to GFA	224.55	231.49	227.87
Deductions to GFA	2.95	2.85	2.05
Closing GFA	1123.51	1291.79	1445.72
Rate of Depreciation (%)	-	-	-
Gross Allowable Depreciation	60.35	71.90	83.26
Less: Consumer Contribution	5.72	6.58	7.50



Particulars	FY 2017-18	FY 2018-19	FY 2019-20
<b>Net Allowable Depreciation</b>	<b>54.63</b>	<b>65.31</b>	<b>75.76</b>

**TABLE 5-18 DEPRECIATION AS APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20  
(Rs. Crore)**

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
	Approved	Approved	Approved
Opening GFA	1231.37	1452.97	1681.61
Cumulative Depreciation	329.46	389.81	461.71
Written Down Value: Opening	901.91	1063.16	1219.90
Additions to GFA	224.55	231.49	227.87
Deductions to GFA	2.95	2.85	2.05
Closing GFA	1123.51	1291.79	1445.72
<b>Gross Allowable Depreciation</b>	<b>60.35</b>	<b>71.90</b>	<b>83.26</b>
Less: Consumer Contribution	5.72	6.58	7.50
<b>Net Allowable Depreciation</b>	<b>54.63</b>	<b>65.31</b>	<b>75.76</b>

## 5.10 INCOME TAX

- 5.10.1 The petitioner submitted that has been paying taxes as per Minimum Alternate Tax (MAT) due to accumulated losses arising from the claims made in income tax return in respect of excessive billing done by UPPCL which is under dispute and pending before the Hon'ble Supreme Court. All these accumulated losses have been consumed in FY 2014-15, therefore, during control period the Company would be liable to pay Income Tax as per normal tax provisions. Further, based on the current status of various matters in various assessment orders and the demand raised by the Income Tax Department, the tax liability for control period have been estimated as aggregate of tax at Normal Rates on Return on Equity and the likely demand under various income tax matters which may arise during control period.
- 5.10.2 The petitioner submitted that due to protracted litigation on power purchase price, the Company as a measure of abundant precaution has been claiming power purchase price as billed by PVVNL / UPPCL in its Income Tax Returns. Consequent to the favourable decision of the Hon'ble Allahabad High Court, Lucknow bench, the Company was liable to pay income tax at normal corporate tax rate. However, since UPPCL, has filed SLP in the Hon'ble Supreme Court against the aforesaid judgment, the Company continues to pay income tax at Minimum Alternate Tax (MAT) rate, which is lower than the normal corporate



tax rate. The petitioner submitted that in the event of favourable decision by the Hon'ble Supreme Court, the Company would be required to pay income tax at normal corporate rates from retrospective dates along with interest. In such event, the Company will also be required to pay taxes on past power purchase differentials which amounts to Rs. 46.05 Cr (approx.) till FY 2013-14. Further, there will also be a demand with respect to interest on the same, which calculated in accordance with the provisions of Income Tax Act, 1961 amounts to Rs. 37.41 Cr as at 31st March, 2016.

- 5.10.3 The petitioner submitted that it has not claimed the above tax liability of Rs. 83.46 Cr in ARR for control period and will be claimed in the year in which the assessment is finalized. The petitioner further submitted that the above should not prejudice the rights of the Company to claim the same in future on actual payment basis.
- 5.10.4 Considering the above, the Petitioner requested the Commission to approve the income tax liability of Rs. 43.81 Crore, Rs. 52.13 Crore and Rs. 60.54 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively.
- 5.10.5 Regulation 32 of the Distribution MYT Regulations, 2014 provides as follows:

**32. Income Tax**

*a) Income Tax, if any, on the Licensed business of the Distribution Licensee shall be treated as expense and shall be recoverable from consumers through tariff. However, tax on any income other than that through its Licensed business shall not be a pass through, and it shall be payable by the Distribution Licensee itself.*

*b) The income tax actually payable or paid shall be included in the ARR. The actual assessment of income tax should take into account benefits of tax holiday, and the credit for carry forward losses applicable as per the provisions of the Income Tax Act 1961 shall be passed on to the consumers.*

*c) Tax on income, if any, liable to be paid shall be limited to tax on return on the equity component of capital employed. However, any tax liability on incentives due to improved performance shall not be considered.*

- 5.10.6 From above it can be observed that the Income tax to be allowed to the petitioner is limited to the return on equity and the income through efficiency gains. Therefore, the Commission has computed the Income Tax liability for the
-

Petitioner at the corporate tax rate of 34.61% at the approved RoE. The Commission has provisionally considered the Income tax for the first control period. However, the same shall be allowed on actuals and reviewed at the time of Annual Performance Review (APR) / True-Up. Thus, the approved Income Tax as approved by the Commission in as follows:

**TABLE 5-19 APPROVED INCOME TAX FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)**

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Income Tax	43.81	30.64	52.13	35.90	60.56	41.22

## 5.11 CONTINGENCY RESERVES

5.11.1 The petitioner submitted that the Regulation 30 of the Distribution MYT Regulations, 2014, provides for maintaining the provision for contingency reserves upto 0.5% of the original cost of fixed assets. The petitioner further submitted that the contingency reserve is being created to meet the eventualities in the nature of major calamities, act of god etc. and thereby, causing huge loss to the network. In any case, the amount so allocated, can be used with prior permission of the Hon'ble Commission only.

5.11.2 The petitioner submitted that the Commission in its tariff order dated October 1, 2014 and June 18, 2015 has not allowed the provision of contingency reserve to reduce extra burden on the consumers. The petitioner's claim towards contingency reserves is as follows:

**TABLE 5-20 CONTINGENCY RESERVES AS CLAIMED BY THE PETITIONER FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)**

Particulars	FY-2017-18	FY-2018-19	FY-2019-20
Opening GFA	1,233.40	1,459.70	1,694.32
Contribution to Contingency Reserve	6.18	7.31	8.48
% of Opening GFA	0.50%	0.50%	0.50%

5.11.3 In line with the Commission's earlier view that the Contribution to Contingency Reserves would put additional burden on the consumers, the Commission has not approved any fund the contingency reserve for the first control period.

## 5.12 PROVISION FOR BAD AND DOUBTFULL DEBT

- 5.12.1 The petitioner submitted that Provision for Bad & Doubtful Debts is projected in accordance with the Company's policy which has also been approved by the Hon'ble Commission in its Tariff Orders. Actual write off will be considered upon ascertaining that the consumer account has no chance of revival and the avenues of recovery are fully exhausted. At the time of actual write off, bad debts are identified against each individual defaulting consumer and subsequently aggregated. In each such instance, supply will stand permanently disconnected and the service apparatus removed as per the Company policy.
- 5.12.2 The petitioner submitted that the Commission in its various Tariff order had directed the Company to convert all unmetered consumers into metered consumers. Accordingly, the Company has started rigorous drives and expect to convert almost all unmetered consumers into metered consumers during Control Period. The petitioner further submitted that Commission has also directed to conduct survey and increase its consumer base to curb illegal / unauthorized use of electricity. Accordingly, through various initiatives the Company expects significant increase in metered consumers in rural areas as compared to earlier years.
- 5.12.3 The petitioner submitted that agree that rural consumers are the worst payers and despite regular drives and various modes / facilities of collection. Hence, there is a need for higher provisions / write-offs in the form of Bad Debts. The petitioner has claimed provision for bad debts debts @ 1.50 % for the FY 2017-18, FY 2018-19 and FY 2019-20 each of Gross Revenues for FY 2017-18, FY 2018-19 and FY 2019-20 respectively as projected by it.
- 5.12.4 Regulation 29 of the Distribution MYT Regulations, 2014 provides as follows:
- "29. Bad and Doubtful Debts:***  
*Bad and Doubtful Debts shall be allowed as a legitimate business expense with the ceiling limit of 2% of the revenue receivables provided the distribution licensee actually identifies and writes off bad debts as per the transparent policy approved by the Commission. In case there is any recovery of bad debts already written off, the recovered bad debt will be treated as other income."*
- 5.12.5 The Commission has approved bad-debts for FY 2017-18 to FY 2019-20 at 1.50% of estimated revenue billed during the year. Regulation 29 of the Distribution
-



MYT Regulations, 2014, provides for bad-debts with ceiling limit up to 2% of revenue receivables and that the same are written off actually with transparent policy approved by Commission. The Petitioner has claimed a provisioning of 1.50% for the control period on the basis of projected revenue billed during the year and the projected receivable from the consumers.

- 5.12.6 The Commission approves the provisioning at 1.50% for the first control period on the basis of approved Receivable from Customers at the beginning of the year, approved Revenue billed & Collection for the year. Any variations would be considered at the time of true-up. Accordingly, the provision for bad debts as considered by the Commission for FY 2017-18 to FY 2019-20 is shown in the Table below:

**TABLE 5-21 APPROVED PROVISION FOR BAD AND DOUBTFULL DEBT FOR FY 2017-18  
TO FY 2019-20**

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Receivable from Customers as at the beginning of the year	216.53	216.53	246.98	246.98	283.12	283.12
Revenue billed for the year	1,502.47	1417.93	1722.34	1641.89	1982.52	1,890.68
Collection for the year	1,449.44	1367.88	1686.20	1607.43	1940.64	1850.74
Gross receivable from customer as at the end of the year	246.98	245.27	283.12	256.77	325.00	294.65
% of Provision	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
<b>Provision for Bad &amp; Doubtful debts</b>	<b>22.58</b>	<b>21.31</b>	<b>25.88</b>	<b>24.67</b>	<b>29.79</b>	<b>28.41</b>

### 5.13 RETURN ON EQUITY

- 5.13.1 The petitioner submitted that it has computed the Return on Equity (RoE) as per Regulation 31 of the Distribution MYT Regulations, 2014. The petitioners claim for Return on Equity for the Control period is as follows:

**TABLE 5-22 RETURN ON EQUITY CLAIMED FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)**

Loan Details	FY 2017-18	FY 2018-19	FY 2019-20
Equity (Opening Balance)	341.11	404.38	469.69
Net additions during the year	63.27	65.31	64.29
Equity (Closing Balance)	404.38	469.69	533.97
Average Equity	372.74	437.03	501.83
Rate of Return on Equity	16%	16%	16%
<b>Return on Equity</b>	<b>59.64</b>	<b>69.92</b>	<b>80.29</b>



- 5.13.2 As per Regulation 31 of the Distribution MYT Regulations, 2014, the petitioner is eligible for 16% post tax RoE, which is as follows:

***“31 Treatment of Return on equity***

*a) Return on equity shall be computed on 30% of the capital base or actual equity, whichever is lower:*

*Provided that assets funded by consumer contribution, capital subsidies / grants and corresponding depreciation shall not form part of the capital base. Actual equity infused in the Distribution Licensee as per book value shall be considered as perpetual and shall be used for computation in these regulations.*

*b) 16% (sixteen) post-tax return on equity shall be considered irrespective of whether the Distribution Licensee has claimed return on equity in the ARR petition.”*

- 5.13.3 Accordingly, the Commission has approved the RoE on equity base as calculated in previous section, which is shown in table below:

**TABLE 5-23 APPROVED ROE FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)**

Return on Equity Computation	FY 2017-18	FY 2018-19	FY 2019-20
	Approved	Approved	Approved
Regulatory Equity Base at the beginning of the year	327.49	390.23	454.61
Assets Capitalised during the year	224.55	231.49	227.87
Equity portion of Assets Capitalised during the year	62.73	64.38	62.84
Regulatory Equity Base at the end of the year	390.23	454.61	517.45
Return on Opening Regulatory Equity Base @ 16%	52.40	62.44	72.74
Return on Addition to Equity Base during the year @ 16%	5.02	5.15	5.03
<b>Total Return on Equity</b>	<b>57.42</b>	<b>67.59</b>	<b>77.76</b>

**5.14 NON-TARIFF INCOME**

- 5.14.1 The Non-Tariff Income includes delayed payment surcharge, miscellaneous charges, income from investments, interest on fixed deposits and income from consultancy business. The non-tariff income claimed by the Petitioner in its Petition is Rs. 2.92 Crore which is net of Rs. 3.52 Crore towards Cost of Borrowing for DPS.



- 5.14.2 As per the approach followed by the Commission in its previous Orders and to appropriately compensate for the cost incurred for financing the deferred payment beyond the normative period, the Commission in this Order has reduced the amount of non-tariff income by the financing costs of DPS.
- 5.14.3 The financing cost of delayed payment surcharge has been computed by the Commission based on the projected DPS for the year. The DPS has been provisionally grossed up at 18% per annum. Further, the financing cost is arrived at on the grossed-up amount and interest rate as considered for working capital has been applied. The computation of the financing cost for DPS is provided in the Table below:

**TABLE 5-24 APPROVED COST OF BORROWING FOR DPS FOR FY 2017-18 TO FY 2019-20**

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Delayed Payment Surcharge (Rs. Crore)	4.51	4.51	4.29	4.29	4.07	4.07
DPS grossed up at 1.50% per month or 18% per annum	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%
Amount (Rs. Crore)	25.07	25.07	23.82	23.82	22.63	22.63
Financing cost	14.05%	14.05%	14.05%	14.05%	14.05%	14.05%
<b>Cost of Borrowing (Rs. Crore)</b>	<b>3.52</b>	<b>3.52</b>	<b>3.35</b>	<b>3.35</b>	<b>3.18</b>	<b>3.18</b>

- 5.14.4 The Commission approves the non-tariff income as per Petitioner's submission and the financing cost for DPS as computed above. Accordingly, the non-tariff income net of cost for DPS amounting to Rs. 2.92 Crore, Rs. 2.91 Crore, Rs. 2.90 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively, has been approved. Any variations would be taken at the time of Truing-up.

## **5.15 REVENUE FROM SALE OF POWER AT EXISTING TARIFF**

- 5.15.1 The Petitioner submitted the detailed computation of the revenue from sale of power for FY 2017-18 to FY 2019-20 at existing tariff and regulatory surcharge as approved by the Commission vide Tariff Order dated August 1, 2016 at Rs. 1164.59 Crore (including regulatory surcharge of Rs. 104.52 Crore), Rs. 1617.50 Crore (including regulatory surcharge of Rs. 119.82 Crore) and Rs. 1861.85 Crore (including regulatory surcharge of Rs. 137.92 Crore) for FY 2017-18, FY 2018-19 and FY 2019-20 respectively.



5.15.2 The Commission has found the approach adopted by the Petitioner for calculating the revenue from sale of electricity at existing tariff to be fair and equitable. The Commission has computed the estimated revenue at existing Tariff based on the approved billing determinants for FY 2017-18, FY 2018-19 and FY 2019-20. Accordingly, the Commission has approved the revenue from sale of power at existing Tariff as provided in the Table below:

**TABLE 5-25 REVENUE AT EXISTING TARIFF RECOMPUTED BY THE COMMISSION FOR FY 2017-18**

Particulars	Sales	Revenue	Average Realisation
	(MU)	(Rs. Crs)	(Rs/kWh)
LMV-1: Domestic Light, Fan & Power	342.66	201.45	5.88
LMV-2: Non-Domestic Light, Fan & Power	33.60	33.45	9.95
LMV-3: Public Lamps	33.51	23.02	6.87
LMV-4: Institutions	19.67	18.23	9.27
LMV-5: Private Tube Wells	23.83	3.17	1.33
LMV 6: Small and Medium Power	75.93	68.57	9.03
LMV-7: Public Water Works	18.73	16.90	9.02
LMV-8: STW and Pumped Canals	0.31	0.22	7.18
LMV-9: Temporary Supply	56.24	44.41	7.90
HV-1: Non-Industrial Bulk Power	142.54	136.80	9.60
HV-2: Large and Heavy Power	1,033.97	760.26	7.35
<b>Subtotal</b>	<b>1,780.99</b>	<b>1,306.49</b>	<b>7.34</b>
<b>Regulatory Surcharge (@8%)</b>	-	<b>104.52</b>	
<b>Total Sales</b>	<b>1,780.99</b>	<b>1,411.01</b>	<b>7.92</b>

**TABLE 5-26 REVENUE AT EXISTING TARIFF RECOMPUTED BY THE COMMISSION FOR FY 2018-19**

Particulars	Sales	*Revenue	Average Realisation
	(MU)	(Rs. Crs)	(Rs/kWh)
LMV-1: Domestic Light, Fan & Power	409.45	265.71	6.49
LMV-2: Non-Domestic Light, Fan & Power	38.01	41.05	10.80
LMV-3: Public Lamps	33.51	28.83	8.60
LMV-4: Institutions	23.98	24.93	10.40
LMV-5: Private Tube Wells	19.75	4.01	2.03
LMV 6: Small and Medium Power	89.59	79.31	8.85
LMV-7: Public Water Works	21.30	20.23	9.50
LMV-8: STW and Pumped Canals	0.31	0.26	8.25
LMV-9: Temporary Supply	67.43	56.93	8.44
HV-1: Non-Industrial Bulk Power	172.90	174.66	10.10
HV-2: Large and Heavy Power	1,165.67	853.04	7.32
<b>Subtotal</b>	<b>2,041.88</b>	<b>1,548.95</b>	<b>7.59</b>





*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Particulars	Sales	*Revenue	Average Realisation
	(MU)	(Rs. Crs)	(Rs/kWh)
<b>*Regulatory Surcharge (@6%)</b>	-	<b>92.94</b>	-
<b>Total Sales</b>	<b>2,041.88</b>	<b>1,641.89</b>	<b>8.04</b>

\*Note: Revenue and Regulatory Surcharge for FY 2018-19 is computed at tariff approved for FY 2017-18

**TABLE 5-27 REVENUE AT EXISTING TARIFF RECOMPUTED BY THE COMMISSION FOR FY 2019-20**

Particulars	Sales	*Revenue	Average Realisation
	(MU)	(Rs. Crs)	(Rs/kWh)
LMV-1: Domestic Light, Fan & Power	493.55	319.43	6.47
LMV-2: Non-Domestic Light, Fan & Power	43.06	46.55	10.81
LMV-3: Public Lamps	33.51	28.83	8.60
LMV-4: Institutions	29.33	30.23	10.31
LMV-5: Private Tube Wells	16.24	4.02	2.48
LMV 6: Small and Medium Power	105.85	92.05	8.70
LMV-7: Public Water Works	24.37	22.91	9.40
LMV-8: STW and Pumped Canals	0.31	0.26	8.25
LMV-9: Temporary Supply	80.96	68.36	8.44
HV-1: Non-Industrial Bulk Power	210.10	211.97	10.09
HV-2: Large and Heavy Power	1,316.78	959.06	7.28
<b>Subtotal</b>	<b>2,354.07</b>	<b>1,783.66</b>	<b>7.58</b>
<b>*Regulatory Surcharge (@6%)</b>	-	<b>107.02</b>	-
<b>Total Sales</b>	<b>2,354.07</b>	<b>1,890.68</b>	<b>8.03</b>

\*Note: Revenue and Regulatory Surcharge for FY 2019-20 is computed at tariff approved for FY 2017-18

## 5.16 REVENUE FROM SALE OF POWER AT APPROVED TARIFF

- 5.16.1 The Commission in this Tariff Order for FY 2017-18 to FY 2019-20 has approved the retail Tariffs for FY 2017-18 only due to the reason explained in tariff philosophy for different category of consumers of the NPCL, effective within 7 days from the date of publication. The detailed Rate Schedule is enclosed as ANNEXURE 14.3 to this Order.
- 5.16.2 The Commission in this Section has computed the revenue at approved tariffs for FY 2017-18 for FY 2017-18 to FY 2019-20. The revenue of FY 2018-19 and FY 2019-20 is subject to APR, Truing up and or tariff revision. of Based on these approved tariffs and the period of applicability, the approved revenue for FY 2017-18 to FY 2019-20 for NPCL is as shown in the Table below:





**TABLE 5-28 REVENUE AT REVISED TARIFF RECOMPUTED BY THE COMMISSION FOR FY 2017-18**

Particulars	Sales	Revenue	Average Realization
	(MU)	(Rs. Crs)	(Rs/kWh)
LMV-1: Domestic Light, Fan & Power	342.66	208.40	6.08
LMV-2: Non-Domestic Light, Fan & Power	33.60	34.38	10.23
LMV-3: Public Lamps	33.51	24.96	7.45
LMV-4: Institutions	19.67	19.03	9.67
LMV-5: Private Tube Wells	23.83	3.46	1.45
LMV 6: Small and Medium Power	75.93	68.57	9.03
LMV-7: Public Water Works	18.73	17.26	9.21
LMV-8: STW and Pumped Canals	0.31	0.23	7.54
LMV-9: Temporary Supply	56.24	45.44	8.08
HV-1: Non-Industrial Bulk Power	142.54	139.25	9.77
HV-2: Large and Heavy Power	1,033.97	760.26	7.35
<b>Subtotal</b>	<b>1,780.99</b>	<b>1,321.23</b>	<b>7.42</b>
<b>Regulatory Surcharge (@6%)</b>	-	<b>96.69</b>	-
<b>Total Sales</b>	<b>1,780.99</b>	<b>1,417.93</b>	<b>7.96</b>

#### **5.17 REVENUE GAP OF FY 2015-16 AND FY 2016-17**

5.17.1 As detailed earlier in this Order the Commission has undertaken the Truing-up of ARR for FY 2015-16 and has not revised the ARR for FY 2016-17. In view of the above, the revenue gap of FY 2015-16 as approved in this Order and revenue gap of FY 2016-17 as approved by the Commission in its Order dated August 1, 2017 has been considered in the ARR of FY 2017-18. Accordingly, the consolidated revenue gap for FY 2015-16 and FY 2016-17 works out to Rs 415.34 Crore.

#### **5.18 CARRYING COST**

5.18.1 The petitioner submitted that creation and carry forward of Regulatory Assets should be resorted to only under exceptional circumstances, but if Regulatory Assets are created by the Commission, then the Licensee is entitled to the Carrying cost of such Regulatory Assets.

5.18.2 The petitioner further submitted that the Tariff Policy, 2006 provides that in such case the State Commissions should ensure appropriate return on equity in order to enable the utilities to borrow in future also.

5.18.3 The Commission, as of now, has approved the rate of interest for computation of carrying cost at 14.99%. The Commission has also allowed the recovery of past



revenue gaps through Regulatory Surcharge and the Licensee will be able to recover certain portion of past revenue gap through the Regulatory Surcharge over the entire year. As the Licensee will be able to recover certain portion of past revenue gap throughout the year and for the reasons mentioned while allowing the carrying cost for trueing up, the Commission has considered the monthly compounding on the carrying cost. The carrying cost on regulatory assets for FY 2017-18 is given below:

**TABLE 5-29 CARRYING COST AS APPROVED BY THE COMMISSION FOR FY 2017-18**

Particulars	Formula	Amount (Rs. Crore)
Revenue Gap / (Surplus) (For FY 2017-18)	A	(167.81)
Revenue Gap (For previous year)	B	415.34
Interest Rate as per Regulations	D	14.99%
Carrying Cost on Revenue Gap for FY 2016-17	$E = D \times (A/2)$	(12.58)
Carrying Cost on Revenue Gap for previous years	$F = D \times B$	62.26
Total Carrying cost	$H = E + F$	49.68

## 5.19 SUMMARY OF ARR FOR FY 2017-18 TO FY 2019-20

5.19.1 In the preceding Sections, the Commission has detailed the expenses submitted by the Petitioner and that approved by the Commission under various heads for FY 2017-18 to FY 2019-20. The Commission has also approved the revenue from existing tariffs and revenue from revised tariffs. Based on the above, the approved ARR and the revenue from tariffs for FY 2017-18 are summarized in the Table below:

**TABLE 5-30 SUMMARY OF ARR AS APPROVED BY THE COMMISSION FOR FY 2017-18  
TO FY 2019-20**

Particulars	2017-18		2018-19		2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Power Purchase Expenses	910.54	807.38	1129.59	937.35	1318.56	1049.35
Transmission Charges (UPPTCL+PGCIL)	141.65	135.54	311.36	158.57	345.21	183.70
Employee cost	47.76	26.75	55.98	30.58	63.96	34.71
A&G expenses	19.31	11.95	24.13	13.47	28.40	15.25
R&M expenses	45.50	39.53	53.15	45.93	61.60	52.50
<b>Gross O&amp;M Expenses</b>	<b>112.57</b>	<b>78.23</b>	<b>133.26</b>	<b>89.98</b>	<b>153.96</b>	<b>102.47</b>
Interest charges	77.11	73.13	90.81	85.97	104.52	98.52
Depreciation	52.01	54.63	64.24	65.31	76.74	75.76



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Particulars	2017-18		2018-19		2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Contingency Reserve	6.18	0	7.31	0	8.48	0
Taxes (Income Tax and FBT)	43.81	30.64	52.13	35.90	60.56	41.22
<b>Gross Expenditure</b>	<b>1343.88</b>	<b>1179.54</b>	<b>1788.72</b>	<b>1373.08</b>	<b>2068.02</b>	<b>1551.02</b>
Employee cost capitalized	10.69	5.99	13.17	7.19	15.04	8.16
Interest capitalized	-	-	-	-	-	-
A&G expenses capitalized	-	-	-	-	-	-
<b>Net Expenditure</b>	<b>1333.19</b>	<b>1173.55</b>	<b>1775.55</b>	<b>1365.89</b>	<b>2052.98</b>	<b>1542.86</b>
Provision for Bad & Doubtful debts	22.58	21.31	25.88	24.67	29.79	28.41
Miscellaneous Expenses	0.30	0.30	0.29	0.29	0.21	0.21
<b>Total net expenditure with provisions</b>	<b>1356.06</b>	<b>1195.15</b>	<b>1801.72</b>	<b>1390.85</b>	<b>2082.97</b>	<b>1571.47</b>
Add: Reasonable Return / Return on Equity	59.64	57.42	69.92	67.59	80.29	77.76
Less: Non-Tariff Income	2.92	2.92	2.91	2.91	2.90	2.90
Add: Efficiency Gains	0.47	0.47	0.24	0.24	0.12	0.12
<b>Annual Revenue Requirement (ARR)</b>	<b>1413.24</b>	<b>1250.12</b>	<b>1868.97</b>	<b>1455.76</b>	<b>2160.48</b>	<b>1646.45</b>
*Revenue from Existing Tariff	1411.01	1411.01	1617.50	1672.87	1861.85	1926.35
Revenue Gap/(Surplus)	2.23	(160.90)	251.23	(186.13)	298.52	(244.23)
Revenue Gap/ Surplus from Prev. Year	430.88	415.34	309.99	297.21	167.21	141.68
Carrying cost	64.76	49.68	65.32	30.60	47.45	2.93
<b>Net Revenue Gap</b>	<b>497.87</b>	<b>304.13</b>	<b>626.53</b>	<b>141.68</b>	<b>513.18</b>	<b>(99.61)</b>
*Total Revenue at Approved / Revised Tariff	1585.79	1417.93	2045.00	1672.87	-	1926.35
Additional Revenue from Revised Tariff with Regulatory Surcharge	174.78	6.92	427.50	0.00	491.03	0.00
<b>Revenue Gap carrying forward</b>	<b>323.09</b>	<b>297.21</b>	<b>199.03</b>	<b>141.68</b>	<b>22.14</b>	<b>(99.61)</b>

\*Revenue for FY 2018-19 and FY 2019-20 is at Approved tariff for FY 2017-18

5.19.2 The revenue gap carried forward for FY 2017-18, FY 2018-19 and FY 2019-20 is approved provisionally and shall be subject to final true-up.



## **6. OPEN ACCESS**

### **6.1 BACKGROUND**

- 6.1.1 The Commission has notified the Uttar Pradesh Electricity Regulatory Commission (Terms and Conditions for Open Access) Regulations, 2004 (in short 'UPERC Open Access Regulations') vide notification no. UPERC/Secy./Regulations/05-249 dated June 7, 2005 to operationalise long-term and short-term open access in the State. The Regulations also provides that effective from April 1, 2008 any consumer with demand of above 1 MW can avail open access on transmission and distribution systems.
- 6.1.2 Subsequently, the Commission has also finalized the necessary regulatory framework as below:
- UPERC (Terms and Conditions for Open Access) (First Amendment) Regulations, 2009 that includes among others, the detailed procedure(s) for Long-Term Open Access and Short-Term Open Access for use of distribution system, with or without transmission system;
  - Model Bulk Power Wheeling Agreement (BPWA) for availing wheeling services from Distribution Licensee(s);
  - Procedures for Scheduling, Dispatch, Energy Accounting, UI Accounting and Settlement System of electricity transmitted through the State grid for the electricity drawn by Distribution Licensee(s) from outside and / or within the State.
- 6.1.3 Further, the Commission has also advised the SLDC to develop the procedure for energy accounting of electricity drawn from the grid by an open access customer who is connected with the distribution system or electricity injected into the grid by a generating station embedded in the distribution system.
- 6.1.4 In the absence of procedures and guidelines from State Transmission Utility (in short 'STU') and State Load Dispatch Centre (in short 'SLDC'), the Commission, on its own motion, has made detailed procedures for long term and short term open access which covers all aspects, which the Regulations direct by way of an amendment. The "Uttar Pradesh Electricity Regulatory Commission (Terms and Conditions for Open Access) (First Amendment) Regulations, 2009 dated 18.6.09", shall come into force from the date it was notified in the Gazette.
-



6.1.5 The said amendment, which includes procedures for Long-Term Open Access and Short-Term Open Access mainly, focuses on:

- Operationalisation of long-term and short-term use of intra-State transmission and distribution system by generating companies including captive plants /renewable energy plants, distribution / trading Licensees and open access customers with sustained development of transmission and distribution systems in 'proper and coordinated' manner for conveyance of electricity.
- Operationalisation of time-block wise accounting of the quantity of electricity transmitted through State grid and stating the responsibilities of STU for weekly metering and of SLDC for scheduling, dispatch and energy accounting including UI accounting.
- Requirement of Bulk Power Transmission Agreement for use of transmission network and Bulk Power Wheeling Agreement for use of distribution network for long-term open access transactions.

6.1.6 The Electricity Act, 2003 has defined the Open Access as non-discriminatory provisions for use of transmission lines or distribution system or associated facilities. **Having regards to operation constraints and other relevant factors, the Commission directs that the Open Access shall be allowed by the Distribution Licensees as per the provisions outlined by the Commission in its Regulations, Orders and any amendments from time to time.**

6.1.7 The Commission has finalized the model Bulk Power Transmission Agreement (BPTA) and Supplementary BPTA for availing transmission services of UPPTCL.

6.1.8 The Commission has also finalized the model Bulk Power Wheeling Agreement (BPWA) which is to be signed between a Distribution Licensee and the long-term customer to agree therein, inter alia, to make payment of wheeling charge, surcharge and additional surcharge, if any, for use of the distribution system.

## **6.2 OPEN ACCESS CHARGES**

6.2.1 The Commission in the Tariff Order for UPPTCL has determined the Transmission Charges payable by Open Access users for use of UPPTCL transmission network for transmission of electricity. Similarly, the Commission has also determined

the wheeling charges payable by the Open Access users for utilising the distribution network of the Distribution Licensees for wheeling of electricity.

### 6.3 WHEELING CHARGES

- 6.3.1 The Distribution MYT Regulations, 2014, embarks upon maintaining separate books of accounts for Wheeling and Retail Supply Business. Also, for such period until the accounts are segregated and separate books are maintained, the Distribution MYT Regulations mandates the Commission to stipulate the ratio of allocation of all expenses and return component based on the data obtained from the licensee. The extract of the relevant portion of the Regulations is as follows:

***“36. Segregation of Wheeling Business and Retail Supply Business***

*The Distribution Licensee shall maintain separate books of accounts for Wheeling Business and Retail Supply Business. For such period until accounts are segregated and separate books of accounts are maintained, the Commission shall stipulate the ratio of allocation of all expenses and return component, based on data obtained from the Distribution Licensees. The following broad principles shall be followed for allocation of costs towards wheeling business and supply business, out of the total Aggregate Revenue Requirements determined:*

*(a) Power purchase cost shall be allocated to the Supply business.*

*(b) Operation and Maintenance expenses shall be segregated between wheeling and supply businesses in such manner as may be determined by the Commission.*

*(c) Majority of the capital expenditure related expenses, viz., depreciation, interest and return on equity, shall be included under the wheeling business.*

*Note - The Supply Business would require only a small component of the capital expenditure towards billing and collection activity.”*

- 6.3.2 The Commission vide its second deficiency note directed NPCL to submit the allocation of each component of ARR into wheeling nad retail supply business. In reply NPCL submitted that there has been no significant variance in allocation ratio over the years. The petitioner further requested the Commission to consider allocation ratio as per audited accounts.
- 6.3.3 The Commission for the purpose of this tariff Order has adopted the basis of allocation of the expenses provided by the Licensee as per audited accounts of
-



FY 2015-16 and has accordingly approved the ARR into Wheeling and Retail Supply for FY 2017-18 to FY 2019-20 as given in the table below:

**TABLE 6-1 WHEELING AND RETAIL SUPPLY ARR APPROVED BY THE COMMISSION FOR  
FY 2017-18 TO FY 2019-20**

Sr. No.	Item	Allocation %		Allocation FY 2017-18		
		Wheeling	Retail Supply	Total Approved ARR	Wheeling ARR	Retailing Supply ARR
1	Power Purchase Expenses	0%	100%	807.38	0.00	807.38
2	Transmission Charges	0%	100%	135.54	0.00	135.54
3	O&M Expenses	75%	25%	78.23	58.67	19.56
4	Statutory & Other Regulatory Expenses	68%	32%	0.00	0.00	0.00
5	Interest Charges	100%	0%	73.13	73.13	0.00
6	Depreciation	94%	6%	54.63	51.35	3.28
7	Contingency Reserve	94%	6%	0.00	0.00	0.00
8	Taxes (Income Tax & FBT)	94%	6%	30.64	28.80	1.84
9	Gross Expenditure			1179.54	211.95	967.59
	Less: Employee Expense capitalised	75%	25%	5.99	4.49	1.50
10	Net Expenditure			1173.55	207.46	966.09
	Add: Special Appropriation			0.00	0.00	0.00
11	Add: Provision for Bad & Doubtful Debts	0%	100%	21.31	0.00	21.31
12	Add: Miscellaneous Exp	100%	0%	0.30	0.30	0.00
13	Total Net Expenditure with Provisions			1195.15	207.76	987.39
14	Add: Reasonable Return/ Return on Equity	94%	6%	57.42	53.97	3.45
15	Less: Non-Tariff Income	0%	100%	2.92	0.00	2.92
16	Add: Efficiency Gains	94%	6%	0.47	0.44	0.03
17	<b>Aggregate Revenue Requirement (ARR)</b>			1250.12	262.17	987.94

**TABLE 6-2 WHEELING AND RETAIL SUPPLY ARR APPROVED BY THE COMMISSION FOR FY 2018-19**

Sr. No.	Item	Allocation %		Allocation FY 2018-19		
		Wheeling	Retail Supply	Total Approved ARR	Wheeling ARR	Retailing Supply ARR
1	Power Purchase Expenses	0%	100%	937.35	0.00	937.35
2	Transmission Charges	0%	100%	158.57	0.00	158.57
3	O&M Expenses	75%	25%	89.98	67.48	22.49



*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Sr. No.	Item	Allocation %		Allocation FY 2018-19		
		Wheeling	Retail Supply	Total Approved ARR	Wheeling ARR	Retailing Supply ARR
4	Statutory & Other Regulatory Expenses	68%	32%	0.00	0.00	0.00
5	Interest Charges	100%	0%	85.97	85.97	0.00
6	Depreciation	94%	6%	65.31	61.39	3.92
7	Contingency Reserve	94%	6%	0.00	0.00	0.00
8	Taxes (Income Tax & FBT)	94%	6%	35.90	33.74	2.15
9	Gross Expenditure			1373.08	248.59	1124.49
	Less: Employee Expense capitalized	75%	25%	7.19	5.39	1.80
10	Net Expenditure			1365.89	243.20	1122.69
	Add: Special Appropriation			0.00	0.00	0.00
11	Add: Provision for Bad & Doubtful Debts	0%	100%	24.67	0.00	24.67
12	Add: Miscellaneous Exp	100%	0%	0.29	0.29	0.00
13	Total Net Expenditure with Provisions			1390.85	243.48	1147.36
14	Add: Reasonable Return/ Return on Equity	94%	6%	67.59	63.53	4.06
15	Less: Non-Tariff Income	0%	100%	2.91	0.00	2.91
16	Add: Efficiency Gains	94%	6%	0.24	0.23	0.01
17	<b>Aggregate Revenue Requirement (ARR)</b>			1455.76	307.24	1148.52

**TABLE 6-3 WHEELING AND RETAIL SUPPLY ARR APPROVED BY THE COMMISSION FOR FY 2019-20**

Sr. No.	Item	Allocation %		Allocation FY 2019-20		
		Wheeling	Retail Supply	Total Approved ARR	Wheeling ARR	Retailing Supply ARR
1	Power Purchase Expenses	0%	100%	1049.35	0.00	1049.35
2	Transmission Charges	0%	100%	183.70	0.00	183.70
3	O&M Expenses	75%	25%	102.47	76.85	25.62
4	Statutory & Other Regulatory Expenses	68%	32%	0.00	0.00	0.00
5	Interest Charges	100%	0%	98.52	98.52	0.00
6	Depreciation	94%	6%	75.76	71.22	4.55
7	Contingency Reserve	94%	6%	0.00	0.00	0.00
8	Taxes (Income Tax & FBT)	94%	6%	41.22	38.74	2.47
9	Gross Expenditure			1551.02	285.33	1265.69
	Less: Employee Expense capitalized	75%	25%	8.16	6.12	2.04
10	Net Expenditure			1542.86	279.21	1263.65





*Approval of Business Plan, MYT ARR & Tariff for NPCL for  
FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Sr. No.	Item	Allocation %		Allocation FY 2019-20		
		Wheeling	Retail Supply	Total Approved ARR	Wheeling ARR	Retailing Supply ARR
	Add: Special Appropriation			0.00	0.00	0.00
11	Add: Provision for Bad & Doubtful Debts	0%	100%	28.41	0.00	28.41
12	Add: Miscellaneous Exp.	100%	0%	0.21	0.21	0.00
13	Total Net Expenditure with Provisions			1571.47	279.41	1292.06
14	Add: Reasonable Return/ Return on Equity	94%	6%	77.76	73.10	4.67
15	Less: Non-Tariff Income	0%	100%	2.90	0.00	2.90
16	Add: Efficiency Gains	94%	6%	0.12	0.11	0.01
17	<b>Aggregate Revenue Requirement (ARR)</b>			1646.45	352.62	1293.83

6.3.4 Based on the above, the wheeling charges for FY 2017-18 to FY 2019-20 has been worked out by the Commission as shown in table below:

**TABLE 6-4 WHEELING CHARGES APPROVED BY THE COMMISSION FOR FY 2017-18 TO FY 2019-20**

Details	Unit	FY 2017-18	FY 2018-19	FY 2019-20
		Approved	Approved	Approved
Net Approved Distribution (Wheeling Function) ARR	Rs. Cr	262.17	307.24	352.62
Retail Sales by NPCL	Mus	1780.99	2041.89	2354.08
Wheeling Charges	Rs/kWh	1.47	1.50	1.50

6.3.5 The Commission in order to encourage Open Access transactions in the State has further tried to segregate the wheeling charges payable by consumers seeking Open Access based on the voltage levels at which they are connected to the distribution network. The charges have been worked out on the assumption that the wheeling expenses at 11 kV voltage level shall be 80% of the average wheeling charges determined for the Wheeling function of NPCL and that for wheeling at voltages above 11 kV shall be 50% of the average wheeling charges as given in the Table below.

6.3.6 Further, as detailed in the Tariff Order of UPPTCL for FY 2017-18 to FY 2019-20, the Commission has considered the transmission open access charges for short term open access at the same level as approved for Long term open access. Due to substantial use of short-term Open Access, the basis on which the short-term

Open Access Charges are being levied in the country have undergone change. This could be observed from the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 wherein the transmission charges for long-term, medium-term and short-term designated ISTS customers of the transmission system are same. In view of the same the Commission has approved the short-term distribution wheeling charges same as long term wheeling charges.

**Table 6-5: LONG TERM VOLTAGE LEVEL WHEELING CHARGES (Rs. / kWh)**

Details	Unit	FY 2017-18	FY 2018-19	FY 2019-20
		Approved	Approved	Approved
Connected at 11 kV Voltage Level	Rs/kWh	1.18	1.20	1.20
Connected above 11 kV Voltage Level	Rs/kWh	0.74	0.75	0.75

6.3.7 In addition to the payment of wheeling charges, the open access customers also have to bear the wheeling losses in kind. Further, it is also logical that the open access customers have to bear only the technical losses in the system, and should not be asked to bear any part of the commercial losses.

6.3.8 The Commission in this order has approved distribution losses at 8.00%, which is line with the existing losses for FY 2015-16 and approved losses for FY 2016-17. Hence, the Commission hereby approves that the technical losses at 11 kV voltage level to be around 2.71% and the technical losses above 11 kV voltage level up to 33 kV to be around 1.18% in line actual losses for FY 2015-16. Hence, the Commission has considered the wheeling loss applicable for Open Access transactions entailing drawal at 11 kV voltage level at 2.71%, and that for drawal at voltages above 11 kV voltage level at 1.18%.

6.3.9 The wheeling charges determined above shall not be payable if the Open Access customer is availing supply directly through the State transmission network.

#### **6.4 CROSS SUBSIDY SURCHARGE**

6.4.1 The Commission has computed the cross-subsidy surcharge for Open Access consumers in accordance with the methodology specified in Regulations 39 of the Distribution MYT Regulations, 2014.



**6.4.2** As per Regulation 39 (f), the cross-subsidy surcharge is to be computed based on the difference between (i) the tariff applicable to the relevant category of consumers and (ii) the cost of the Distribution Licensee to supply electricity to the consumers of the applicable class. In case of a consumer opting for open access, the Distribution Licensee could be in a position to discontinue purchase of power at the margin in the merit order. Accordingly, the Commission has computed the cost of supply to the consumer for this purpose as the aggregate of (a) the weighted average of power purchase costs (inclusive of fixed and variable charges) of top 5% power at the margin, excluding liquid fuel based generation, in the merit order approved by the Commission adjusted for average loss compensation of the relevant voltage level and (b) the distribution wheeling charges as determined in the preceding section.

**6.4.3** The Commission has computed the cross-subsidy surcharge for the relevant consumer categories using the following formula:

$$S = T - [C / (1 - (L / 100)) + D]$$

Where

S is the surcharge

T is the Tariff payable by the relevant category of consumers;

C is the Weighted average cost of power purchase of top 5% at the margin excluding liquid fuel based generation and renewable power.

D is the average wheeling charges for transmission and distribution of power

L is the system Losses for the applicable voltage level, expressed as a percentage, which is computed at 1.18% at 33 kV, 2.71% at 11 kV and 8.04% at LT level in line with the actual losses for FY 2015-16.

**6.4.4** As per the above formula, the avoidable cost of supply for the Open Access consumers as approved is provided in the Table below, which will be applied against the tariff applicable for the relevant consumer category for computation of Cross subsidy surcharge as and when any consumer applies for the same.



**Table 6-6: COST OF SUPPLY AS APPROVED BY THE COMMISSION FOR FY 2017-18 (Rs. / kWh)**

S No.	Categories	Wh. Charge (D)	Wt. Avg. Pur Cost (C)	System Loss (L)	Total Cost
1	HV Categories at 11 KV	1.18	4.21	2.71%	5.50
2	HV Categories above 11 KV	0.74	4.21	1.18%	4.99

**Table 6-7: COST OF SUPPLY AS APPROVED BY THE COMMISSION FOR FY 2018-19 (Rs. / kWh)**

S No.	Categories	Wh. Charge (D)	Wt. Avg. Pur Cost (C)	System Loss (L)	Total Cost
1	HV Categories at 11 KV	1.20	4.16	2.71%	5.48
2	HV Categories above 11 KV	0.75	4.16	1.18%	4.96

**Table 6-8: COST OF SUPPLY AS APPROVED BY THE COMMISSION FOR FY 2019-20 (Rs. / kWh)**

S No.	Categories	Wh. Charge (D)	Wt. Avg. Pur Cost (C)	System Loss (L)	Total Cost
1	HV Categories at 11 KV	1.20	4.12	2.71%	5.43
2	HV Categories above 11 KV	0.75	4.12	1.18%	4.91

- 6.4.5 The impact of migration of consumers from the network of the incumbent Distribution Licensee on the consumer mix and revenues of a particular Distribution Licensee shall be reviewed by the Commission from time to time as may be considered appropriate.
- 6.4.6 The impact of migration / shifting of consumers from the network of the incumbent Distribution Licensee on the consumer mix and revenues of a particular Distribution Licensee shall be reviewed by the Commission from time to time as may be considered appropriate.
- 6.4.7 The Commission has approved levy of Regulatory Surcharge for recovery of cumulative regulatory asset created for the Licensee, which is a part of the tariff charged to different consumer categories. Hence, the Cross-Subsidy Surcharge has been computed by subtracting the avoidable cost of supply for the Open Access consumers from the tariff applicable for the relevant consumer, which also includes the applicable Regulatory Surcharge.
- 6.4.8 The category-wise Cross Subsidy Surcharge approved by the Commission for FY 2017-18 to FY 2019-20 is as given in the Tables below:



**Table 6-9: CROSS SUBSIDY SURCHARGE APPROVED BY THE COMMISSION FOR FY 2017-18**

S No.	Categories	Average Billing Rate	Average Billing Rate (inclusive of Regulatory Surcharge) "T"	Cost of Supply for computing CSS	Cross Subsidy Surcharge "CSS"
1	HV-1 (Supply at 11 kV)	10.81	11.68	5.50	6.18
2	HV-1 (Supply above 11 kV)	9.33	10.08	4.99	5.09
3	HV-2 (Supply at 11 kV)	7.72	8.29	5.50	2.79
4	HV-2 (Supply above 11 kV)	7.21	7.74	4.99	2.75

**Table 6-10: CROSS SUBSIDY SURCHARGE APPROVED BY THE COMMISSION FOR FY 2018-19**

S No.	Categories	Average Billing Rate	Average Billing Rate (inclusive of Regulatory Surcharge) "T"	Cost of Supply for computing CSS	Cross Subsidy Surcharge "CSS"
1	HV-1 (Supply at 11 kV)	11.21	12.11	5.48	6.63
2	HV-1 (Supply above 11 kV)	9.64	10.41	4.96	5.44
3	HV-2 (Supply at 11 kV)	7.67	8.28	5.48	2.80
4	HV-2 (Supply above 11 kV)	7.18	7.76	4.96	2.79

**Table 6-11: CROSS SUBSIDY SURCHARGE APPROVED BY THE COMMISSION FOR FY 2019-20**

S No.	Categories	Average Billing Rate	Average Billing Rate (inclusive of Regulatory Surcharge) "T"	Cost of Supply for computing CSS	Cross Subsidy Surcharge "CSS"
1	HV-1 (Supply at 11 kV)	11.19	12.09	5.43	6.66
2	HV-1 (Supply above 11 kV)	9.63	10.40	4.91	5.48
3	HV-2 (Supply at 11 kV)	7.62	8.23	5.43	2.80
4	HV-2 (Supply above 11 kV)	7.15	7.72	4.91	2.81

## 6.5 ADDITIONAL SURCHARGE

- 6.5.1 The petitioner submitted that the Commission in its Tariff Order dated August 1, 2016 has approved additional surcharge as Nil (zero). It is pertinent to mention that Section 42(4) of the Electricity Act, 2003 provides that a consumer permitted to receive supply of electricity from a person other than distribution licensee of the area in which such consumer is located, shall be liable to pay an Additional Surcharge to meet the fixed cost of the Distribution licensee arising out of his obligation to supply.



6.5.2 Regulation 39 (f) of Distribution MYT Regulations, 2014 provides as under:

“.....

*ii. Additional Surcharge shall be determined on 'case to case' basis and shall be payable only if the Licensee is able to conclusively demonstrate the incidence of any stranded costs.*

*iii. Cross-subsidy surcharge and additional surcharge shall be shown as revenue from tariff from the consumer categories which are permitted open access and such amount shall be utilized to meet the cross-subsidy requirements of subsidized categories and fixed costs of the Licensee arising out of his obligation to supply. The Licensee shall provide the details in its annual filings during the transition period and MYT filings during the control period.*

...”

6.5.3 The Commission in its deficiency note dated February 14, 2017 directed the petitioner to submit the detailed justification for claiming Rs. 1.00/unit for additional surcharge. In response the petitioner submitted that the power purchase portfolio of the Company for the Control period is largely divided into two parts – Power procured from Long Term Contracts and Power procured through Short Term Contracts. As per Long-term PPAs, the Company is liable to pay fixed charges to the extent of 85% of the power irrespective of actual drawl. Similarly, the short-term power procurement contracts, which are based on single part tariff, invariably carries a covenant to procure at least 80-85% of the contracted supply or else the Company will have to pay compensation of 20% of the tariff per unit of the shortfall. The petitioner submitted that in case a consumer avails open access and does not procure power from the Company; the Company will be liable to pay compensation equivalent to fixed charges in the LT PPA or 20% of Tariff in ST PPA with respect to the power not procured.

6.5.4 The Commission takes a note of the petitioner's submission. It has been observed that there has been considerable amount of load shedding in the area of NPCL which implies that there is a power deficit scenario. In such a case if any consumer avails open access, the Licensee does not really have to reduce the power procurement from the tied up short term sources. The distribution licensee in such a scenario still has large number of consumers to whom the

---



available electricity can be supplied and will not then have to pay any compensation to the suppliers. Considering the above, the Commission has approved additional surcharge for FY 2017-18 to FY 2019-20 as Nil (zero). The Commission further directs the Petitioner to improve its demand supply position as the consumers in the Petitioner's area are facing considerable amount of load shedding.

- 6.5.5 Further, Other Charges, apart from the charges approved in this order, will also be required to be paid by the Open Access consumers, as specified in other UPERC Regulations and Orders.



## 7. TARIFF PHILOSOPHY

### 7.1 CONSIDERATIONS IN TARIFF DESIGN

- 7.1.1 Section 62 of the Electricity Act 2003, read with Section 24 of the Uttar Pradesh Electricity Reforms Act, 1999 sets out the overall principles for the Commission to determine the final tariffs for all categories of consumers defined and differentiated according to consumer's load factor, power factor, voltage, total consumption of energy during any specified period or the time at which supply is required or the geographical position of any area, nature of supply and the purpose for which the supply is required. The overall mandate of the statutory legislations to the Commission is to adopt factors that will encourage efficiency, economical use of the resources, good performance, optimum investments and observance of the conditions of the License.
- 7.1.2 The linkage of tariffs to cost of service and elimination of cross-subsidies is an important feature of the Electricity Act, 2003. Section 61 (g) of the Electricity Act, 2003 states that the tariffs should progressively reflect the cost of supply and it also requires the Commission to reduce cross subsidies within a timeframe specified by it. The need for progressive reduction of cross subsidies has also been underlined in Sections 39, 40 and 42 of the Electricity Act, 2003. The Tariff Policy, 2016 also advocates that the tariff should progressively reflect the efficient and prudent cost of supply.
- 7.1.3 The Commission has approved the retail tariff for FY 2017-18 in view of the guiding principles as stated in the Electricity Act, 2003, Tariff Policy and UPERC Distribution MYT Tariff Regulations 2014. The Commission has also considered the comments / suggestions / objections of the stakeholders and public at large while determining the tariffs. The Commission in its past Orders has laid emphasis on adoption of factors that encourages economy, efficiency, effective performance, autonomy, regulatory discipline and improved conditions of supply. On these lines, the Commission, in this Order too, has applied similar principles keeping in view the ground realities.
- 7.1.4 As regards to the linkage of Tariff with the Cost of Service, the Distribution MYT Tariff Regulations, 2014 states as follows:

*c) **Allocation of Cost:** The Cost to serve shall be allocated to the consumer categories in the following manner:*



**Step 1: Functionalization of Cost** - Total cost shall be divided on the basis of functions performed such as power purchase, distribution etc.

**Step 2: Classification of Cost** –Each of the functionalized costs shall be further classified, based on its intrinsic nature into Demand related cost, Energy related cost and Customer related cost. Demand related costs shall generally be of fixed nature, related to capacity creation and shall include interest on capital borrowing, depreciation etc. Energy cost shall be related to quantum of electricity consumption of consumer, such as fuel cost, interest on working capital, etc. Consumer related cost shall include operating expenses associated with meter reading, billing and accounting.

**Step 3: Allocation of Cost**

**i. Allocation of Demand Costs:** Demand costs of all the functions shall be allocated among consumer categories on the basis of average coincident peak demand of the tariff categories (average of past 12 months). To facilitate determination of average coincident peak demand for the various tariff categories, load research shall be made an integral part of the operations of the Distribution Licensees and systematic load research exercises shall be initiated by the Distribution Licensee.

**ii. Allocation of Energy Costs:** Energy related costs of Distribution functions shall be allocated to consumer categories on the basis of ratio of electricity consumption of each consumer category to the total electricity consumption under the purview of the Distribution Licensee. Energy related costs of Power purchase shall be allocated to various tariff categories on the basis of block approach on merit order dispatch and incremental principle, where each tariff category shall be allocated the incremental (energy related) power purchase cost on the basis of their respective share in the incremental power purchase. For the purpose of operationalizing the block approach and incremental principle, the Commission shall identify and notify a suitable year as the "base year".

**iii. Allocation of Customer Costs:** Customer related costs shall be allocated to consumer categories on the basis of the ratio of number of consumers in each category to total number of consumers under the purview of the Distribution Licensee.



*d) Summation of allocated Demand cost, Energy cost and Customer cost across functions shall be total Cost to serve for respective consumer categories. Cost to serve reduced by revenue from a consumer category shall give total subsidy for that category. Total subsidy for a consumer category reduced by Government subsidy, if any, shall be cross-subsidy for that consumer category.*

*e) The consumers below poverty line who consume power below a specified level, say 30 units per month, shall receive a special support through cross subsidy.*

.....

*g) Tariff Design*

*(1) The Commission shall be guided by the objective that the tariff progressively reflects the efficient and prudent cost of supply of electricity.*

*(2) After the costs have been allocated based on the method specified in clauses(c) and (d) above, tariffs for different consumer categories shall be designed with due regard to factors provided under section 62(3) of the Act.*

7.1.5 In terms of the Distribution MYT Tariff Regulations, 2014, Tariff Policy and the Electricity Act, 2003, the Commission opines that in the ideal scenario, the tariff of any category should be linked to the cost imposed on the system by the said category. However, as the same is not available, the Commission, while determining the tariff for each category, the Commission has looked into the relationship between the tariff and the overall average cost of supply for FY 2017-18. Efforts are made to move the tariff of appropriate consumer categories, towards the band of +/- 20% to meet the declared objectives of the Multi Year Distribution Tariff Regulations, 2014, Tariff Policy, 2016 and the Electricity Act, 2003.

7.1.6 In view of the above, the Commission has determined the retail tariff keeping in the mind the guiding principles as stated in Section 61 of the Electricity Act, 2003. There was unabridged revenue gap considering the existing tariff for FY 2017-18 (including the gap for previous years). Considering the huge amount of revenue gap for the current year and high cost of supply and resultant poor cost coverage in the absence of cost reflective tariff, the Commission has decided to

rationalize the tariff for FY 2017-18 by approving revised rates for various categories of consumers to ensure some recovery of the revenue gap. However, the Commission observes that with the changing scenario, there may be a lot of volatility and uncertainty in the sector and the Commission feels that it would be appropriate to approve the tariff for FY 2017-18 only in this order and the tariff for FY 2018-19 and 2019-20 shall be reviewed at the time of filing of Annual Performance Review, if required.

- 7.1.7 The Tariff has been designed so as to compensate the rising costs of the Licensees without putting excessive load on the consumers. Effort has been made to ensure that the effective Tariff for the consumers having lower consumption will be lesser as compared to the consumers having higher consumption. This would discourage the consumers to use more electricity and will contribute in electricity savings. Accordingly, the Tariffs for LMV-1, LMV-2, LMV-3, LMV-4, LMV-5, LMV-7, LMV-8, LMV-9, LMV-10, HV-1, HV-3 and HV-4 have been revised and increased. There has been no change in the Tariffs for LMV-6 (Small & Medium Power) & HV-2 (Large and Heavy Power) however, the ToD structure for LMV-6 and HV-2 categories have been changed based on the load curves of the categories as submitted by the petitioners and ToD structure has been divided in summer and winter seasons. Further, certain categories of consumers such as Shelter Homes, orphanages, old age homes, Institutions run for mentally retarded and forsaken children have been included under LMV -1 (Domestic Light, Fan & Power) category, previously they were under LMV- 4 (Public institutions). The same has been detailed in the subsequent sections

### **Metering**

- 7.1.8 In its previous Tariff Orders, the Commission linked the tariff for unmetered consumer categories in (LMV-1 and LMV-2) with the contracted load which was earlier linked with number of consumers. The Commission in cognizance to the approach followed in the Tariff Order for FY 2015-16 and FY 2016-17, has decided to continue to levy of fixed charges of the unmetered consumers under LMV-1 and LMV-2 up to 2 kW as per their contracted load in Rs. / kW terms
- 7.1.9 It has been observed in the previous years, that in spite of various incentive / dis-incentives, there has not been any considerable improvement in the metering status the Distribution Licensee continues to supply electricity to the unmetered consumers which results in considerable loss of unaccounted
-

electricity. The Petitioner has not been making its full efforts to convert the unmetered connections. It is further observed that the licensee has not provided any metering plan to convert all the unmetered consumers to the metered category. **Therefore, the Commission in this Order is directing the Licensee to put its sincere efforts for converting the unmetered consumers to metered consumers thereby ensuring that metering is achieved up to the satisfactory level, failing which the Commission may take a strict view for appropriate action.**

### Time of Day Tariff

7.1.10 The Time of Day tariff (TOD) is a widely accepted Demand Side Management (DSM) measure for energy conservation by price. The TOD structure prompts the consumer to change their consumption profile so as to shift their loads during off peak hours when the power is relatively cheaper. TOD tariff encourages the distribution licensees to move towards separation of peak and off-peak tariffs which would help in reducing consumption as well as costly power purchase at the peak time. The Tariff is set in such a way that it inherently provides incentives and disincentives for the use of electricity in different time periods. The basic objective of implementing time of day tariffs is to flatten the load curve over a period of a day resulting in a reduction in the peaking power requirement and also to enhance power requirement during off peak period.

7.1.11 The Commission in this order has approved a new TOD structure for LMV-6 and HV-2 category as depicted below:

Summer Months (April to September)		
Hours of the Day	Total No of Hours	Discount/ Penalty
05.00 -11.00 hours	6	(-)15%
11.00- 17.00 hours	6	-
17.00- 23.00 hours	6	(+)15%
23.00- 05.00 hours	6	-
Winter Months (October to March)		
05.00 -11.00 hours	6	-
11.00- 17.00 hours	6	-
17.00- 23.00 hours	6	(+)15%
23.00- 05.00 hours	6	(-)15%

7.1.12 The TOD structure for street lights i.e LMV-3 category is kept as approved by the Commission in its Tariff order for FY 2016-17 as stated below:



Hours of the Day	Discount/ Penalty
18.00 -06.00 hours	-
06.00- 18.00 hours	(+) 20%

- 7.1.13 It may be noted that by implementing the TOD Tariff, the peak load gets shifted and the Distribution Licensees gain in the form of reduction in power purchase expenses as the additional energy supplied to the consumers during peak hours are typically purchased from a costlier source. It is also noted that the consumers have raised their objections on the removal of special concession given to them in TOD in the Tariff Order for FY 2017-18. It is important to note that to promote industries in the state of Uttar Pradesh, there has been no hike in tariff of LMV-6 and HV-2 consumers despite a rise in ACOS and gap between the ARR and Revenue. Accordingly, the Commission, based on the load curves of the categories as submitted by licensees approves the ToD structure. The Commission also notes that the change in TOD structure may require reprogramming / installation of software in the TOD meters, hence the revised TOD structure and rates will be applicable as and when reprogramming / installation of software of the consumer TOD meters has been done. However, the Licensee shall complete this work within a period of 2 months.
- 7.1.14 The Commission in this Tariff Order has not continued with the optional TOD structure because the TOD structure in itself has been made sufficient with introduction of four different time slabs and different Structure in summer and winter months. The Commission in this Order has done away with the TOD structure for the Induction Furnaces / Arc Furnaces, Rolling / Re-Rolling Mill industrial consumers. This might have some tariff increase for such consumers, but still the tariff of HV-2 category consumers is such that it will be inside the range of  $\pm 20\%$  of ACOS. The TOD structure has been detailed in the Rate Schedule which is provided subsequently in this Order.

#### **LMV-1**

##### **Unmetered (Rural)**

- 7.1.15 The Commission has revised the tariff for the LMV-1 unmetered (rural) category. The rates and other terms and conditions as depicted in the Rate Schedule shall apply.



### **Life-line consumers**

- 7.1.16 The Commission accepts that for Lifeline consumers with low paying capabilities, minimum consumption will not be more than 100 units per month, hence the rate for load upto 1 kW and consumption upto 100 units per month for Lifeline consumers has been fixed by the Commission in the Rate Schedule.

### **Single point buyer**

- 7.1.17 This category has been existing since long and there was no provision of additional charge in the previous years. However, for the 1<sup>st</sup> time, an additional charge of 10% was approved in FY 2015-16. Further, it came to the knowledge of the Commission that the same was quite high and there were large number of mal-practices being done by the builders / developers. Seeing all this, in public interest, the Commission reduced these additional charges from 10% to 5% in FY 2016-17 and introduced a more transparent and consumer friendly mechanism for supply of electricity through Single Point connection. Further, in the public hearings, the Commission was swamped with a large no. of grievances of Multi Storey occupants against the Builders and RWA's wherein it was informed that they were charging high rate and there was no transparency in their operations. The Commission is concerned about the same and is working with the participation of the stakeholders and Licensees to find solution to the problem of the consumers. In this regard, first meeting, chaired by the Chairman of the Commission, was also held on 26.10.2017 which was attended by the officials of all the Licensees and the Commission. Further, more meetings will be held to find a solution to the problem of the consumers. However, in this order, the rates and other terms and conditions as depicted in the Rate Schedule shall apply.

### **LMV-5: PTW Consumers**

- 7.1.18 Uttar Pradesh is an agrarian economy. To cope up with the growing demand of various means of irrigation for agriculture in the State, electrification of private tube wells has always been of much importance. The GoUP provides support in form of subsidy for these consumers. Under this scheme GoUP allots area wise targets for Energisation of Private Tube Wells & accordingly allocates fund for this purpose.



- 7.1.19 Under System Improvement initiatives the Licensees have submitted to have undertaken Rural Feeder Segregation program to ensure supply as per scheduled hours to the agriculture sector. The Distribution Licensees in tariff proposal for FY 2017-18 to the Commission have proposed tariff increase for LMV-5 (small power for private tube wells / pumping sets for irrigation purposes) category. Further the petitioners have added a new sub-category under LMV-5 i.e. “Energy efficient pumps” and has submitted that this category has been introduced to promote the increased usage of Energy efficient pumps in the rural areas in order to curb unnecessary electricity consumption.
- 7.1.20 During the public hearing process various farmer and farmer associations requested the Commission not to make any tariff hike in light of the draught and unseasonal rains that have destroyed the crops.
- 7.1.21 The Commission after considering all the submissions has decided to increase the tariff for the consumers getting supply under the LMV-5 category. The rates and other terms and conditions as depicted in the Rate Schedule shall apply.

#### **Tariff for Industrial consumers (LMV-6 & HV-2)**

- 7.1.22 In order to promote the industries in the state, No tariff increase has been done for LMV-6 & HV-2 category consumers. The rates and other terms and conditions has depicted in the Rate Schedule.
- 7.1.23 The Commission has also added Kolhu consumers in Seasonal industries under LMV-6 category.

#### **Tariff for LMV-10**

- 7.1.24 LMV-10 rate schedule does not apply for NPCL, hence, this category has been removed from the rate schedule.

#### **Applicability of tariff category**

- 7.1.25 The applicability, character and point of supply and other terms & conditions of different consumer categories have been defined in the Rate Schedule annexed to this Tariff Order. In case of any inconformity, the Rate Schedule shall prevail over the details given in the various sections of this Order.



## 8. TREATMENT OF REVENUE GAP

### 8.1 REVENUE GAP/ REGULATORY ASSET

8.1.1 The Commission in this Tariff Order has carried out the True-up for FY 2015-16 and ARR approval for the MYT period FY 2017-18 to FY 2018-19. The Commission is guided by the provisions of MYT Distribution Regulations, 2014 for treatment of the revenue gap. The Regulation 35 of MYT Distribution Regulations, 2014 on Regulatory Asset are extracted for reference as under:

***“Treatment of Regulatory Assets***

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

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

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

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

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

8.1.2 The Regulation 35 (c) provides for allowance of carrying cost in line with the State Bank Advance Rate (SBAR). Further, the Hon`ble Appellate Tribunal for Electricity has held that proper financing costs / carrying costs / interest charges on the regulatory assets has to be allowed by the State Commission(s). Accordingly, the Commission approves the interest rate for computation of carrying cost to be allowed to the Petitioner based on State Bank Advance Rate (SBAR) on monthly compounding basis in this Order.

8.1.3 Based on the above, the approved % interest rate for computation of carrying costs and the revenue gap for the respective years, the table below highlights the approved / trued-up ARR, revenue at applicable / approved tariffs, carrying cost and the revenue gap for respective years under consideration in the present Order.





**Table 8.1: REVENUE GAP ANALYSIS (Rs. Crore)**

Particulars	FY 2015-16 (Approved)	FY 2016-17 (Approved)	FY 2017-18 (Approved)	*FY 2018-19 (Approved)	*FY 2019-20 (Approved)
Aggregate Revenue Requirement	903.66	1,029.66	1,250.12	1455.76	1646.45
Revenue at applicable / approved Tariff (without regulatory surcharge)	963.59	1,111.75	1,321.23	1548.95	1783.66
Revenue from Regulatory Surcharge	75.63	88.94	96.69	92.94	107.02
Revenue gap from previous years	578.67	521.07	415.34	297.21	141.68
Carrying cost	77.96	65.29	49.68	30.60	2.93
Revenue Gap / (Surplus) carried forward	521.07	415.34	297.21	141.68	(99.61)

\*Note: Revenue for FY 2018-19 and FY 2019-20 has been considered at tariff approved for FY 2017-18

- 8.1.4 From the above table the Commission observes that after revision of tariff including regulatory surcharge approved vide Tariff Order dated August 1, 2016, the recovery of regulatory asset has still not completed. The revenue gap carried forward for FY 2017-18 is approved on a provisional basis and shall be subject to APR / True-up or as may be decided by Commission and shall be recovered in future years. Also, the revenue gap and carrying cost computed for FY 2018-19 and FY 2019-20 at approved tariff for FY 2017-18 is subject to APR / True up.

## 8.2 REGULATORY SURCHARGE:

- 8.2.1 As can be seen from the table above, the entire ARR for FY 2017-18, FY 2018-19 and FY 2019-20 including revenue gap for previous years and including carrying cost could not be recovered completely even after applying approved tariff.
- 8.2.2 It has been observed in the past that due to heavy burden of regulatory assets year after year coupled with heavy borrowings to finance the same along with interest, the revenue gap is burgeoning with every passing year resulting into higher interest cost, which in turn cascades into higher cost of service to the consumers. Therefore, any delay in recovery of revenue gap burdens the consumers for carrying cost, therefore, speedy recovery of the same is essential.
- 8.2.3 Various government and autonomous agencies are stressing on timely and accurate revision of tariffs for the survival of distribution companies. Even, the Hon'ble ATE, while dealing with a suo-motto Petition, OP No. 1 of 2011, on the



letter received from Ministry of Power (Judgment passed on 11th November 2011), has emphasized on timely recovery of regulatory assets. The relevant observation of the Hon'ble ATE in the said matter is reproduced below:

*“66..... (iv) In determination of ARR / Tariff, the revenue gaps ought not to be left and Regulatory Asset should not be created as a matter of course except where it is justifiable, in accordance with the Tariff policy and the Regulations. **The recovery of the Regulatory Asset should be time bound and within a period not exceeding three years at the most and preferable within Control period. Carrying Cost of the Regulatory Asset should be allowed to utilities in the ARR of the year in which the Regulatory Assets are created to avoid problem of cash flow to the Distribution Licensee.**” (at page 75 of the Order)*

- 8.2.4 While the Commission acknowledges that the Licensee is one of the most efficient distribution utility in the country, however, due to heavy burden of regulatory assets year after year coupled with heavy borrowings to finance the same along with interest thereon, suitable tariff revision commensurate with the Aggregate Revenue Requirements approved by the Commission is inevitable for its survival and sustainability.
- 8.2.5 The Commission in its previous Tariff Order dated August 1, 2016 had allowed a regulatory surcharge @ 8% for recovery of past accumulated regulatory assets. However, the Commission observes that during the MYT Control Period, after considering the revised tariff, the revenue gap of NPCL is reducing considerably in the MYT Control Period. Thus, for meeting carrying cost of the revenue gap and liquidation of revenue gap, the Commission has decided to allow a **regulatory surcharge of 6% over “RATE” as defined in the Rate Schedule for FY 2017-18. The same shall be applicable until further order of the Commission.**

### **8.3 FUTURE POWER PROCUREMENT:**

- 8.3.1 The Commission acknowledges the efforts and initiatives taken by the Petitioner in containing its power purchase costs. It becomes all the more important to control the power purchase costs as it is the single element which contributes more than 80% of the Aggregate Revenue Requirement of the Licensee.



- 8.3.2 The long-term power procurement has to be carried out through transparent process of competitive bidding and the Commission firmly believes that the Petitioner will continue its efforts to procure the long term power through competitive bidding process and at the least possible rates in order to contain the cost of supply and thereby the regulatory asset for the over-all benefit of the industry as well as consumer.
- 8.3.3 Further, the Commission feels that there is still scope for improvement in the operations of the Licensee and if suitable steps are taken by them in this direction it can result in enormous financial savings. These steps could range from;
- Savings in power procurement
  - Effective Demand Supply Management (DSM)



## 9. DIRECTIVES

### 9.1 DIRECTIVES PROVIDED BY COMMISSION AND THEIR COMPLIANCE BY LICENSEES

9.1.1 The chapter details the Commission's directives to the Licensee. The Licensee in its ARR and Tariff filings has provided details regarding status of compliance to the Commission's directives issued vide Tariff Order for FY 2014-15, FY 2015-16 and FY 2016-17. The status of compliance to the directives by Licensee is provided in the Table below:

**Table 9-1: STATUS OF COMPLAINE OF DIRECTIVES OF TARIFF ORDER FOR FY 2014-15 DATED OCTOBER 1, 2014**

Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	NPCL's Submission vide MYT Petition	Commission's Direction
1	The Commission directs the Petitioner to enter into a Long term PPA within six months and also submit the status of the same within 2 months from the date of this Order.	2 Months	-	
2	Licensee is directed to look into all the matters / issues raised during the Public hearing Process to take appropriate action on the same. Licensee is also directed to submit the detailed report on the same within 2 months from the date of this Order.	2 Months	-	
3	The Commission directs NPCL to initiate concrete steps to purchase power from renewable sources of energy so as to meet its Renewable Purchase Obligation under	1 Month	-	-



*Approval of Business Plan, MYT ARR & Tariff for NPCL for FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	NPCL's Submission vide MYT Petition	Commission's Direction
	the UPERC (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010. Licensee further directed to submit the source wise (generating source or REC) detailed action plan to fulfill its RPO Obligations for FY 2014-15 and for future years within 1 month of this Order.			
4	The Commission directs the Licensee to ensure that all its unmetered consumers get converted into metered connection by 31st March, 2015.	By 31st March, 2015.	-	-
5	The Commission directs NPCL to regularly update the Commission on the status of implementation of the DSM measures being undertaken / intended to be taken up by the utility. The report must also indicate the cost-benefit analysis of the measures being undertaken by NPCL.	At end of each quarter of the Financial Year	The petitioner has already formed a DSM cell in accordance with DSM Regulations 2014. Some of the DSM measures undertaken by the Company are detailed below- 1. Installation of Roof-top solar water Geysers and Solar power cell; 2. Rearrangement of weekly offs; 3. Replacement of conventional pumps with energy 4. So far, 12 lacs (Approx.) LEDs are solid in the licensed area of the Company; 5. Education and awareness regarding energy conversation; 6. The Company has granted connectivity to roof-top solar projects of around 7 MW (Approx.)	The Commission has addressed the same in its TO FY 2017-18.



## DIRECTIVES FOR FY 2015-16

**Table 9-2: STATUS OF COMPLAINE OF DIRECTIVES OF TARIFF ORDER FOR FY 2015-16 DATED JUNE 18, 2015**

Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
1	The Commission directs the Petitioner to enter into a Long term PPA as soon as possible and also submit the status of the same within 2 months from the date of this Order.	2 Months (18th August, 2015)	The Petitioner submitted that it has already entered into LTPPA for 187 MW power to cater to the base demand. Post approval of the LTPPA and commencement of supply of power under the said PPA, the petitioner will further study the residual demand supply gap to be met through Long-term / medium-term/ short-term power for arranging the same.	Noted.
2	The Commission directs the Licensee to submit data related to its peak demand and off peak demand in MW along with its sales projections in accordance with Clause 3.1.4 of the Distribution Tariff Regulations.	Along with the petition for FY 2016-17	The data regarding the peak demand and off peak demand along with sales projection has been provided in Chapter -4 and also as RTF P-10	Noted.
3	The Commission directs the Petitioner to ensure to convert all the unmetered consumers into metered consumers as soon as possible and submit quarterly report on status of unmetered consumers in its licensee area.	Each quarter of FY 2015-16	Noted for Compliance.	The Petitioner should convert all the unmetered consumers into metered consumers at the earliest and should submit quarterly progress report for FY 2016-17.
4	As regards the RPO Obligation the Licensee is directed to ensure that it should procure	Next ARR filing	The Petitioner submitted that it signed a long term PPA with Greater Noida Industrial	The Petitioner should comply with the UPERC



*Approval of Business Plan, MYT ARR & Tariff for NPCL for FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
	renewable energy in accordance with Regulation 4 of the UPERC (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010 during FY 2015-16 to meet their obligation.		Development Authority (GNIDA) for procurement of 1.0 MWp solar power from its Plant at Kasna for a period of 10 years w.e.f. March 1, 2015 @Rs. 7.06 per kWh and power supply has commenced since March 1, 2015. The Company had bilateral discussions with various power trading companies/ generators / potential generators for procurement of renewable energy. The Company has also published advertisement on 27.10.2014, 16.12.2014 and 26.03.2015 in The Times of India and The Economic Times to procure RE power. Despite the above, the Company did not receive any firm offers at all. In addition to above, the Company has also signed net-metering agreements totaling to 1.65 MW from roof-top Solar Projects of GNIDA till December'15. Further, the Company has also signed net-metering agreement with M/s Bharat Petroleum Corporation Limited for their 1.05 MW roof-top Solar Plant. The Company is in process of signing net-metering agreement for approx. 7 MWp of solar power plants upcoming in Greater Noida area in near future.	(Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010 during FY 2016-17 to meet its RPO Obligations.



*Approval of Business Plan, MYT ARR & Tariff for NPCL for FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
5	As regards the choice of connection, the Licensee, in accordance with the provisions of the supply code wherein the consumer has the choice to opt the supplier, is directed to release connections to all such consumers who desire to disconnect their connections from the single point supplier and instead wish to take connections directly from the Licensee and submit the status report on the same along with next ARR filing	Next ARR filing	The Company has informed the consumers, however, no application has been received so far.	Noted.
6	The Distribution Licensees are directed to submit the actual Regulatory Surcharge recovered in FY 2014-15 and FY 2015-16 on account of the Revenue Gap / Regulatory Asset admitted by the Commission in this Order	For FY 2014-15 By 15th July, 2015 For FY 2015-16 By 15th April, 2016	The Petitioner submitted that the Actual Regulatory Surcharge recovered in FY 2015-16 (April to December 2015) has been provided.	Noted.
7	The Commission directs the Licensee to evolve principles for prudent segregation of ARR towards wheeling function and retail supply function embedded in the distribution function in accordance with Clause 2.1.2 of the Distribution Tariff Regulations, 2006.	As per the Time frame stipulated in MYT Regulations, 2014	The Company has been segregating the ARR towards wheeling and retail supply functions based on its Audited Cost records duly submitted to the Commission along with every ARR petition. The Audited Cost records for FY 2014-15 have been submitted with this ARR petition.	Noted.
8	The Commission directs the Licensee to submit a long term business plan in accordance with Clause 2.1.7 of the Distribution Tariff Regulations. The Licensee in such business plan	As per the Time frame stipulated in MYT Regulations, 2014	The Petitioner submitted that the Business Plan will be submitted as per the Time frame stipulated in MYT Regulations, 2014 and the same shall be submitted by June 1, 2016.	The Petitioner should submit the business plan for the control period as per the UPERC MYT,





*Approval of Business Plan, MYT ARR & Tariff for NPCL for FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
	shall identify capex projects for the ensuing year and subsequent four years and submit detailed capital investment plan along with a financing plan for undertaking the identified projects in order to meet the requirement of load growth, refurbishment and replacement of equipment, reduction in distribution losses, improvement of voltage profile, improvement in quality of supply, system reliability, metering, communication and computerization, etc.			Distribution Tariff Regulations, 2014 at the earliest.
9	The Commission directs the Licensee to conduct benchmarking studies to determine the desired performance standards in accordance with Clause 2.1.8 of the Distribution Tariff Regulations.	As per the Time frame stipulated in MYT Regulations, 2014	The Company had invited Competitive Bidding from eligible consultants for conducting of various studies as stipulated in MYT Regulations, 2014 which were also directed by the Hon'ble Commission vide letter number UPERC/Secy/D(Tariff)/15-128 Dated 14th September, 2015. The bids from concerned Consultants were received on 17th November 2015 and they were further requested to give presentation on the methodology proposed. Thereafter the Company has submitted Standing Committee's Evaluation Report and Recommendations for the kind perusal and approval of the Commission for the purpose of appointment of consultants vide its letter no. P-77Q/043 dated 18th December, 2015.	The Commission directs the petitioner to expedite the same.



*Approval of Business Plan, MYT ARR & Tariff for NPCL for FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
			The approval of the same is awaited from the Commission to take further necessary action in the matter.	
10	The Petitioner should file its Annual ARR/ Tariff Petition for FY 2016-17 as per the Regulations 12.2, 12.7, 12.8, 12.9 notified vide Distribution MYT Regulations, 2014	As per the Time frame stipulated in MYT Regulations, 2014	The ARR petition for FY 2016-17 is being filed accordingly.	Noted.
11	The Petitioner should complete the Assessment Study of metered consumers as per the Regulations 16.2 notified vide Distribution MYT Regulations, 2014 and subsequently submit the report to the Commission	As per the Time frame stipulated in MYT Regulations, 2014	The Company is in the process of appointing consultants for the purpose of conducting the requisite studies as directed by the Commission vide letter No. UPERC/Secy/D(Tariff)/15-1218 dated 14th September 2015.	The Commission directs the petitioner to expedite the same.
12	The Petitioner should complete the Assessment Study of un-metered consumers to establish base line norms as per the Regulations 17.1 notified vide Distribution MYT Regulations, 2014 and subsequently submit the report to the Commission	As per the Time frame stipulated in MYT Regulations, 2014	The Petitioner submitted that the no. of un-metered domestic consumers in its licensed area are 2627 as on 30th June, 2015, which is only 4% of the total consumer base of the Company and hence, do not have significant impact on the ARR/ revenue of the area. Therefore, it is requested that the assessment study may not be as fruitful as it may be in case of other licensees having large un metered consumer base, it is therefore, requested to kindly exempt the company from conducting such study	The Commission has addressed the same in its directives for FY 2016-17.



*Approval of Business Plan, MYT ARR & Tariff for NPCL for FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
13	The Petitioner should complete the Study of Agriculture feeders segregated and not segregated in significant numbers to determine base line norms as per the Regulations 17.2, 17.3 notified vide Distribution MYT Regulations, 2014 and subsequently submit the report to the Commission	As per the Time frame stipulated in MYT Regulations, 2014	The Petitioner submitted that Greater Noida is developing very rapidly, all the land under agriculture is being acquired and urbanized, due to this urbanization, the tube well are getting disconnected. The main agriculture belt exists along the river bank of the Hindon River, and for these consumers there are separate agriculture feeders. Further they are few tube well connections which are being supplied from non segregated feeders. In view of the above company requested the Commission to kindly relieve it conducting such an audit	The Commission has addressed the same in its directives for FY 2016-17
14	The Commission reiterates that the Licensees should conduct a detailed study to provide accurate and effective consumption norms as specified by the Commission in its earlier Orders and as per the provisions outlined in Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014 in the time bound manner.	As per the Time frame stipulated in MYT Regulations, 2014	The Petitioner submitted that as per clause 17.1, 17.2 and 17.3 of the UPERC (Multi Year Distribution Tariff) Regulation, 2014 it has directed to conduct consumption studies of un metered consumers, segregated and non-segregated agriculture consumers. As it has already been mention above, the number of these consumers are negligible and therefore the company requested the Commission to kindly exempt the company from conducting such study	The Commission has addressed the same in its directives for FY 2016-17
15	The Petitioner should submit Incremental Power Purchase Cost as per the Regulations 20.1	Within 28 days of quarter end , for each quarter of	The Company has considered the rates offered by M/s Dhariwal Infrastructure	The Licensee should submit the Incremental



*Approval of Business Plan, MYT ARR & Tariff for NPCL for FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
	notified vide Distribution MYT Regulations, 2014 and subsequently submit the report to the Commission	Tariff Period 1.4.2015 to 31.3.2020	Limited for supply of 170 MW power on long-term basis which, for the first year, is at Rs. 4.60 at NPCL Bus excluding taxes. In addition to the above, the Company also considered the rates prevailing in bilateral trades as reported in CERC Monthly Market Reports till Aug'15. the rates are in the range of Rs. 4.60 per kWh to Rs. 5.12 per kWh. Considering the above-mentioned factors, the Company has estimated its power purchase cost @ Rs. 4.83 per unit for FY 2016 – 17.	Power Purchase Cost as per the Regulations 20.1 notified vide MYT Regulations, 2014.
16	The Petitioner should submit Roadmap for Reduction of Cross Subsidy as per the Regulation 39 notified vide Distribution MYT Regulations, 2014	Within 2 months	The Petitioner submitted the same vide letter No. P77Q(III)/029 dated 4th August 2015 copy of the letter is enclosed as Annexure-10.3.	The Petitioner should propose a Roadmap for Reduction of Cross Subsidy as per the Regulation 39 notified vide MYT Regulations, 2014 on which the Commission may take an appropriate view.
17	Licensee should provide online facility for submission of application for new connection, name change, load enhancement and load reduction	Within 3 months	The Petitioner submitted that the facilities for online submission of application for new connection, name change, have gone online on 15th September, 2015.	Noted.



*Approval of Business Plan, MYT ARR & Tariff for NPCL for FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
18	Licensee should develop the mobile application for online payments of bills including other services for facilitation to consumers	Within 3 months	The Petitioner submitted that Mobile application for viewing bills, making online payment, and submitting queries and complaints has already been developed on Android and made available to our consumer from April 2015.	Noted
19	The Petitioner should submit Standards of Performance parameters as per the tariff formats of Distribution Tariff Regulations, 2006	Within three month from issue of this Order	The Company has already submitted the Standards of Performance parameters as per the formats provided in the UPERC Supply Code 2005, the last being for the quarter April to June 2015 vide letter No. P-77 J(III) /031 dated 10th August, 2015. Copy of the letter has been attached as Annexure-10.4.	Noted
20	The Commission directs the Petitioner to frame guidelines and procedures for identifying, physically verifying and writing off the bad debts and also to fix responsibility of its employees in this regard and submit the same to the Commission for its approval	Within three months of issue of this Order	The Petitioner submitted the details of bad debts written off/ provided for FY 2014-15 as Annexure 13.8.	The Petitioner should frame guidelines and procedures for identifying, physically verifying and writing off the bad debts and also to fix responsibility of its employees in this regard and submit the same to the Commission for its approval.



## DIRECTIVES FOR FY 2016-17

**Table 9-3: STATUS OF COMPLAINEE OF DIRECTIVES OF TARIFF ORDER FOR FY 2016-17 DATED AUGUST 1, 2016**

Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
1	As lack of approved transparent policy on identifying and writing off bad debts is hindering allowance of bad debts as an ARR component; the Commission directs the Licensee to submit ten sample cases of LT & HT consumers where orders have been issued for writing off bad debts, clearly depicting the procedure adopted for writing off bad debts along with policy framework for managing bad debts for the Commission's perusal.	Immediate	As per the Company policy, each and every case of bad debt / potential bad debt is identified, discussed in detail with the commercial and operations departments along with their chances of recovery in full / part. Thereafter, the defaulting consumers are shortlisted and subsequently aggregated. In each such instance, supply stands permanently disconnected and the service apparatus removed. Apart from the above, the dues from consumers which are long outstanding but could not be disconnected because of political or some other reasons are being provided for in the audited books of accounts. These debtors are older than two - three years and recovery thereof has become costlier and uneconomical. Further, prolonged litigation process for the purpose of recovery, culminate into very high legal costs and colossal waste of precious time of the officials of the Company which otherwise could be used for productive purposes. Thus, after reviewing each and every debtor on case	The Commission has addressed the same in directives for FY 2017-18.



*Approval of Business Plan, MYT ARR & Tariff for NPCL for FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
			to case basis, these debtors are written off and / or provided for, as the case may be, based on their chances of recovery, cost-benefit etc. The detailed analysis are thereafter put-up before the audit committee and the board of directors of the Company for their approval. Further, a sample list of consumers both from LT and HT category has been provided.	
2	The Commission directs the Licensee to submit a business plan for the control period i.e. from April 1, 2017 to March 31, 2020 in accordance with Regulation 5, 12.1 & 13.1 of the Distribution MYT Regulations, 2014. The Licensee in such business plan shall submit but not limited to detailed category-wise sales and demand projections, power procurement plan, capital investment plan, financing plan and physical targets. The licensee should note that the specified timeline of June 1, 2016 for submission of the same under the Multi Year Tariff Regulation is over. The Licensee should submit the same at the earliest.	Immediate	The Petitioner has submitted the Business Plan for the MYT Period.	Noted
3	The Commission directs the Licensee to conduct benchmarking studies to determine the desired performance standards in accordance with Regulation 4.2.1 of the Distribution MYT Regulations,	Immediate	The petitioner has conducted the bidding process and submitted its letter No. P-77Q/043	Noted



Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
	2014. The licensee should note that specified timeline of September 30, 2015 for submission of the same under the Multi Year Tariff Regulation, 2014 is over. The Licensee should submit the same at the earliest.		dated 18 <sup>th</sup> December 2015 for approval of the Commission.	
4	The Commission directs the Licensee to ensure 100 % compliance of the Commission's Orders and targets to achieve 100% metering. The Licensee should submit the Quarterly progress report in this regard	Immediate	The Company has adequate stock of meters and related accessories to convert all the unmetered consumers into metered ones. However, the reason for slow conversion, as mentioned in the report submitted vide letter number P77A/2014/012 dated 27th August 2015 is the opposition and reluctance of the villagers to get meters meters installed as there will be an increase in their monthly electricity bills. During public hearings for determination of Tariffs, villagers have opposed installation of meters by the Company. Since, support from local administration / Police is not available for this activity, the Company through persuasive means and by engaging the village Contact Persons and Village Pradhan in various villages has been installing meters so that there is no law and order problem in the respective areas. Further, as the Commission is aware, the Company is not granting any new unmetered connection in its licensed area.	Noted





Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
5	The Commission once again directs the licensee that they should file FPPCA in a timely and regular manner failing which the Commission may have to resort to take strict action against the Licensee like disallowance of additional power purchase expenses and the associated carrying cost on account of additional Power Purchase expenses or any other action that the Commission may deem fit while doing the Truing up.	Immediate	The Petitioner has submitted the Computation of incremental power purchase cost for quarter ending June'16.	Noted
6	The Commission directs the Licensee to submit the consumer category and sub-category wise Regulatory Surcharge collected for each year till FY 2015-16 (December) since inception at the earliest.	Immediate	The Petitioner has submitted the details of the same.	Noted
7	The Commission reiterates that the Licensee should adhere to the time line outlined in UPERC (Multi Year Distribution Tariff) Regulations, 2014 for conducting a detailed study to provide accurate and effective consumption norms as specified by the Commission in its earlier directions. The licensee should note that specified timeline of December 1, 2015 for submission of the same under the Multi Year Tariff Regulation, 2014 has expired. The Licensee should submit the same at the earliest.	Immediate	The petitioner has conducted the bidding process and submitted its letter No. P-77Q/043 dated 18 <sup>th</sup> December 2015 for approval of the Commission.	Noted



Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
8	The Petitioner should complete the Assessment Study of metered consumers as per the Regulations 16.2 notified vide Distribution MYT Regulations, 2014 and subsequently submit the report to the Commission. The licensee should note that specified timeline of September 30, 2015 for submission of the same under the Multi Year Tariff Regulation, 2014 has expired. The Licensee should submit the same at the earliest.	Immediate	The petitioner has conducted the bidding process and submitted its letter No. P-77Q/043 dated 18 <sup>th</sup> December 2015 for approval of the Commission.	Noted
9	The Petitioner should complete the Assessment Study of un-metered consumers to establish base line norms as per the Regulations 17.1 notified vide Distribution MYT Regulations, 2014 and subsequently submit the report to the Commission. The licensee should note that specified timeline of December 1, 2015 for submission of the same under the Multi Year Tariff Regulation, 2014 is over. The Licensee should submit the same at the earliest.	Immediate	The petitioner has conducted the bidding process and submitted its letter No. P-77Q/043 dated 18 <sup>th</sup> December 2015 for approval of the Commission.	Noted
10	The Petitioner should complete the Study of Agriculture feeders segregated and not segregated in significant numbers to determine base line norms as per the Regulations 17.2, 17.3 notified vide MYT Regulations, 2014 and subsequently submit the report to the Commission. The licensee should note that specified timeline of December 1, 2015 for	Immediate	The petitioner has conducted the bidding process and submitted its letter No. P-77Q/043 dated 18 <sup>th</sup> December 2015 for approval of the Commission.	Noted



*Approval of Business Plan, MYT ARR & Tariff for NPCL for FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
	submission of the same under the Multi Year Tariff Regulation, 2014 is over. The Licensee should submit the same at the earliest.			
11	The Petitioner should submit Roadmap for Reduction of Cross Subsidy as per the Regulation 39 notified vide MYT Regulations, 2014. The licensee should note that specified timeline of October, 2014 for submission of the same under the Multi Year Tariff Regulation, 2014 is over. The Licensee should submit the same at the earliest.	Immediate	The petitioner has submitted its roadmap as per letter no. P-77Q(III)/029 dated 4th August, 2015.	Noted
12	The Petitioner should submit month wise details of number of supply hours for rural and urban area for FY 2014-15 & FY 2015-16	Within one month from issue of this Order	he Petitioner has submitted its response as per letter no P-77A/2016/012 dated 10th June 2016.	Noted
13	The Commission directs the Petitioner to submit a proposal for "Rate Schedule" linked to number of hours of supply.	At the time of next ARR filings	-	Noted
14	The Commission directs the Licensee to submit every month a report comprising the details of the power purchased from all the sources demonstrating that the Merit Order Dispatch Principle has been strictly followed and that the procurement was optimal in regard to cost taking into consideration of the power available at the power exchanges etc.	Monthly Basis	The Petitioner submitted that currently, the entire power is being procured through short-term competitive bidding having single-part tariff, as approved by the Commission. Further, the aforesaid cost can be optimised provided Company is allowed by UPSLDC to procure / sell power through power exchange. Despite repeated requests, UPSLDC is yet to grant NoC which is a prerequisite for participation in Power Exchange(s).	Noted



*Approval of Business Plan, MYT ARR & Tariff for NPCL for FY 2017-18 to FY 2019-20 and True-up of FY 2015-16*

Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance vide MYT Petition	Commission's Direction
15	The Petitioner should file the MYT Petition for the Control FY 2017-18 to FY 2019-20 as per the Regulations 12.2, 12.7, 12.8 & 12.9 as per MYT Regulations, 2014	As per MYT timeline	The Petitioner has submitted the same.	Noted
16	The Licensee is directed to explore the possibility of having TOD tariff structure for domestic and non-domestic categories and submit their proposal.	At the time of next ARR filings	The Petitioners submitted that it is in discussion with the consumers to ascertain their views and the same will be submitted along with the MYT petition for FY 2017-18 to FY 2019-20.	The Commission has addressed the same in its directives for FY 2017-18.



## DIRECTIVES FOR MYT CONTROL PERIOD

**Table 9-4: DIRECTIVES ISSUED UNDER PRESENT TARIFF ORDER**

Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order
1	The Commission directs NPCL to regularly update the Commission on the status of implementation of the DSM measures being undertaken / intended to be taken up by the utility. The report must also indicate the cost-benefit analysis of the measures being undertaken by NPCL.	At end of each quarter of the Financial Year
2	As regards the RPO Obligation, NPCL is directed to ensure that it should procure renewable energy in accordance with Regulation 4 of the UPERC (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010 during each year to meet their obligation.	Next ARR filing
3	As lack of approved transparent policy on identifying and writing off bad debts is hindering allowance of bad debts as an ARR component; the Commission directs the Licensee to submit ten sample cases of LT & HT consumers where orders have been issued for writing off bad debts, clearly depicting the procedure adopted for writing off bad debts along with policy framework for managing bad debts for the Commission's perusal.	Immediate
4	The Licensee is directed to explore the possibility of having TOD tariff structure for domestic and non-domestic categories and submit their proposal.	At the time of next ARR filings
5	The Licensee is directed to submit the action plan for achieving 100% metering	At the time of filing APR
6	Any other compliances / milestones as per MYT Distribution Tariff Regulations, 2014 and Commissions Orders.	-



## 10. APPLICABILITY OF THE ORDER

The Licensees, in accordance to Regulation 13.3. of the Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014, 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



## **11. ANNEXURES**

### **11.1 RATE SCHEDULE FOR FY 2017-18**

#### **Rate Schedule for FY 2017-18**

**(Applicable for NPCL)**

##### **A. GENERAL PROVISIONS:**

These provisions shall apply to all categories unless specified otherwise and are integral part of the Rate Schedule.

##### **1. NEW CONNECTIONS:**

All new connections shall be given in kW, KVA, or BHP as agreed to be supplied by the licensee. Further, if the contracted load (Kw / kVA) of already existing consumer is in fractions then the same shall be treated as next higher kW / kVA load. If the contracted load is in kW and is being converted into kVA, the conversion factor of 0.90 will be used ( $kVA = kW / 0.90$ ) for tariff application purposes and the same shall be rounded off up to two decimal places.

##### **2. READING OF METERS:**

As per applicable provisions of Electricity Supply Code 2005 and its amendments.

##### **3. BILLING WHEN METER IS NOT MADE ACCESSIBLE:**

A penalty of Rs. 50 / kW or as decided by the Commission through an Order shall be levied for the purposes of Clause 6.2 (c) of the applicable Electricity Supply Code 2005 and its amendments.

##### **4. BILLING IN CASE OF DEFECTIVE METERS:**

As per the applicable provisions of Electricity Supply Code 2005 and its amendments.

##### **5. KVAH TARIFF:**

'kVAh based tariffs' shall be applicable on all consumers having contracted load of 10 kW / 13.4 BHP and above, under different categories with TVM / TOD / Demand recording meters (as appropriate).

The rates prescribed in different categories in terms of kW and kWh will be converted into appropriate kVA and kVAh by multiplying Fixed / Demand Charges and Energy Charges by an average power factor of 0.90. Similarly, the Fixed / Demand Charges expressed in BHP can be converted into respective kVA rates in accordance with formula given below:

$$\text{Fixed Charges in kVA} = (\text{Fixed Charges in BHP} / 0.746) * 0.90$$

$$\text{Fixed Charges in kVA} = (\text{Fixed Charges in kW} * 0.90)$$

$$\text{Energy Charges in kVAh} = (\text{Energy Charges in kWh} * 0.90)$$

The converted rates (i.e. Energy charge in Rs. / kVAh and Fixed / Demand charges in Rs. / kVA) will be rounded up to two decimal places.

Further, for converting energy slabs of different categories specified in kWh to kVAh, average power factor of 0.90 will be used as a converting factor for converting each energy slab (specified in kWh) into energy slabs (in kVAh). The converted energy slabs (in kVAh) will be rounded to next higher kVAh.

**Note 1:** In case of kVAh billing only kVAh reading will be used for billing purpose.

**Note 2:** If the average power factor of a consumer in a billing cycle is leading and is within the range of 0.95 - 1.00, then for tariff application purposes such leading power factor shall be treated as unity. The bills of such consumers shall be prepared on kwh basis. However, if the leading power factor is below 0.95 (lead) then the consumer shall be billed as per the kVAh reading indicated by the meter. However, the aforesaid provision of treating power factor below 0.95 (lead) as the commensurate lagging power factor, for the purposes of billing, shall not be applicable on HV-3 category and shall be treated as unity. Hence, for HV-3, "lag only" logic of the meter should be used which blocks leading kVAh.

## 6. BILLABLE LOAD / DEMAND:

For all consumers having TVM / TOD / Demand recording meters installed, the billable load / demand during a month shall be the actual maximum load / demand as recorded by the meter (can be in parts of kW or kVA) or 75% of the contracted load / demand (kW or kVA), whichever is higher.

In case the Licensee's meter reader does not note the actual maximum load / demand, then the Licensee will raise the bill at 75% of the contracted load and in cases where the consumer approaches the Licensee with a meter reading but does not provide the proof of actual maximum load / demand displayed on his meter, then in such case the Licensee will raise the bill at 100% of the contracted load.





Further in case a consumer feels that his maximum load / demand reading has been noted wrong, the consumer may approach the licensee with a photo of the actual maximum load / demand reading displayed on his meter of the concerned month. The licensee shall accept the same for the purpose of computation of billable demand, however if the licensee wishes to, it can get the same verified within 5 days.

## 7. SURCHARGE / PENALTY:

### (i) DELAYED PAYMENT:

If a consumer fails to pay his electricity bill by the due date specified therein, a late payment surcharge shall be levied at 1.25% on the dues (excluding late payment surcharge) per month; up-to first three months of delay and subsequently at 2.00% on the dues (excluding late payment surcharge) per month of delay. Late payment surcharge shall be calculated proportionately for the number of days for which the payment is delayed beyond the due date specified in the bill and levied on the unpaid amount of the bill excluding delayed payment surcharge. Imposition of this surcharge is without prejudice to the right of the Licensee to disconnect the supply or take any other measure permissible under the law.

### (ii) CHARGES FOR EXCEEDING CONTRACTED DEMAND:

- a) If the maximum load / demand in any month of a **domestic consumer** having TVM / TOD / Demand recording meter exceeds the contracted load / demand, then such excess load / demand shall be levied equal to 100% of the normal rate apart from the normal fixed / demand charge as per the maximum load / demand recorded by the meter. Further, if the consumer is found to have exceeded the contracted load / demand for continuous previous three months, the consumer shall be served a notice of one month advising him to get the contracted load enhanced as per the provisions of the Electricity Supply Code, 2005 and amendments thereof. However, the consumer shall be charged for excess load for the period the load is found to exceed the contracted load. The Licensee shall merge the excess load with the previously sanctioned load, and levy additional charges calculated as above, along with additional security. Subsequent action regarding the increase in contracted load, or otherwise shall be taken only after due examination of the consumer's reply to the notice and a written order in this respect by the Licensee.



- b) If the maximum load / demand in any month, for the consumers of **other category (except (a) above)** having TVM / TOD / Demand recording meter exceeds the contracted load / demand, then such excess load / demand shall be levied equal to 200% of the normal rate apart from the normal fixed / demand charges as per the maximum load / demand recorded by the meter.
- c) Any surcharge / penalty shall be over and above the minimum charge, if the consumption bill of the consumer is being prepared on the basis of minimum charge.
- d) Provided where no TVM / TOD / Demand recording meter is installed, the excess load / demand charge shall be levied as per the Electricity Supply Code, 2005 as amended from time to time.

#### 8. POWER FACTOR SURCHARGE:

- i. Power factor surcharge shall not be levied where consumer is being billed on kVAh consumption basis.
- ii. It shall be obligatory for all consumers to maintain an average power factor of 0.90 or more during any billing period. No new connections of motive power loads / inductive loads above 3 kW, other than under LMV-1 and LMV-2 category, and / or of welding transformers above 1 kVA shall be given, unless shunt capacitors having I.S.I specifications of appropriate ratings are installed, as described in section H - 'LIST OF POWER FACTOR APPARATUS' of this Rate Schedule.
- iii. In respect of the consumers with or without TVM / TOD / Demand recording meters, excluding consumers under LMV-1 category up to contracted load of 10 kW and LMV-2 category up to contracted load of 5 kW, if on inspection it is found that capacitors of appropriate rating are missing or in-operational and Licensee can prove that the absence of capacitor is bringing down the power factor of the consumer below the obligatory norm of 0.90; then a surcharge of 15% on the 'RATE' shall be levied on such consumers. Licensee may also initiate action under the relevant provisions of the Electricity Act, 2003, as amended from time to time.  
Notwithstanding anything contained above, the Licensee also has a right to disconnect the power supply, if the power factor falls below 0.75.



- iv. Power factor surcharge shall however, not be levied during the period of disconnection on account of any reason whatsoever.

**9. PROTECTIVE LOAD AND PROTECTIVE LOAD CHARGE:**

Consumers getting supply on independent feeder at 11kV & above voltage, emanating from sub-station, may opt for facility of protective load and avail supply during the period of scheduled rostering imposed by the Licensee, except under emergency rostering. An additional charge @ 100% of base demand charges shall be levied on the sanctioned protective load (as per Electricity Supply Code, 2005 and its amendments) per month as protective load charge. However, consumers of LMV-4 (A) - Public Institutions will pay the additional charge @ 25% of base demand charges only. During the period of scheduled rostering, the load shall not exceed the sanctioned protective load. In case the consumer exceeds the sanctioned protective load during scheduled rostering, he shall be liable to pay twice the prescribed additional charges for such excess load.

**10. ROUNDING OFF:**

All bills will be rounded off to the nearest rupee i.e. up to 49 paisa shall be rounded down to previous rupee and 50 paisa upwards shall be rounded up to next rupee. The difference due to such rounding shall be adjusted in subsequent bills.

**11. OPTION OF MIGRATION TO HV-1 & HV-2 CATEGORY:**

The consumer under LMV-2 and LMV-4 with contracted load above 50 kW and getting supply at 11 kV & above voltage shall have an option to migrate to the HV-1 category and LMV-6 consumers with contracted load above 50 kW and getting supply at 11 kV & above voltage shall have an option to migrate to the HV-2 category. Furthermore, the consumers shall have an option of migrating back to the original category on payment of charges prescribed in Cost Data Book for change in voltage level.

**12. PRE-PAID METERS / AUTOMATIC METER READING SYSTEM:**

- (i) Any consumer having prepaid meters shall also be entitled to a discount of 1.25% on the 'RATE' as defined in the Tariff Order.
- (ii) The token charges for code generation for prepaid meters shall be Rs. 10/- per token or as decided by the Commission from time to time.



**13. CONSUMERS NOT COVERED UNDER ANY RATE SCHEDULE OR EXPRESSLY EXCLUDED FROM ANY CATEGORY:**

For consumers of light, fan & power (excluding motive power loads) not covered under any rate schedule or expressly excluded from any LMV rate schedule will be categorized under LMV-2.

A consumer under metered category may undertake any extension work, in the same premises, on his existing connection without taking any temporary connection as long as his demand does not exceed his contracted demand and the consumer shall be billed in accordance with the tariff applicable to that category of consumer.

**14. SOLAR WATER HEATER REBATE:**

If consumer installs and uses solar water heating system of 100 litres or more, a rebate of Rs. 100 /- per month or actual bill for that month whichever is lower shall be given. The same shall be subject to the condition that consumer gives an affidavit to the licensee to the effect that he has installed such system and is in working condition, which the licensee shall be free to verify from time to time. If any such claim is found to be false, in addition to punitive legal action that may be taken against such consumer, the licensee will recover the total rebate allowed to the consumer with 100% penalty and debar him from availing such rebate for the next 12 months.

**15. REBATE ON PAYMENT ON OR BEFORE DUE DATE:**

A rebate at the rate of 1.00 % on the 'RATE' shall be given in case the payment is made on or before the due date. The consumers having any arrears in the bill shall not be entitled for this rebate. The consumers who have made advance deposit against their future monthly energy bills shall also be eligible for the above rebate applicable on the 'RATE'.

**16. REBATE TO CONSUMERS WHO SHIFT FROM UNMETERED TO METERED CONNECTION:**

In case any rural consumer shifts from unmetered to metered category, he shall be entitled to rebate of 10% on the 'RATE' which shall be applicable from date of installation of meter till end of FY 2017-18.



**17. SCHEME FOR ADVANCE DEPOSIT FOR FUTURE MONTHLY ENERGY BILLS:**

If a consumer intends to make advance deposit against his future monthly energy bills, the Licensee shall accept such payment and this amount shall be adjusted only towards his future monthly energy bills. On such advance deposit the consumers shall be paid interest, at the interest rate applicable on security deposit, for the period during which advance exists for each month on reducing balance method and amount so accrued shall be adjusted in the electricity bills which shall be shown separately in the bill of each month. Further, quarterly report regarding the same must be submitted to the Commission.

**18. FACILITATION CHARGE FOR ONLINE PAYMENT:**

- (i) No transaction charge shall be collected from the consumers making their payment through internet banking.
- (ii) The Licensees shall bear the transaction charges for transactions up to Rs. 4,000 for payment of bill through internet using Credit Card / Debit Card.

**19. MINIMUM CHARGE:**

Minimum charge is the charge in accordance with the tariff in force from time to time and come into effect only when sum of fixed / demand charges and energy charges are less than a certain prescribed amount i.e. Minimum Charges. For each month, consumer will pay an amount that is higher of the following:

- Fixed / Demand charges (if any) plus Energy Charge on the basis of actual consumption for the month and additional charges such as Electricity Duty, Regulatory Surcharges, FPPCA / Incremental Cost Surcharges and any other charges as specified by the Commission from time to time.
- Monthly minimum charge as specified by the Commission and computed at the contracted load and additional charges such as Electricity Duty, Regulatory Surcharges, FPPCA / Incremental Cost Surcharges and any other charges as specified by the Commission from time to time.

**20. EXEMPTION FROM MINIMUM CHARGE FOR USING SOLAR POWER:**

If a consumer under LMV-2 (Non - domestic light, fan and power) category installs a rooftop solar plant under the provisions of UPERC (Rooftop Solar PV Grid Interactive Systems Gross / Net Metering) Regulations, 2015 with maximum peak capacity of the grid connected rooftop solar PV system not exceeding 100% of the

---



sanctioned load / demand of the consumer, then such consumer shall be exempted from payment of monthly minimum charges. Such exemption shall be in force till the time the solar plant remains fully operational.

**21. INTEREST ON DUES PAYABLE TO CONSUMER BY THE LICENSEE:**

If a consumer becomes eligible for dues from the Licensee which may arise out of rectification / adjustment / settlement of bill(s), then such consumer will also be entitled to get interest at rate applicable for interest on security deposits on all the dues payable by the Licensee to the consumer. The Licensee shall compute the interest amount for the period during which such pending amounts exists and adjust such interest towards the future monthly bills of consumers. After adjustment of the interest amount in a particular month, the balance amount, will be carried forward to next month for adjustment with interest on balance amount. The details of such interest amount and adjustment made during the month shall be shown separately in the bill. Further, separate accounting of interest paid must be maintained by the Licensees.

**22. DEFINITION OF RURAL SCHEDULE:**

Rural Schedule means supply schedule as defined and notified by State Load Despatch Centre (SLDC), Lucknow from time to time.



## B. RETAIL TARIFFS FOR FINANCIAL YEAR 2017-18

### RATE SCHEDULE LMV – 1:

#### DOMESTIC LIGHT, FAN & POWER:

##### 1. APPLICABILITY:

This schedule shall apply to:

- a) Premises for residential / domestic purpose, Accommodation for Paying Guests for Domestic purpose (Excluding Guest Houses), Janata Service Connections, Kutir Jyoti Connections, Jhuggi / Hutments, Places of Worship (e.g. Temples, Mosques, Gurudwaras, Churches) and Electric Crematoria, Shelter Homes, orphanages, old age homes, Institutions run for mentally retarded and forsaken children.
- b) Mixed Loads
  - i. **50 kW and above**
    - a. Registered Societies, Residential Colonies / Townships, Residential Multi-Storied Buildings with mixed loads (getting supply at single point) with the condition that at least 70% of the total contracted load shall be exclusively for the purposes of domestic light, fan and power. The above mixed load, within 70%, shall also include the load required for lifts, water pumps and common lighting,
    - b. Military Engineer Service (MES) for Defence Establishments (Mixed load without any load restriction).
  - ii. **Less than 50 kW**

Except for the case as specified in Regulation 3.3 (e) of Electricity Supply Code, 2005 as amended from time to time, if any portion of the load is utilized for conduct of business for non-domestic purposes then the entire energy consumed shall be charged under the rate schedule of higher charge

##### 2. CHARACTER AND POINT OF SUPPLY:

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

### 3. RATE:

Rate, gives the fixed and energy charges at which the consumer shall be billed during the billing period applicable to the category:

#### (a) Consumers getting supply as per 'Rural Schedule':

Description	Description	Fixed charge	Energy charge)
i) Un-metered	All Load	Rs. 300 / kW / month*	Nil

\*Note: The RATE will be Rs. 400 / kW / month from 1<sup>st</sup> April, 2018 onwards.

Description	Consumption Range	Fixed* Charge	Energy Charge
ii) Metered	For first 100 kWh / month*	Rs. 80.00 / kW / month	Rs. 3.00 / kWh
	For next 101 - 150 kWh / month		Rs. 3.50 / kWh
	For next 151 – 300 kWh / month		Rs. 4.50 / kWh
	For next 301 – 500 kWh / month		Rs. 5.00 / kWh
	For above 500 kWh / month (Starting from 501 <sup>st</sup> unit)		Rs. 5.50 / kWh

\*For consumers with contracted load up to 1 KW and not consuming more than 100 units per month, fixed charges shall be Rs. 50.00 / kW / month

#### (b) Supply at Single Point for bulk loads (50 kW and above, Supplied at any Voltage):

Description	Fixed Charge	Energy Charge
For Townships, Registered Societies, Residential Colonies, multi-storied residential complexes (including lifts, water pumps and common lighting within the premises) with loads 50 kW and above with the restriction that at least 70% of the total contracted load is meant exclusively for the domestic light, fan and power purposes and for Military Engineer Service (MES) for Defence Establishments (Mixed load without any load restriction).	Rs. 95.00 / kW / Month	Rs. 6.10 / kWh

The body seeking the supply at Single point for bulk loads under this category shall be considered as a deemed franchisee of the Licensee. Such body shall charge not more than 5% additional charge on the above specified 'Rate' from its consumers apart from





other applicable charges such as Regulatory Surcharge, Penalty, Rebate and Electricity Duty on actual basis.

The 5% additional charge shall be towards facilitating supply of electricity to the individual members to recover its expenses towards supply of electricity, distribution loss, electrical maintenance in its supply area, billing, accounting and audit etc.

The deemed franchisee is required to provide to all its consumers and the licensee, a copy of the detailed computation of the details of the amounts realized from all the individual consumers and the amount paid to the licensee for every billing cycle on half yearly basis. If he fails to do so, then the consumers may approach the Consumer Grievance Redressal Forum (CGRF) having jurisdiction over their local area for the redressal of their grievances.

The deemed franchisee shall arrange to get its account(s) audited by a Chartered Accountant mandatorily. The audited accounts will be made available to all the consumers of the deemed franchisee within 3 months of the closure of that financial year. If he fails to do so, then the consumers may approach the Consumer Grievance Redressal Forum (CGRF) having jurisdiction over their local area for the redressal of their grievances.

The deemed franchisee should separately meter the electricity supplied from back up arrangements like DG sets etc. The bill of its consumers should clearly depict the units and rate of electricity supplied through back up arrangement and electricity supplied through Licensee.

The deemed franchisee shall not disconnect the supply of electricity of its consumers on the pretext of defaults in payments related to other charges except for the electricity dues regarding the electricity consumed by its consumers and electricity charges for lift, water lifting pump, streetlight if any, corridor / campus lighting and other common facilities.

In case the deemed franchisee exceeds the contracted load / demand under the provisions of Clause 7(ii) – 'Charges for Exceeding Contracted demand' of the General Provisions of this Rate Schedule, only in such case the deemed franchisee will recover the same from the individual members who were responsible for it on the basis of their individual excess demands.

### (c) OTHER METERED DOMESTIC CONSUMERS:

- 1. Lifeline consumers:** Consumers with contracted load of 1 kW, energy consumption up to 100 kWh / month.

Description	Fixed Charge	Energy Charge
Loads up to 1 kW only and for consumption up to 100 kWh / month	Rs. 50.00 / kW / month	Rs. 3.00 / kWh

- 2. Others:** Other than Lifeline consumers (i.e. consumers who do not qualify under the criteria laid above for lifeline consumers.)

Description	Consumption Range	Fixed Charge	Energy Charge
All loads	For first 150 kWh / month	Rs. 100.00 / kW / month	Rs. 4.90 / kWh
	For next 151 - 300 kWh / month		Rs. 5.40 / kWh
	For next 301 – 500 kWh / month		Rs. 6.20 / kWh
	For above 500 kWh / month (Starting from 501 <sup>st</sup> unit)		Rs. 6.50 / kWh

#### Note:

For all consumers under this category the maximum demand during the month recorded by the meter has to be essentially indicated in their monthly bills. However, this condition would be mandatory only in case meter reading is done by the Licensee. Accordingly, if the bill is being prepared on the basis of reading being submitted by the consumer then the consumer would not be liable to furnish maximum demand during the month and his bill would not be held back for lack of data of maximum demand.



## **RATE SCHEDULE LMV– 2:**

### **NON - DOMESTIC LIGHT, FAN AND POWER:**

#### **1. APPLICABILITY:**

This schedule shall apply to all consumers using electric energy for Light, Fan and Power loads for Non-Domestic purposes, like all type of Shops including Patri Shopkeepers, Hotels, Restaurants, Private Guest Houses, Private Transit Hostels, Private Students Hostels, Marriage Houses, Show-Rooms, Commercial / Trading Establishments, Cinema and Theatres, Banks, Cable T.V. Operators, Telephone Booths / PCO (STD / ISD), Fax Communication Centres, Photo Copiers, Cyber Café, Private Diagnostic Centres including X-Ray Plants, MRI Centres, CAT Scan Centres, Pathologies and Private Advertising / Sign Posts / Sign Boards, Commercial Institutions / Societies, Automobile Service Centres, Coaching Institutes, Private Museums, Power Looms with less than 5 kW load and for all companies registered under the Companies Act, 1956 with loads less than 75 kW.

#### **2. Character and Point of Supply:**

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

#### **3. RATE:**

Rate, gives the fixed and energy charges at which the consumer shall be billed during the billing period applicable to the category:

##### **(a) Consumers getting supply as per 'Rural Schedule'**

Description	Description	Fixed charge	Energy charge)
i) Un-metered	All Load	Rs. 1000 / kW / month	Nil
ii) Metered	All Load	Rs. 95 / kW / month	Rs. 5.00 / kWh

**(b) Private Advertising / Sign Posts / Sign Boards / Glow Signs / Flex\*:**

For all commercial (road side / roof tops of buildings) advertisement hoardings such as Private Advertising / Sign Posts / Sign Boards / Glow Signs / Flex, the rate of charge shall be as below:

Description	Fixed Charge	Energy Charge
Metered	-	Rs. 18.00 / kWh

*\*Note: Minimum charge payable by a consumer under the category "(b) Private Advertising / Sign Posts / Sign Boards / Glow Signs / Flex category" shall be Rs. 1800 / kW / Month.*

**Note:**

1. For application of these rates Licensee shall ensure that such consumption is separately metered.

**(c) In all other cases,** including urban consumers and consumers getting supply through rural feeders but exempted from scheduled rostering / restrictions or through co-generating radial feeders in villages / towns.

Contracted Load	Fixed Charge
Up to 2 kW	Rs. 300.00 / kW / month
Above 2 kW to 4 kW	Rs. 350.00 / kW / month
Above 4 kW	Rs. 430.00 / kW / month

Consumption Range	Energy Charge
For first 300 kWh / month	Rs. 7.00 / kWh
For next 301 – 1000 kWh / month	Rs. 8.00 / kWh
For above 1000 kWh / month (Starting from 1001 <sup>st</sup> unit)	Rs. 8.30 / kWh

**Note:** Minimum charge payable by a consumer under the category "(c) In all other cases" shall be Rs. 575 / kW / month (From April to September) and Rs. 425 / kW / month (From October to March).



**Note:**

For all consumers under this category the maximum demand during the month recorded by the meter has to be essentially indicated in their monthly bills. However, this condition would be mandatory only in case meter reading is done by the Licensee. Accordingly, if the bill is being prepared on the basis of reading being submitted by the consumer then the consumer would not be liable to furnish maximum demand during the month and his bill would not be held back for lack of data on maximum demand.

**4. REBATE TO POWER LOOMS:**

Rebate to Power Loom consumers shall be applicable in accordance with the Government order dated June 14, 2006 and the Commission's order dated July 11, 2006 subject to adherence of provision of advance subsidy.



### **RATE SCHEDULE LMV -3:**

#### **PUBLIC LAMPS:**

**1. APPLICABILITY:**

This schedule shall apply to Public Lamps including Street Lighting System, Road Traffic Control Signals, Lighting of Public Parks, etc. The street lighting in Harijan Bastis and Rural Areas are also covered by this rate schedule.

**2. CHARACTER AND POINT OF SUPPLY:**

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

**3. RATE:**

Rate gives the fixed and energy charges (including the TOD rates as applicable to the hour of operation) at which the consumer shall be billed during the billing period applicable to the category:

**(a) Un-metered Supply:**

Description	Gram Panchayat	Nagar Palika and Nagar Panchayat	Nagar Nigam
To be billed on the basis of total connected load calculated as the summation of individual points	Rs. 2000 / kW or part thereof per month	Rs. 3000 / kW or part thereof per month	Rs. 4000 / kW or part thereof per month



**(b) Metered Supply:**

Description	Gram Panchayat		Nagar Palika and Nagar Panchayat		Nagar Nigam	
	Fixed Charges	Energy Charges	Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
All loads	Rs. 160 / kW / month	Rs. 7.00 / kWh	Rs. 200 / kW / month	Rs. 7.50 / kWh	Rs. 220 / kW / month	Rs. 7.75 / kWh

**TOD Rates applicable for the metered supply (% of Energy Charges):**

18:00 hrs – 06:00 hrs	0%
06:00 hrs – 18:00 hrs	(+) 20%

4. For 'Maintenance Charges', 'Provision of Lamps' and 'Verification of Load' Point refer section E - 'PUBLIC LAMPS' of this Rate Schedule.



---

**RATE SCHEDULE LMV– 4:**

**LIGHT, FAN & POWER FOR PUBLIC INSTITUTIONS AND PRIVATE INSTITUTIONS:**

**1. APPLICABILITY:**

Applicable for load less than 75 kW.

**LMV- 4 (A) - PUBLIC INSTITUTIONS:**

This schedule shall apply to:

- (a) Government Hospitals / Government Research Institutions / Offices of the Government Organizations other than companies registered under Companies Act 1956.
- (b) Government & Government aided (i) Educational Institutions (ii) Hostels (iii) Libraries
- (c) Religious and charitable trusts & Institutions having a valid registration under Section 12 AA & 30G issued by the Income Tax department including hospitals, colleges and those providing services free of cost or at the charges / structure of charges not exceeding those in similar Government operated institutions.
- (d) Railway Establishments (excluding railway traction, industrial premises & Metro) such as Booking Centres, Railway Stations & Railway Research and Development Organization, Railway rest houses, Railway holiday homes, Railway inspection houses.
- (e) All India Radio and Doordarshan
- (f) Guest houses of Government., Semi-Government, Public Sector Undertaking Organisations

**LMV-4 (B) - PRIVATE INSTITUTIONS:**

This schedule shall apply to non-Government hospitals, nursing homes / dispensaries / clinics, private research institutes, and schools / colleges / educational institutes & charitable institutions / trusts not covered under (A) above.





## 2. CHARACTER AND POINT OF SUPPLY:

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

## 3. RATE:

Rate, gives the fixed and energy charges at which the consumer shall be billed during the billing period applicable to the category:

Description	Contracted Load	Fixed Charge
(A) For Public Institutions	Up to 2 kW	Rs. 275 / kW / month
	Above 2 kW to 4 kW	Rs. 290 / kW / month
	Above 4 kW	Rs. 300 / kW / month
(B) For Private Institutions	Up to 3 kW	Rs. 310 / kW / month
	Above 3 kW	Rs. 390 / kW / month

Description	Consumption Range	Energy Charge
(A) For Public Institutions	For first 1000 kWh / month	Rs. 7.80/ kWh
	For next 1001 – 2000 kWh / month	Rs. 8.10/ kWh
	For above 2000 kWh / month (Starting from 2001 <sup>st</sup> unit)	Rs. 8.30/ kWh
(B) For Private Institutions	For first 1000 kWh / month	Rs. 8.60 / kWh
	For above 1000 kWh / month (Starting from 1001 <sup>st</sup> unit)	Rs. 8.90 / kWh



**RATE SCHEDULE LMV– 5:**

**SMALL POWER FOR PRIVATE TUBE WELLS / PUMPING SETS FOR IRRIGATION PURPOSES:**

**1. APPLICABILITY:**

This schedule shall apply to all power consumers getting supply as per Rural / Urban Schedule for Private Tube-wells / Pumping Sets for irrigation purposes having a contracted load up to 25 BHP and for additional agricultural processes confined to Chaff-Cutter, Thresher, Cane Crusher and Rice Huller. All new connections under this category shall necessarily have the ISI marked energy efficient mono-bloc pump sets with capacitors of adequate rating to qualify for the supply. All existing pump sets shall be required to install capacitors of adequate rating.

**2. CHARACTER AND POINT OF SUPPLY:**

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

**3. RATE:**

Rate gives the fixed and energy charges at which the consumer shall be billed during the billing period applicable to the category:

**(A) For consumers getting supply as per Rural Schedule:**

**(i) Un-metered Supply**

Fixed Charge	Energy Charge
Rs. 150 / BHP / month	Nil
Consumer under this category will be allowed a maximum lighting load of 120 Watts.	

**(ii) Metered Supply**

Fixed Charge	Minimum Charges	Energy Charge
Rs. 60.00 / BHP / month	Rs. 150 / BHP / month	Rs. 1.75 / kWh

**Note:** Minimum amount payable by a consumer under the category “Rural Schedule (Metered Supply) shall be Rs. 150 per BHP per month, till the installation of the meter. Regulatory Surcharge, Duty, Taxes etc. will be payable extra.

**(iii) Energy Efficient Pumps**

Fixed Charge	Minimum Charges	Energy Charge
Rs. 60.00 / BHP / month	Rs. 130 / BHP / month	Rs. 1.50 / kWh

**Note:** Minimum amount payable by a consumer under the category “Rural Schedule (Energy Efficient Pumps) shall be Rs. 130 per BHP per month, till the installation of the meter. Regulatory Surcharge, Duty, Taxes etc. will be payable extra

**(B)** For consumers getting supply as per **Urban Schedule** (Metered Supply) including consumers getting supply through rural feeders exempted from scheduled rostering or through co-generating radial feeders in villages and towns.

Fixed Charge	Minimum Charges	Energy Charge
Rs. 120.00 / BHP / month	Rs. 200 / BHP / month	Rs. 5.50 / kWh

**Note:** Minimum amount payable by a consumer under the category “Urban Schedule (Metered Supply) shall be Rs. 200 per BHP per month, till the installation of the meter. Regulatory Surcharge, Duty, Taxes etc. will be payable extra.

For PTW consumers of Bundelkhand Area located in Gram Sabha, the minimum amount payable by a consumer shall be Rs. 150.00 per BHP per month, till the installation of the meter. Regulatory Surcharge, Duty, Taxes etc. will be payable extra.



## **RATE SCHEDULE LMV– 6:**

### **SMALL AND MEDIUM POWER:**

#### **1. APPLICABILITY:**

This schedule shall apply to all consumers of electrical energy having a contracted load less than 100 HP (75 kW) for industrial / processing or agro-industrial purposes, power loom (load of 5 kW and above) and to other power consumers, not covered under any other rate schedule. Floriculture, Mushroom and Farming units with contracted load less than 100 BHP (75kW) shall also be covered under this rate schedule. This schedule shall also apply to pumping sets above 25 BHP.

#### **2. CHARACTER AND POINT OF SUPPLY:**

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

#### **3. RATE:**

Rate, gives the fixed and energy charges (including the TOD rates as applicable to the hour of operation) at which the consumer shall be billed during the billing period applicable to the category:

##### **(A) Consumers getting supply other than Rural Schedule:**

<b>Contracted Load</b>	<b>Fixed Charge</b>
Up to 4 kW	Rs. 245 / kW / month
Above 4 kW to 9 kW	Rs. 255 / kW / month
Above 9 kW	Rs. 275 / kW / month

<b>Consumption Range</b>	<b>Energy Charge</b>
Up to 1000 kWh / month	Rs. 7.00 / kWh on entire consumption
Up to 2000 kWh / month	Rs. 7.35 / kWh on entire consumption
For above 2000 kWh / month	Rs. 7.60 / kWh on entire consumption

**TOD Structure:**
**Summer Months (April to September) \***

Hours	% of Energy Charges
05:00 hrs – 11:00 hrs	(-) 15%
11:00 hrs – 17:00 hrs	0%
17:00 hrs – 23:00 hrs	(+) 15%
23:00 hrs – 05:00 hrs	0%

**Winter Months (October to March) \***

Hours	% of Energy Charges
05:00 hrs – 11:00 hrs	0%
11:00 hrs – 17:00 hrs	0%
17:00 hrs – 23:00 hrs	(+) 15%
23:00 hrs – 05:00 hrs	(-) 15%

*\*Note: As the change in TOD structure may require reprogramming / installation of software in the TOD meters, the above rates will be applicable as and when reprogramming / installation of software of the consumer TOD meters has been done. However, the Licensee shall complete this work within a period of 2 months.*

**(B) Consumers getting supply as per Rural Schedule:**

The consumer under this category shall be entitled to a rebate of 7.5% on 'RATE (Excluding the TOD rates as applicable to the hour of operation)' as given for 'Consumers getting supply other than Rural Schedule'. Further, no 'TOD RATE' shall be applicable for this category.

**4. PROVISIONS RELATED TO SEASONAL INDUSTRIES:**

Seasonal industries will be determined in accordance with the criteria laid down below. No exhaustive list can be provided but some examples of industries exhibiting such characteristics are sugar, ice, rice mill, kolhu and cold storage. The industries which operate during certain period of the year, i.e. have seasonality of operation, can avail the benefits of seasonal industries provided:



- i) The load of such industry is above 13.4 BHP (for motive power loads) & 10 kW (other loads) and have Tri-vector Meters / TOD meters installed at their premises, however for Kolhu consumers such load is of 10 HP or above.
- ii) The continuous period of operation of such industries shall be at least 4 (four) months but not more than 9 (nine) months in a financial year.
- iii) Any prospective consumer, desirous of availing the seasonal benefit, shall specifically declare his season at the time of submission of declaration / execution of agreement mentioning the period of operation unambiguously.
- iv) The seasonal period once notified cannot be reduced during the next consecutive 12 months. The off-season tariff is not applicable to composite units having seasonal and other category loads.

The off-season tariff is also not available to those units who have captive generation exclusively for process during season and who avail Licensees supply for miscellaneous loads and other non-process loads.
- v) The consumer opting for seasonal benefit has a flexibility to declare his off-season maximum demand subject to a maximum of 25% of the contracted demand. The tariff rates (demand charge per kW / kVA and energy charge per kWh / kVAh) for such industries during off-season period will be the same as for normal period. Further, during the off season period, fixed charges shall be levied on the basis of maximum demand recorded by the meter (not on normal billable demand or on percentage contracted demand). Rates for the energy charges shall however be the same as during the operational season. Further, first violation in the off-season would attract normal billable demand charges and energy charges calculated at the unit rate 50% higher than the applicable tariff during normal period but only for the month in which the consumer has defaulted. However, on second violation in the off-season, the consumer will be charged at the normal billable demand for the entire off-season and energy charges calculated at the unit rate 50% higher than the applicable tariff during normal period.

## 5. REBATE TO POWER LOOMS:

Rebate to Power Loom consumers shall be applicable in accordance with the Government order dated June 14, 2006 and the Commission's order dated July 11, 2006 subject to adherence of provision of advance subsidy.



**6. FACTORY LIGHTING:**

The electrical energy supplied shall also be utilized in the factory premises for lights, fans, coolers, etc. which shall mean and include all energy consumed for factory lighting in the offices, the main factory building, stores, time keeper's office, canteen, staff club, library, crèche, dispensary, staff welfare centres, compound lighting, etc. No separate connection for the same shall be provided.



## **RATE SCHEDULE LMV– 7:**

### **PUBLIC WATER WORKS:**

#### **1. APPLICABILITY:**

This schedule shall apply to Public Water Works, Sewage Treatment Plants and Sewage Pumping Stations functioning under Jal Sansthan, Jal Nigam or other local bodies.

#### **2. CHARACTER AND POINT OF SUPPLY:**

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

#### **3. RATE:**

##### **(A) Consumers getting supply other than “Rural Schedule”:**

Rate gives the fixed and energy charges at which the consumer shall be billed during the billing period applicable to the category:

<b>Fixed Charge</b>	<b>Energy Charge</b>
Rs. 350.00 / kW / month	Rs. 8.30 / kWh

##### **(B) Consumers getting supply as per “Rural Schedule”:**

The consumer under this category shall be entitled to a rebate of 7.5% on ‘RATE’ as given for ‘Consumer getting supply other than Rural Schedule’.





**RATE SCHEDULE LMV – 8:**

**STATE TUBE WELLS / PANCHAYTI RAJ TUBE WELL & PUMPED CANALS:**

**1. APPLICABILITY:**

- (i) This schedule shall apply to supply of power for all State Tube wells, including Tube wells operated by Panchayti Raj, World Bank Tube wells, Indo Dutch Tube wells, Pumped Canals and Lift Irrigation schemes with contracted load less than 100 BHP (75 kW).
- (ii) Laghu Dal Nahar having load above 100 BHP (75 kW).

**2. CHARACTER AND POINT OF SUPPLY:**

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

**3. RATE:**

Rate gives the fixed and energy charges at which the consumer shall be billed during the billing period applicable to the category:

Description	Fixed Charge	Energy Charge
Metered	Rs. 300.00 / BHP / month	Rs. 7.40 / kWh
Un-metered	Rs. 3000.00 / BHP / month	Nil

- 4.** For finding out net load during any quarter of the year for this category refer section F - 'STATE TUBE – WELLS' of this Rate Schedule.



### **RATE SCHEDULE LMV – 9:**

#### **TEMPORARY SUPPLY:**

##### **1. APPLICABILITY:**

###### **A) Un-metered Supply for Illumination / Public Address / Temporary Shops in Melas:**

This schedule shall apply to temporary supply of light, fan & power up to 20 KW, Public address system and illumination loads during functions, ceremonies and festivities and temporary shops, not exceeding three months.

###### **B) Metered Supply for all other purposes:**

This schedule shall apply to all temporary supplies of light, fan and power load for the purpose other than mentioned in (A) above.

This schedule shall also apply for power taken for construction purposes including civil work by all consumers and Govt. Departments.

##### **2. CHARACTER AND POINT OF SUPPLY:**

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

##### **3. RATE (SEPARATELY FOR EACH POINT OF SUPPLY):**

Rate gives the fixed and energy charges at which the consumer shall be billed during the billing period applicable to the category:

###### **A. Un-metered:**

(i) Fixed charges <b><i>for illumination / public address / ceremonies</i></b> for load up to 20 kW per connection plus Rs. 100 per kW per day for each additional kW.	Rs. 4250.00 / day
(ii) Fixed charges for <b><i>temporary shops</i></b> set-up during festivals / melas or otherwise and having load up to 2KW	Rs. 500.00 / day / shop



**B. Metered\*:**

Description	Energy Charge
Individual Residential construction	Rs. 7.50 / kWh
	From 3 <sup>rd</sup> year onwards: Base Tariff applicable for current year plus additional 10% of the applicable Energy Charge.
Others	Rs. 8.50 / kWh
	From 3 <sup>rd</sup> year onwards: Base Tariff applicable for current year plus additional 10% of the applicable Energy Charge.

*\*Minimum bill payable by a consumer under the category "Metered" shall be Rs. 400.00 / kW / week.*

**Note:** Charge as specified at section A - 'GENERAL PROVISIONS', shall be paid by the consumer in advance.



---

**RATE SCHEDULE HV- 1:**

**NON - INDUSTRIAL BULK LOADS**

**1. APPLICABILITY:**

This rate schedule shall apply to:

- (a) Commercial loads (as defined within the meaning of LMV-2) with contracted load of 75 kW & above and getting supply at single point on 11 kV & above voltage levels.
- (b) Private institutions (as defined within the meaning of LMV-4 (b)) with contracted load of 75 kW & above and getting supply at single point on 11 kV & above voltage levels.
- (c) Non domestic bulk power consumer (other than industrial loads covered under HV-2) with contracted load 75 kW & above and getting supply at single point on 11 kV & above voltage levels and feeding multiple individuals (owners / occupiers / tenants of some area within the larger premises of the bulk power consumer) through its own network and also responsible for maintaining distribution network.
- (d) Public institutions (as defined within the meaning of LMV-4 (a)) with contracted load of 75 kW & above and getting supply at single point on 11 kV & above voltage levels. The institution / consumer seeking the supply at Single point for non-industrial bulk loads under this category shall be considered as a deemed franchisee of the Licensee.
- (e) Registered Societies, Residential Colonies / Townships, Residential Multi-Storied Buildings with mixed loads (getting supply at single point) with contracted load 75 kW & above and getting supply at single point on 11 kV & above voltage levels and having less than 70% of the total contracted load exclusively for the purposes of domestic light, fan and power. Figure of 70%, shall also include the load required for lifts, water pumps and common lighting,
- (f) For Offices / Buildings / Guesthouses of UPPCL / UPRVUNL / UPJVNL / UPPTCL / Distribution Licensees having loads above 75 kW and getting supply at 11 kV & above voltages.

## 2. CHARACTER AND POINT OF SUPPLY:

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

## 3. RATE:

Rate, gives the demand and energy charges at which the consumer shall be billed during the billing period applicable to the category:

- (a) **Commercial Loads / Private Institutions / Non - domestic bulk power consumer with contracted load 75 kW & above and getting supply at Single Point on 11 kV & above:**

	For supply at 11kV		For supply above 11 kV	
Contracted Load	Upto 100 kVA	Above 100 kVA	Upto 100 kVA	Above 100 kVA
Demand Charges	Rs. 360.00 / kVA / month	Rs. 400.00 / kVA / month	Rs. 360.00 / kVA / month	Rs. 400.00 / kVA / month

	For supply at 11kV		For supply above 11 kV	
Consumption Range	For first 2500 kVAh / month	For above 2500 kVAh / month (Starting from 2501 <sup>st</sup> kVAh )	For first 2500 kVAh / month	For above 2500 kVAh / month (Starting from 2501 <sup>st</sup> kVAh)
Energy Charges	Rs. 7.90 / kVAh	Rs. 8.25 / kVAh	Rs. 7.70 / kVAh	Rs. 8.05 / kVAh

- (b) **Public Institutions, Registered Societies, Residential Colonies / Townships, Residential Multi-Storied Buildings including Residential Multi-Storied Buildings with contracted load 75 kW & above and getting supply at Single Point on 11 kV & above voltage levels:**

	For supply at 11kV		For supply above 11 kV	
Contracted Load	Upto 100 kVA	Above 100 kVA	Upto 100 kVA	Above 100 kVA
Demand Charges	Rs. 325.00 / kVA / month	Rs. 340.00 / kVA / month	Rs. 325.00 / kVA / month	Rs. 340.00 / kVA / month



	For supply at 11kV		For supply above 11 kV	
Consumption Range	For first 2500 kVAh / month	For above 2500 kVAh / month (Starting from 2501 <sup>st</sup> kVAh)	For first 2500 kVAh / month	For above 2500 kVAh / month (Starting from 2501 <sup>st</sup> kVAh)
Energy Charges	Rs. 7.50 / kVAh	Rs. 7.70 / kVAh	Rs. 7.30 / kVAh	Rs. 7.50 / kVAh

The body seeking the supply at Single point for bulk loads under this category shall be considered as a deemed franchisee of the Licensee. Such body shall charge not more than 5% additional charge on the above specified 'Rate' from its consumers apart from other applicable charges such as Regulatory Surcharge, Penalty, Rebate and Electricity Duty on actual basis.

The 5% additional charge shall be towards facilitating supply of electricity to the individual members to recover its expenses towards supply of electricity, distribution loss, electrical maintenance in its supply area, billing, accounting and audit etc.

The deemed franchisee is required to provide to all its consumers and the licensee, a copy of the detailed computation of the details of the amounts realized from all the individual consumers and the amount paid to the licensee for every billing cycle on half yearly basis. If he fails to do so, then the consumers may approach the Consumer Grievance Redressal Forum (CGRF) having jurisdiction over their local area for the redressal of their grievances.

The deemed franchisee shall arrange to get its account(s) audited by a Chartered Accountant mandatorily. The audited accounts will be made available to all the consumers of the deemed franchisee within 3 months of the closure of that financial year. If he fails to do so, then the consumers may approach the Consumer Grievance Redressal Forum (CGRF) having jurisdiction over their local area for the redressal of their grievances.

The deemed franchisee should separately meter the electricity supplied from back up arrangements like DG sets etc. The bill of its consumers should clearly depict



the units and rate of electricity supplied through back up arrangement and electricity supplied through Licensee.

The deemed franchisee shall not disconnect the supply of electricity of its consumers on the pretext of defaults in payments related to other charges except for the electricity dues regarding the electricity consumed by its consumers and electricity charges for lift, water lifting pump, streetlight if any, corridor / campus lighting and other common facilities.

In case the deemed franchisee exceeds the contracted load / demand under the provisions of Clause 7(ii) – ‘Charges for Exceeding Contracted demand’ of the General Provisions of this Rate Schedule, only in such case the deemed franchisee will recover the same from the individual members who were responsible for it on the basis of their individual excess demands.



---

## **RATE SCHEDULE HV– 2:**

### **LARGE AND HEAVY POWER:**

#### **1. APPLICABILITY:**

This rate schedule shall apply to all consumers with contracted load of 75 kW (100 BHP) and above for industrial and / or processing purposes as well as to Arc / induction furnaces, rolling / re-rolling mills, mini-steel plants and Floriculture, Mushroom and Farming units and to any other HT consumer not covered under any other rate schedule.

Supply to Induction and Arc furnaces shall be made available only after ensuring that the loads sanctioned are corresponding to the load requirement of tonnage of furnaces. The minimum load of one-ton furnace shall in no case be less than 400 kVA and all loads will be determined on this basis. No supply will be given on loads below this norm.

For all HV-2 consumers, conditions of supply, apart from the rates, as agreed between the Licensee and the consumer shall continue to prevail as long as they are in line with the existing Regulations & Acts.

#### **2. CHARACTER AND POINT OF SUPPLY:**

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

#### **3. RATE:**

Rate, gives the demand and energy charges (including the TOD rates as applicable to the hour of operation) at which the consumer shall be billed during the billing period applicable to the category:





**(A) Urban Schedule:**

	For supply up to 11 kV	For supply above 11 kV and up to 66 kV	For supply above 66 kV and up to 132 kV	For supply above 132 kV
<b>BASE RATE</b>				
Demand Charges	Rs. 250.00 / kVA / month	Rs. 240.00 / kVA / month	Rs. 220.00 / kVA / month	Rs. 220.00 / kVA / month
Energy Charges	Rs. 6.65 / kVAh	Rs. 6.35 / kVAh	Rs. 6.15 / kVAh	Rs. 5.95 / kVAh

**TOD Structure:**

**Summer Months (April to September) \***

Hours	% of Energy Charges
05:00 hrs – 11:00 hrs	(-) 15%
11:00 hrs – 17:00 hrs	0%
17:00 hrs – 23:00 hrs	(+) 15%
23:00 hrs – 05:00 hrs	0%

**Winter Months (October to March) \***

Hours	% of Energy Charges
05:00 hrs – 11:00 hrs	0%
11:00 hrs – 17:00 hrs	0%
17:00 hrs – 23:00 hrs	(+) 15%
23:00 hrs – 05:00 hrs	(-) 15%

*\*Note: As the change in TOD structure may require reprogramming / installation of software in the TOD meters, the above rates will be applicable as and when reprogramming / installation of software of the consumer TOD meters has been done. However, the Licensee shall complete this work within a period of 2 months.*

**(B) Rural Schedule:**

This schedule shall be applicable only to consumers getting supply up to 11 kV as per 'Rural Schedule'. The consumer under this category shall be entitled to a rebate of 7.5% on 'BASE RATE' as given for 11 kV consumers under urban schedule. Further, no 'TOD RATE' shall be applicable for this category.

**(C) Consumers already existing under HV-2 category with metering arrangement at low voltage:**

Existing consumer under HV-2 with metering at 0.4 kV shall be required to pay as per schedule applicable to 11 kV consumers under HV-2 category.

**4. PROVISIONS RELATED TO SEASONAL INDUSTRIES:**

Seasonal industries will be determined in accordance with the criteria laid down below. No exhaustive list can be provided but some examples of industries exhibiting such characteristics are sugar, ice, rice mill and cold storage. The industries which operate during certain period of the year, i.e. have seasonality of operation, can avail the benefits of seasonal industries provided:

- i. The continuous period of operation of such industries shall be at least 4 (four) months but not more than 9 (nine) months in a financial year.
- ii. Any prospective consumer, desirous of availing the seasonal benefit, shall specifically declare his season at the time of submission of declaration / execution of agreement mentioning the period of operation unambiguously.
- iii. The seasonal period once notified cannot be reduced during the next consecutive 12 months. The off-season tariff is not applicable to composite units having seasonal and other category loads.
- iv. The off-season tariff is also not available to those units who have captive generation exclusively for process during season and who avail Licensees supply for miscellaneous loads and other non-process loads.
- v. The consumer opting for seasonal benefit has a flexibility to declare his off seasonal maximum demand subject to a maximum of 25% of the contracted demand. The tariff rates (demand charge per kW / kVA and energy charge per kWh / kVAh) for such industries during off-season period will be the same as for normal period. Further, during the off season fixed charges shall be levied on the basis of maximum demand recorded by the meter (not on normal billable demand or on percentage contracted demand). Rates for the energy charges shall however be the same as during the operational season. Further, first violation in the off-season would attract full billable demand charges and energy charges calculated at the unit rate 50% higher than the applicable tariff during normal period but only for the month in which the consumer has



defaulted. However, on second violation in the off-season, the consumer will forfeit the benefit of seasonal rates for the entire season and energy charges calculated at the unit rate 50% higher than the applicable tariff during normal period.

## **5. FACTORY LIGHTING:**

The electrical energy supplied shall also be utilized in the factory premises for lights, fans, coolers, etc. which shall mean and include all energy consumed for factory lighting in the offices, the main factory building, stores, time keeper's office, canteen, staff club, library, crèche, dispensary, staff welfare centres, compound lighting, etc. No separate connection for the same shall be provided.



### **RATE SCHEDULE HV – 3:**

#### **A: RAILWAY TRACTION:**

##### **1. APPLICABILITY:**

This schedule shall apply to the Railways for Traction loads only.

##### **2. CHARACTER OF SERVICE AND POINT OF SUPPLY:**

Alternating Current, single phase, two phase or three phase, 50 cycles, 132 kV or below depending on the availability of voltage of supply and the sole discretion of the Licensee. The supply at each sub-station shall be separately metered and charged.

##### **3. RATE:**

Rate, gives the demand and energy charges at which the consumer shall be billed for consumption during the billing period applicable to the category:

Description	Charges
<b>(a) Demand Charge</b>	
For supply at and above 132 kV	Rs. 365.00 / kVA / month
Below 132 kV	Rs. 375.00 / kVA / month
<b>(b) Energy Charge</b> (all consumption in a month)	
For supply at and above 132 kV	Rs. 7.65 / kVAh
Below 132 kV	Rs. 7.90 / kVAh

**Note:** Minimum charge payable by a consumer under this category shall be Rs. 850.00 / kVA / month.

##### **4. DETERMINATION OF THE DEMAND:**

Demand measurement at a particular time will be made on basis of simultaneous maximum demands recorded in summation kilovolt-ampere meter installed at contiguous substation serviced by same grid transformer.



The maximum demand for any month shall be defined as the highest average load measured in Kilo Volt amperes during any fifteen consecutive minutes period of the month.

**B: METRO RAIL CORPORATION:**

**1. APPLICABILITY:**

This schedule shall apply to the Metro Rail Corporation.

**2. CHARACTER OF SERVICE AND POINT OF SUPPLY:**

Alternating Current, single phase, two phase or three phase, 50 cycles, 132 kV or below depending on the availability of voltage of supply and the sole discretion of the Licensee. The supply at each sub-station shall be separately metered and charged.

**3. RATE:**

Rate, gives the energy charges at which the consumer shall be billed for consumption during the billing period applicable to the category:

<b>Demand Charges</b>	Rs. 200.00 / kVA / month
<b>Energy Charges</b>	Rs. 6.50 / kVAh

**Note:** Minimum charge payable by a consumer under this category shall be Rs. 800 / kVA / month.

- Penalty @ Rs. 540 / kVA / month will be charged on excess demand, if maximum demand exceeds contracted load.

**4. DETERMINATION OF THE DEMAND:**

Demand measurement shall be made by suitable kilovolt ampere indicator at the point of delivery. The demand for any month shall be defined as the highest average load measured in Kilo Volt Amperes during any fifteen consecutive minutes period of the month.



## **RATE SCHEDULE HV – 4:**

### **LIFT IRRIGATION WORKS:**

#### **1. APPLICABILITY:**

This Rate Schedule shall apply to medium and large pumped canals with contracted load of 100 BHP (75kW) and above.

#### **2. CHARACTER OF SERVICE & POINT OF SUPPLY:**

As per applicable provisions of Electricity Supply Code, 2005 and its amendments.

#### **3. RATE:**

Rate, gives the demand and energy charges at which the consumer shall be billed during the billing period applicable to the category:

##### **(a) Demand Charges:**

<b>Voltage Level</b>	<b>Rate of Charge</b>
For supply at 11 kV	Rs. 320.00 / kVA / month
For supply at 33 kV and 66 kV	Rs. 310.00 / kVA / month
For supply at 132 kV	Rs. 300.00 / kVA / month

##### **(b) Energy Charges:**

<b>Voltage Level</b>	<b>Rate of Charge</b>
For supply at 11 kV	Rs. 7.70 / kVAh
For supply at 33 kV and 66 kV	Rs. 7.55 / kVAh
For supply at 132 kV	Rs. 7.35 / kVAh

##### **c) Minimum Charges:**

Minimum charge payable by a consumer under this category shall be Rs. 1000.00 / kVA / month irrespective of supply voltage



#### **4. DETERMINATION OF THE DEMAND:**

Demand measurement shall be made by suitable kilovolt ampere indicator at the point of supply. In the absence of suitable demand indicator, the demand as assessed by the Licensee shall be final and binding. If, however, the number of circuits is more than one, demand and energy measurement will be done on the principle of current transformer summation metering.



**C. REGULATORY SURCHARGE RATE:**

DISCOM	Regulatory Surcharge Rate (%)**
NPCL	6.00%

\*\* This surcharge shall be applicable on the 'RATE' as defined in the Rate Schedule above.





**D. PUBLIC LAMPS:**

**1. MAINTENANCE CHARGE :**

In addition to the “Rate of Charge” mentioned above, a sum of Rs. 10.00 per light point per month will be charged for operation and maintenance of street lights. This Maintenance Charge will cover only labour charges, where all required materials are supplied by the local bodies. However, the local bodies will have an option to operate and maintain the public lamps themselves and in such case, no maintenance charge shall be recovered. This charge shall not apply to the consumers with metered supply.

**2. PROVISION OF LAMPS:**

Streets where distribution mains already exist, the Licensee will provide a separate single-phase, 2-wire system for the street lights including light fitting and incandescent lamps of rating not exceeding 100 Watts each. In case the above maintenance charge is being levied, the labour involved in replacements or renewal of lamps shall be provided by the Licensee. However, all the required materials shall be provided by the local bodies. The cost of all other types of street light fittings shall be paid by the local bodies.

The cost involved in extension of street light mains (including cost of sub - stations, if any) in areas where distribution mains of the Licensee have not been laid, will be paid for by the local bodies.

**3. VERIFICATION OF LOAD:**

The number of light points including that of traffic signals together with their wattage will be verified jointly by the representatives of Licensee and Town Area / Municipal Board / Corporation at least once in a year. However, additions will be intimated by the Town Area / Municipal Board / Corporation on monthly basis. The Licensee will carry out the checking of such statements to satisfy themselves of the correctness of the same. The monthly bills shall be issued on the basis of verified number of points at the beginning of the year and additions, if any, during the months as intimated above. The difference, if any, detected during joint verification in the following year shall be reconciled and supplementary bills shall be issued.

Further, if the authorized representative of concerned local body does not participate in the work of verification of light points, a notice will be sent by concerned Executive Engineer in writing to such local bodies for deputing



representative on specific date(s), failing which the verification of the light points shall be done by the concerned representative of Licensee which shall be final and binding upon such local body.

#### **E. STATE TUBE-WELLS**

##### **NET LOAD:**

- (i) Net load hereinafter shall mean the total load connected during the quarter less the load of failed and abandoned tube-wells accounted for during that quarter.
- (ii) The connected load as on 31<sup>st</sup> March of the preceding year will be worked out on the basis of 'Net load' reported by the Executive Engineers of concerned Divisions after joint inspection and verification of the same by the concerned officers of the State Government / Panchayat, joint meter reading shall also be taken during the inspection on quarterly basis. The monthly bills for three months of the first quarter will be issued on the connected load worked out as such at the above rates. The same process shall be repeated for subsequent quarters.



## F. SCHEDULE OF MISCELLANEOUS CHARGES

Sl. No.	NATURE OF CHARGES	UNIT	RATES (₹)
1.	Checking and Testing of Meters:		
	a. Single Phase Meters	Per Meter	50.00
	b. Three Phase Meters	Per Meter	50.00
	c. Recording Type Watt-hour Meters / Prepaid Meters	Per Meter	175.00
	d. Maximum Demand Indicator	Per Meter	350.00
	e. Tri-vector Meters	Per Meter	1000.00
	f. Ammeters and Volt Meters	Per Meter	50.00
	g. Special Meters / Net Meters	Per Meter	400.00
	h. Initial Testing of Meters	Per Meter	Nil
2.	Disconnection and Reconnection of supply for any reason whatsoever (Disconnection & Reconnection to be separately treated as single job)		
	a. Consumer having load above 100 BHP/75kW	Per Job	1000.00
	b. Power consumers up to 100BHP/75kW	Per Job	500.00
	c. All other categories of consumers.	Per Job	300.00
3.	Replacement of Meters:		
	a. By higher capacity Meter	Per Job	50.00
	b. Installation of Meter and its subsequent removal in case of Temporary Connections	Per Job	75.00
	c. Changing of position of Meter Board at the consumer's request	Per Job	100.00
4.	Service of Wireman:		
	a. Replacement of Fuse	Per Job	20.00
	b. Inserting and Removal of Fuse in respect of night loads.	Per Job	25.00
	c. Hiring of services by the consumer during temporary supply or otherwise.	Per wireman /day of 6 Hrs. Per Meter	60.00
5.	Resealing of Meters on account of any reason in addition to other charges payable in terms of other provision of charging of penalties, etc.)		100.00



Sl. No.	NATURE OF CHARGES	UNIT	RATES (₹)
6.	Checking of Capacitors (other than initial checking) on consumer's request:		
	a. At 400 V / 230 V	Per Job	100.00
	b. At 11 kV and above.	Per Job	200.00



## G. LIST OF POWER FACTOR APPARATUS

### FOR MOTORS:

Sl. No.	Rating of Individual Motor	KVAR Rating of Capacitor			
		750 RPM	1000 RPM	1500 RPM	3000 RPM
1.	Up to 3 HP	1	1	1	1
2.	5 HP	2	2	2	2
3.	7.5 HP	3	3	3	3
4.	10 HP	4	4	4	3
5.	15 HP	6	5	5	4
6.	20 HP	8	7	6	5
7.	25 HP	9	8	7	6
8.	30 HP	10	9	8	7
9.	40 HP	13	11	10	9
10.	50 HP	15	15	12	10
11.	60 HP	20	20	16	14
12.	75 HP	24	23	19	16
13.	100 HP	30	30	24	20
14.	125 HP	39	38	31	26
15.	150 HP	45	45	36	30
16.	200 HP	60	60	48	40

### FOR WELDING TRANSFORMERS:

Sl. No.	Name Plate Rating in KVA of Individual Welding Transformer	Capacity of the Capacitors (KVAR)
1.	1	1
2.	2	2
3.	3	3
4.	4	3
5.	5	4
6.	6	5
7.	7	6
8.	8	6
9.	9	7



Sl. No.	Name Plate Rating in KVA of Individual Welding Transformer	Capacity of the Capacitors (KVAR)
10.	10	8
11.	11	9
12.	12	9
13.	13	10
14.	14	11
15.	15	12
16.	16	12
17.	17	13
18.	18	14
19.	19	15
20.	20	15
21.	21	16
22.	22	17
23.	23	18
24.	24	19
25.	25	19
26.	26	20
27.	27	21
28.	28	22
29.	29	22
30.	30	23
31.	31	24
32.	32	25
33.	33	25
34.	34	26
35.	35	27



## 11.2 LIST OF PERSONS WHO HAVE ATTENDED PUBLIC HEARING IN NOIDA

List of Persons who attended Public Hearing at Noida on September 22, 2017		
Sl. No.	Name	Organisation
1	Shri KK Tevatia	EE
2	Shri Devender Tiger	Consumer
3	Shri Ajay Prakash Sharma	Consumer
4	Shri Amit Bhargava	Director (Tariff), UPERC
5	Shri Vikas Chandra Agarwal	Director (D, L&L), UPERC
6	Shri Madhusudan Raizada	Consultant, UPERC
7	Shri Sanjay Srivastava	Secretary, UPERC
8	Shri Atul Chaturvedi	DD(Admin), UPERC
9	Shri Sarabjeeet Singh	DD (TE), UPERC
10	Shri Prateek Aggarwal	Consultant, UPERC
11	Shri Hemant Tiwari	UPERC
12	Shri Chanmeet Singh Syal	Consultant, UPERC
13	Shri Rama Shankar Awasthi	Consumer
14	Shri Kapavdhi bhardawaj	Consumer
15	Shri Harish jonega	Consumer
16	Komal Kumar	Consumer
17	Shri Virendra Rula	Consumer
18	Shri Rahul Nagiya	Consumer
19	Shri P.S Jain	Consumer
20	Shri A.D Panday	Consumer
21	Mandakani Ghosh	Consumer
22	Shri Mukesh Goel	Consumer
23	Shri Sanjeev Sharma	Consumer
24	Shri S.P Sharma	Consumer
25	Shri Z Rehman	Consumer
26	Shri M. Sourab	Consumer
27	Shri N.K Sagar	Consumer
28	Shri Kumar Ashok Shroof	Consumer
29	Shri Ajay Kumar Gupta	Consumer
30	Shri Vinay Gupta	Consumer
31	Shri Anil Agrawal	Consumer
32	Shri Rakesh singh	Consumer
33	Shri Surendra Singh	Consumer
34	Shri Rajnikant	Consumer
35	Shri Anil Kumar	Consumer
36	Shri Jeevan Singh	Consumer



List of Persons who attended Public Hearing at Noida on September 22, 2017		
Sl. No.	Name	Organisation
37	Shri Sushil Agrawal	Consumer
38	Shri Sunil Sethi	Consumer
39	Shri Anjan Pachuari	Consumer
40	Anita Singh	Consumer
41	Shri Sushil Kumar Jain	Consumer
42	Shri R.K Roshan	Consumer
43	Shri Anil	Consumer
44	Shri Vinod Gupta	Consumer
45	Shri Sardar Balgir Singh	Consumer
46	Shri Vinay Khandelwal	Consumer
47	Shri Sauil Anit	Consumer
48	Shri Amit Gupta	Consumer
49	Shri Bijendra Singh	Consumer
50	Shri Ajay	Consumer
51	Shri Rajendra	Consumer
52	Shri Anil Kumar	Consumer
53	Shri Sarmat Doy	Consumer
54	Shri Rajesh Srivastwa	Consumer
55	Shri Ankit Jain	Consumer
56	Shri Manoj	Consumer
57	Shri Vinay Goel	Consumer
58	Shri Moolchand	Consumer
59	Shri Hidesh Shidhaki	Consumer
60	Shri Kuldeep Kumar Tyagi	Consumer
61	Shri Rahul Kumar	Consumer
62	Shri Raman Goel	Consumer
63	Shri Vinod Kumar	Consumer
64	Shri Vijay Verma	Consumer
65	Radha Verma	Consumer
66	Shri Pravesh Singh	Consumer
67	Shri Shubhash Chaudhary	Consumer
68	Shri Hakim singh	Consumer
69	Shri Rajiv Nager	Consumer
70	Shri Ramnivash Nager	Consumer
71	Daini Goyal	Consumer
72	Shri Gajanan Mali	Consumer





### 11.3 ACTION TAKEN REPORT ON THE DIRECTIONS ISSUED BY THE COMMISSION IN THE ARR / TARIFF ORDER FOR MYT CONTROL PERIOD FY 2017-18 TO FY 2019-20

Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance
1	The Commission directs NPCL to regularly update the Commission on the status of implementation of the DSM measures being undertaken / intended to be taken up by the utility. The report must also indicate the cost-benefit analysis of the measures being undertaken by NPCL.	At end of each quarter of the Financial Year	
2	As regards the RPO Obligation, NPCL is directed to ensure that it should procure renewable energy in accordance with Regulation 4 of the UPERC (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010 during each year to meet their obligation.	Next ARR filing	
3	As lack of approved transparent policy on identifying and writing off bad debts is hindering allowance of bad debts as an ARR component; the Commission directs the Licensee to submit ten sample cases of LT & HT consumers where orders have been issued for writing off bad debts, clearly depicting the procedure adopted for writing off bad debts along with policy framework for managing bad debts for the Commission's perusal.	Immediate	
4	The Licensee is directed to explore the possibility of having TOD tariff structure for domestic and non-domestic categories and submit their proposal.	At the time of next ARR filings	
5	Any other compliances / milestones as per MYT Distribution Tariff Regulations, 2014 and Commissions orders.	-	



#### 11.4 CATEGORY AND SUB-CATEGORY WISE ABR FOR MYT CONTROL PERIOD

##### CATEGORY WISE ABR FOR FY 2017-18 (AT REVISED / APPROVED TARIFF FOR FY 2017-18)

Particulars	Sales	Revenue	Average Realisation
	(MU)	(Rs. Crs)	(Rs/kWh)
LMV-1: Unmetered	6.45	1.44	2.24
LMV-1: Metered Rural	1.73	0.57	3.33
LMV-1: Bulk	137.91	83.50	6.05
LMV-1: Life Line	1.68	0.64	3.79
LMV-1: Others	194.89	122.25	6.27
LMV-2: Non Domestic Light, Fan & Power	33.60	34.38	10.23
LMV-3: Public Lamps	33.51	24.96	7.45
LMV-4: Institutions (A)	5.11	4.46	8.74
LMV-4: Institutions (B)	14.56	14.57	10.00
LMV-5: Private Tube Wells (Unmetered)	13.36	0.34	0.26
LMV-5: Private Tube Wells (Rural Metered)	6.43	0.87	1.36
LMV-5: Private Tube Wells (Urban metered)	4.04	2.24	5.54
LMV 6: Small and Medium Power (Rural)	0.11	0.10	8.77
LMV 6: Small and Medium Power (Urban)	75.82	68.47	9.03
LMV-7: Public Water Works	18.73	17.26	9.21
LMV-8: STW and Pumped Canals	0.31	0.23	7.54
LMV-9: Temporary Supply	56.24	45.44	8.08
HV-1: Non Industrial Bulk Power	142.54	139.25	9.77
HV-2: Large and Heavy Power	1,033.97	760.26	7.35
<b>Subtotal</b>	<b>1780.99</b>	<b>1321.23</b>	<b>7.42</b>
<b>Regulatory Surcharge</b>		<b>96.69</b>	
<b>Total</b>	<b>1780.99</b>	<b>1417.93</b>	<b>7.96</b>



**\*CATEGORY WISE ABR FOR FY 2018-19(AT REVISED / APPROVED TARIFF FOR FY 2017-18)**

Particulars	Sales	Revenue	Average Realisation
	(MU)	(Rs. Crs)	(Rs/kWh)
LMV-1: Unmetered	4.99	1.58	3.17
LMV-1: Metered Rural	2.89	1.16	4.00
LMV-1: Bulk	173.08	111.48	6.44
LMV-1: Life Line	1.93	0.78	4.02
LMV-1: Others	226.56	150.72	6.65
LMV-2: Non Domestic Light, Fan & Power	38.01	41.05	10.80
LMV-3: Public Lamps	33.51	28.83	8.60
LMV-4: Institutions (A)	5.88	5.59	9.50
LMV-4: Institutions (B)	18.10	19.34	10.69
LMV-5: Private Tube Wells (Unmetered)	8.88	0.29	0.33
LMV-5: Private Tube Wells (Rural Metered)	6.67	1.28	1.91
LMV-5: Private Tube Wells (Urban metered)	4.20	2.44	5.82
LMV 6: Small and Medium Power (Rural)	0.11	0.09	8.60
LMV 6: Small and Medium Power (Urban)	89.48	79.21	8.85
LMV-7: Public Water Works	21.30	20.23	9.50
LMV-8: STW and Pumped Canals	0.31	0.26	8.25
LMV-9: Temporary Supply	67.43	56.93	8.44
HV-1: Non-Industrial Bulk Power	172.90	174.66	10.10
HV-2: Large and Heavy Power	1,165.67	853.04	7.32
<b>Subtotal</b>	<b>2041.88</b>	<b>1548.95</b>	<b>7.59</b>
<b>Regulatory Surcharge</b>		<b>92.94</b>	
<b>Total Sales</b>	<b>2041.88</b>	<b>1641.89</b>	<b>8.04</b>

*\*Subject to Annual Performance Review (APR) and Tariff Revisions*



**\*CATEGORY WISE ABR FOR FY 2019-20 (AT REVISED / APPROVED TARIFF FOR FY 2017-18)**

Particulars	Sales	Revenue	Average Realisation
	(MU)	(Rs. Crs)	(Rs/kWh)
LMV-1: Unmetered	2.65	0.88	3.33
LMV-1: Metered Rural	6.56	2.27	3.46
LMV-1: Bulk	217.66	139.39	6.40
LMV-1: Life Line	2.22	0.90	4.03
LMV-1: Others	264.46	175.99	6.65
LMV-2: Non-Domestic Light, Fan & Power	43.06	46.55	10.81
LMV-3: Public Lamps	33.51	28.83	8.60
LMV-4: Institutions (A)	6.80	6.46	9.50
LMV-4: Institutions (B)	22.53	23.77	10.55
LMV-5: Private Tube Wells (Unmetered)	4.97	0.16	0.33
LMV-5: Private Tube Wells (Rural Metered)	6.92	1.32	1.91
LMV-5: Private Tube Wells (Urban metered)	4.35	2.53	5.82
LMV 6: Small and Medium Power (Rural)	0.10	0.09	8.44
LMV 6: Small and Medium Power (Urban)	105.75	91.96	8.70
LMV-7: Public Water Works	24.37	22.91	9.40
LMV-8: STW and Pumped Canals	0.31	0.26	8.25
LMV-9: Temporary Supply	80.96	68.36	8.44
HV-1: Non-Industrial Bulk Power	210.10	211.97	10.09
HV-2: Large and Heavy Power	1,316.78	959.06	7.28
<b>Subtotal</b>	<b>2354.07</b>	<b>1783.66</b>	<b>7.58</b>
<b>Regulatory Surcharge</b>		<b>107.02</b>	
<b>Total Sales</b>	<b>2354.07</b>	<b>1890.68</b>	<b>8.03</b>

*\*Subject to Annual Performance Review (APR) and Tariff Revisions*



## **11.5 SUMMARY OF BENCHMARKING STUDIES CONDUCTED BY THE PETITIONER**

# *Benchmarking Study*

*(Ref: UPERC vide its letter no. UPERC/Secy/Dir  
(Tariff)/15-1218 dated 14th September 2015)*

*12<sup>th</sup> October 2017*

---

# Executive Summary

## Background

---

Noida Power Company limited (herein referred to as “NPCL”) is a joint venture between the RP-SG Group, a leading business house in India and Greater Noida Industrial Development Authority (GNIDA), an autonomous body of U.P Government responsible for town planning and infrastructure development. The Company started its operations in December 1993 pursuant to grant of license by the U.P. Government.

Electricity is a regulated market; and the Company is governed by the rules and regulations as laid by Hon’ble Uttar Pradesh Regulatory Electricity Regulatory Commission (UPERC).

The Hon’ble UPERC had notified “Uttar Pradesh Electricity Regulatory Commission (Multi-Year Distribution Tariff) Regulations, 2014) (hereinafter called as MYT Regulations, 2014) on 12th May 2014, as per Regulation 4.2.1, distribution licensees of the State are required to carry out Benchmarking Studies under the supervision of the Hon’ble State Commission. Regulation 4.2.1 is presented below for ready reference:

“

### 4.2.1

*Each distribution licensee shall initiate benchmarking studies under the supervision of the Commission to determine the desired performance standards. The benchmarking studies shall be completed by September 30, 2015.”*

The Hon’ble Commission vide its letter no. UPERC/Secy/Dir (Tariff)/15-1218 dated 14th September 2015 had defined the scope of the study.

In line with the above, the Company invited bids from eligible consultants vide RFP dated 12.10.2015 to carry out Benchmarking Studies. The bids obtained in the aforesaid bidding process had been sent to the Standing Committee of the Company constituted to oversee the bidding process. The observations and recommendations of the Standing Committee had been submitted to the Hon’ble Commission vide letter no.P-77Q/043 dated 18<sup>th</sup> December, 2015.

Based on the above the Hon’ble Commission vide its letter no. UPERC/Secy/Dir (Tariff)/2016-1059 dated 23<sup>rd</sup> September, 2016 provided its approval for the engagement of M/s Feedback Infra Pvt. Ltd (“Consultant”) to carry out the Benchmarking Study in accordance with the criteria set by it.

## Overview of the Study

---

The scope of the study has been divided into two sections: Section I and Section II where Section I covers Operational Performance and Reliability related parameters and Section II covers Financial and Capital Cost

---

parameters. Based on the availability of the data and access to information for different utilities, the following parameters were considered by the Consultant to carry out the study –

<b>Benchmarking Parameters – Operational and Financial</b>	<b>Benchmarking Parameters Capital Cost</b>
T&D Losses	33kV Overhead - Rs. per ckt- km.
HT/LT ratio	33kV Underground – Rs. per ckt-km
Average Cost of Supply	11kV Overhead line - Rs. per ckt km.
Total O & M Expenses per unit of sales	11kV Underground line - Rs. per ckt km.
Ratio of Average Power Purchase cost to Average Cost of Supply	33/11 KV Substations
Receivables	Distribution transformers with various transformer capacities.
No. of accidents	LT Overhead
Time taken for resolution of consumer complaints.	LT Underground
SAIFI / SAIDI / CAIDI	
Distribution Transformer failure rate	
Category-wise cost of Supply	

### Selection of Utilities

The Consultant has selected the utilities, as mandated in the RFP documents, for the purpose of benchmarking keeping in view the principles defined in the terms of reference which states coverage of all utilities in the state of Uttar Pradesh, representation of utilities from all the regions of the country and select private utilities and then on the basis of key parameters such as AT&C Losses, credit rating and new initiatives taken by the utilities. Utilities falling under both the criteria have been selected by the Consultant. The terms of reference also suggested to the Consultant that benchmarking of the Company with international utilities and the selection of international utilities should be such that they represent five Continents. Accordingly the utilities selected by the Consultant for benchmarking is as tabulated below –

<b>Uttar Pradesh</b>	<b>North</b>	<b>East</b>	<b>South</b>	<b>West</b>	<b>North-East</b>	<b>Private</b>
PaVVNL PuVVNL MVVNL DVVNL KESCO	UHBVNL JVVNL NDMC	NBPDCL WBSEDCL	BESCOM APSPDCL	PGVCL MSEDCL	TSECL MePDCL	TPDDL BYPL BRPL CESC TPL – Surat

These international utilities too were selected based on the representation from each of the continent as tabulated below –

<b>AUSTRALASIA</b>	<b>NORTH AMERICA</b>	<b>SOUTH AMERICA</b>	<b>EUROPE</b>	<b>ASIA</b>
Ergon Energy Essential Energy (Australia)	Alabama Power Austin Power (United States of America)	AES Eletropaulo (Brazil) Edenor S.A. (Argentina)	Enedis (Spain) Scottish Power Distribution (United Kingdom & Scotland)	Dhaka Electric Supply Company (Bangladesh)



While all the utilities have been considered during the study, the benchmarking of certain parameters have been done only with select utilities based on the relevance of benchmarking as well limitation of data availability. Number of utilities against which the Company is benchmarked by the Consultant across different operational, financial and capital cost parameters is as below -

<b>Benchmarking Parameters</b>	<b>No. of Utilities</b>	<b>Govt.</b>	<b>Private</b>	<b>Intl</b>
T&D Losses	20	16	5	-
HT/LT ratio	21	16	5	-
Average Cost of Supply	21	16	5	-
Total O & M Expenses per unit of sales	20	15	5	-
Ratio of Average Power Purchase cost to Average Cost of Supply	20	15	5	-
Receivables	18	15	3	-
No. of accidents	5	2	3	-
Time taken for resolution of consumer complaints.	6	2	4	-
SAIFI / SAIDI / CAIDI	15	2	4	9
Distribution Transformer failure rate	7	2	5	-
Category-wise cost of Supply	4	1	3	-

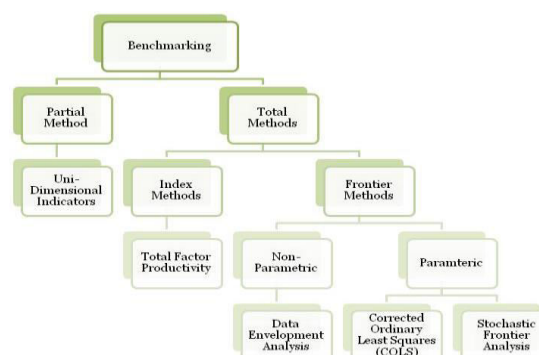
<b>Benchmarking Parameters</b>	<b>No. of Utilities</b>	<b>Govt.</b>	<b>Private</b>	<b>Intl</b>
33kV Overhead - Rs. per ckt- km.	9	6	3	-
33kV Underground – Rs. per ckt-km	8	5	3	-
11kV Overhead line - Rs. per ckt km.	10	7	3	-
11kV Underground line - Rs. per ckt km.	4	1	3	-
Receiving Substations with various transformer capacities.	8	5	3	-
Distribution transformers with various transformer capacities.	9	6	3	-
LT Overhead network.	10	7	3	-
LT Underground network.	3	-	3	-

## Methodology

Different methodologies of benchmarking used internationally have been referred by the Consultant and studied to carry out this study.

It is pertinent to mention here that while benchmarking, it is necessary to take into account the size and structure of the observed samples (which consists of companies whose efficiency is analysed), quality of data (which influence the choice of data to be compared) and the choice of methods that will be used in determining the relative efficiency of companies (it is necessary to respect the basic rule to apply at least two different approaches).

Size and structure of the observed sample and the quality of data are of fundamental importance for the comparative analysis of enterprise efficiency. It is desirable that the sample consists of companies that



operate in the same region, which are approximately the same size; operate in a similar legal and economic environment, and the like.

It is important to emphasize that all data requirements need to be met for all the companies in the sample regardless of the chosen benchmarking method. In the event that for one or several companies within the observed sample some of the data are missing (or known, but obviously incorrect), it is necessary to exclude either the data or the company from the analysis.

While the legal and regulatory environment of all the utilities under benchmarking is similar, however the size of the Company in terms of number of consumers and revenue differs largely from other utilities under comparison besides other demographic and economic characteristics of the area which too are different when compared to other areas where other utilities are operating. Also the data availability across parameters and across Utilities is non-uniform. Under these limitations, instead of adopting any standard benchmarking techniques and computing overall Rank of the Company, relative positioning of the Company is observed by the Consultant against different parameters.

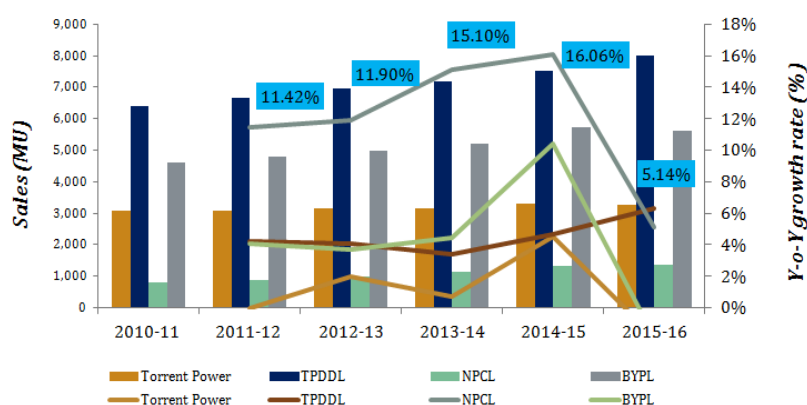
### Observations

NPCL is one of the smallest utilities in the country serving 70,994 consumers with total sales of 1,377 MU out of which 63% sales is contributed by industrial consumers which again is the highest proposition of industrial

	Area times NPCL	Sales times NPCL	Revenue times NPCL
<b>TPDDL</b>	1.52	5.80	5.20
<b>BRPL</b>	2.24	7.76	6.74
<b>BYPL</b>	0.60	4.09	3.52
<b>TPL – Surat</b>	0.16	2.36	1.65
<b>CESC</b>	1.69	6.88	3.37

consumers in any DISCOM in India, though the domestic and agricultural consumers are also from 118 villages spread over 335sqkm area which are 100% electrified well before government's initiative in this regard.

The table shows comparison of size of the Company with private utilities. However, with Greater Noida city under rapid development and with the pace of urbanization, the mix is expected to have increased share of residential and commercial



*NPCL year on year sales Growth Rate is in the range of 11% to 16% over last 5 years except for 2015-16 where the dip was seen across the country. This puts NPCL still as a 'Growing' DISCOM.*

*Sales across other private DISCOMs seems to be stabilized where growth rate in the range only 2% to 6% is witnessed.*

consumers in the coming years. It is also to be noted that Greater Noida

has witnessed a load growth upwards of around 10% annually for last five years which is amongst the highest growth in any utility in the country and a similar load growth is expected in next 5 years also. The previously

mentioned graph as also provided by the Consultant in the detailed report shows growth in sale of the Company in comparison to other utilities – With low consumer density spread over vast area and incessant load growth, continuous investment in the network is palpable. While the investments are made by the Company in adding network to meet the load growth, the Consultant has observed that the Company has very carefully maintained the T&D losses within the range which can be benchmarked with the best of the utilities in the country and reliability which can be benchmarked with international standards.

Serving 63% of the total sales to industrial load, reliability and quality of power supply is a prerequisite since the cost of power supply will be borne by all the stakeholders only. . The Company has consciously been able to maintain the quality of supply with controlled T&D losses which is evident from the industrial load growth in the past and as expected in the future.

As per the Consultant's analysis, the Company is comparatively better placed in terms of reliability and quality of power supply vis-à-vis other utilities and at the same time maintaining low T&D losses. the Company still has an average cost of supply which is comparable with peer utilities.

The Consultant has also acknowledged the efforts by the Company to maintain power purchase cost to a reasonable level which is nearly equal to average of the power purchase cost of all utilities under study. Further, the power purchase cost of the Company is analysed to be less than private Discoms in Delhi, Torrent Power (Surat) and Discoms in Uttar Pradesh, based on data available. Further, the Consultant observed that O&M Cost of the Company is lowest amongst all the utilities under comparison except for PaVVNL and TPL (Surat). Low O&M cost of the Company is due to optimum level of automation of distribution network and substation equipment despite having low consumer density and lengthy network. The Company has also adopted HVDS & LT ABC in villages for better voltage profiles and to reduce higher wear & tear of network.

The Consultant also observed that there are few parameters viz. depreciation, interest and finance charges and ROE where the Company differs slightly from other utilities. All these costs as highlighted by the Consultant are due to increasing GFA which is again a prerequisite given the high load growth.

The Company expects that the same will reach to an optimal level once the load growth is normalized and higher power supply to consumers is made available which is currently impacted due to inadequate transmission capacity provided by UPPTCL to the Company, consumer density has increased and the network is utilized optimally. It is also to be noted that assistance for network strengthening, loss reduction and IT implementation is not extended to the Company under state/central-funded schemes while the others utilities have access to the same. The Company has to purchase land from GNIDA/ UPSIDC / District Administration at market rate for construction of substation. The Company has also invested in building up network capacities at 220/33kV on its own land and contributed towards capacity building at UPPTCL's 400kV Substation for its transmission needs in open access.

Summary of observations made during the study by the Consultant is presented as below –

• Distribution losses for NPCL at nearly 8% is way below the national average of 23%. and lowest in the country except Torrent Power – Surat which has 4.5% Losses.

• However, with likely increase in consumption at LT level, it is expected that losses of NPCL may go up in near future.

• HT: LT ratio in NPCL network is near to the benchmark norms of 1:1 and the effect is also reflected in the T&D losses of NPCL.

• Since, industrial category accounts for 63% of the total sales of NPCL; besides the technical design criteria, it also has the natural advantage of creating more HT network.

• However with the increasing LT consumer load, to maintain the efficiency and to keep T&D losses under control, NPCL will have to continue maintaining the HT: LT ratio close to 1:1.

• The average cost of supply of the utilities under study in the northern part of India is high primarily because of the higher power purchase cost as compared to the utilities in the South, East and North-East. This is due to the fact the utilities in the regions other than north India has high share of hydropower in the overall power portfolio.

• Average cost of supply for NPCL is competitive as compared to the utilities under study. It is pertinent to note that ACoS of NPCL is less than the ACoS of private utilities in Delhi, and it is comparable to the average of ACoS of all utilities under study.

• Average cost of power purchase accounts for the highest share of cost in average cost of supply for any utility. In case of NPCL, power purchase cost accounts for 75% of the total cost of supply. NPCL Power Purchase Cost is lowest amongst all private utilities under study and all Government utilities under study in Northern Region except JVVNL.

• NPCL has highest GFA per unit of sale except for North Bihar Distribution Company Limited, Jaipur DISCOM and West Bengal State Electricity Distribution Company Limited.

• While cities like Surat or even Delhi has already reached saturation in terms of development and only nominal load growth is witnessed - NPCL has witnessed load growth upwards of 10% during the past five years and a similar growth is expected across consumer categories in the coming years. The growth on the LT side under commercial and residential category may be even higher compared to the past growth rate.

• NPCL also has scattered Load which requires lengthy network to be laid out to meet the demand and which has direct impact on GFA.

- NPCL network planning is based on following key principles –
  - Given the high industrial growth and scattered residential and commercial development, to service the new connection within the minimum possible time under ease of doing business and obligation to provide electricity to all, it is important that network is available in advance.
  - Investments in network planning to maintain Low losses – high HT/LT ratio of 0.95, it is to appreciate that converting LT lines to higher voltage entail high initial cost but it pays back by lower T&D Losses
  - Aerial bunch conductor which may entail high initial cost but it is beneficial since it avoids illegal hooking by people.
  - N-1 reliability - Helps in maintaining the power supply and reliability of the system.
- Receivable cycle for most of the private DISCOMs is lower. However, Tata Power has maintained the receivables only to 8 days which is best amongst the utilities under comparison.
- NPCL has total receivables of INR 52.54 Crore, INR 61.19 Crore and INR 83.32 Crore equivalent to total days of 23, 23 and 25 for FY 2013-14, FY 2014-15 and FY 2015-16.
- Government Utilities are most vulnerable against high receivable cycle but PGVCL number of days of receivable are best amongst all the Government Utilities under study and also better than a few private utilities also.
- Due to transmission constraints, NPCL is forced to resort to load shedding due to which reliability of the system decreases which is reflected in the SAIFI, SAIDI and CAIDI of the system which is below the performance level of other private utilities. However In order to evaluate the performance of NPCL, it is pertinent to look at the performance of the system with and without load shedding.
- Under No-Load shedding, NPCL reliability parameters are comparable to most of the private utilities except Torrent Power – Surat which outperforms all the utilities on Reliability Indices
- More than 50% of the distribution transformers in NPCL are in the rural area which is also in line with the fact that sales to domestic category is evenly distributed between urban and urbanized rural. With strong vigilance and proper metering, NPCL has been able to maintain the losses at 8%, however, the administrative challenges remain to restrict the failure of DTR for various reasons.
- DTR failure rate in NPCL urban areas is comparable to other private discoms under the study. However, due to bottleneck in law and order in rural areas, DTR failure rate in rural areas is on a higher side
- NPCL focus on consumer services is visible from the fact that the 100% complaints have been resolved within the stipulated time and consistently for three years which puts NPCL amongst the best performing utilities in the country with respect to consumer service.
- NPCL safety measures both in O&M practices as well construction practices is also best amongst the peer utilities which can be ascertained from the lowest number of fatal and non-fatal accidents in NPCL
- NPCL capital cost on 33KV overhead lines and Sub-station is comparable with UPERC Cost Data as well with other utilities
- NPCL capital cost for 11 KV overhead lines is higher than most of the Utilities primarily because of the use of 12m STP Pole. Delhi DISCOMs use 9m STP for same span of 40m.
- However capital cost incurred by NPCL on 11 KV and 3KV underground lines as well as Distribution Transformer is far lower than the other DISCOMs under comparison

*Having observed NPCL performance across cost, efficiency and operations, NPCL still has scope for improvement on Reliability parameters as well as Distribution Failure Rate. While the reliability parameters of NPCL are comparable to the best performing utilities in India it still has a large scope of improvement compared to best performing utilities globally.*

A summary of relative positioning of the Company as analyzed by the Consultant with respect to other utilities is presented as below-



## Executive Summary – Benchmarking Study



Leading Utilities	BRPL TPDDL CESC BYPL TPL NDMC	BESCOM BRPL TPDDL CESC BYPL TPL(Surat) NDMC			TPL (Surat)	UHBVN PGVCL		KESCO BESCOM PVVNL DVVNL MVVNL PuVVNL TPL, BRPL BYPL, UHBVNL MSEDCL TPDDL, PGVCL MePDCL, NDMC	TPDDL BRPL BYPL TPL (Surat) BESCOM APSDCL TSECL PaVVNL KESCO MVVNL
	4.11	212	4.34	3.78	8.04%	0.95	63%	0.62	0.71
NPCL	Sales Density (MU/ Sq. km.)	Consumer density (No./ Sq. km)	Sales/ employee (MU/No.)	Revenue / Employee ( INR Cr/ No.)	T&D loss (%)	HT:LT ratio (No.)	Industrial sales (%)	GFA/sale ( Rs. Cr./MU)	GFA/ Revenue (No.)
Lacking Utilities	MePDCL PGVCL TSECL JVVNL APSDCL MSEDCL WBSEDCL BESCOM UHBVNL	MePDCL PGVCL JVVNL TSECL MSEDCL APSDCL UHBVNL WBSEDC	TPDDL, BRPL BYPL, CESC UHBVN, PGVCL MSEDCL, BESCOM, NBPDC, WBSEDCL, TSECL, PUVVNL, PaVVNL DVVNL, KESCO MVVNL	TPDDL BRPL BYPL CESC PGVCL MSEDCL BESCOM NBPDC WBSEDCL TSECL PUVVNL PaVVNL DVVNL KESCO MVVNL	NDMC, TSECL BRPL, BYPL NBPDC, MePDCL, BESCOM, JVVNL, WBSEDCL, TPDDL, HBVNL, PGVCL, MSEDCL APSDCL PuVVNL PaVVNL , DVVNL KESCO, MVVNL	JVVNL, DVVNL MVVNL, PaVVNL, PUVVNL BRPL, BYPL BESCOM TPDDL, MSEDCL WBSEDCL CESC, TPL, TSECL , NBPDC APSDCL NDMC, MePDCL, KESCO	TSECL , BRPL , BYPL, NBPDC, MePDCL, BESCOM, JVVNL, WBSEDCL, TPDDL, UHBVNL, PGVCL MSEDCL, APSDCL, TPL , PuVVNL , PaVVNL, DVVNL, KESCO , MVVNL, NDMC	JVVNL WBSEDC NBPDC	JVVNL PGVCL MSEDCL NBPDC WBSEDCL MePDCL PUVVNL DVVNL

## Executive Summary – Benchmarking Study



NPCL	Leading Utilities					
	6.41	0.68	0.33	0.31	0.29	0.29
Lacking Utilities	Average Cost of Supply (Rs./kWh)	APPC/ ACoS (No.)	O&M expenses (Rs./kWh)	Dep. (Rs./kWh)	RoE (Rs./kWh)	Interest on Long term loan (Rs./kWh)
	KESCO MVVNL PuVVNL MSEDCL BYPL DVVNL TPDDL BRPL, JVVNL UHBVNL NBPDC NDMC	MVVNL PuVVNL KESCO BYPL BESCOM TPDDL PaVVNL NDMC BRPL APSPDC TPL, CESC	DVVNL JVVNL, BESCOM MVVNL, PuVVNL BRPL, NBPDC TPDDL, KESCO, BYPL, WBDESC UHBVNL MSEDCL, CESC, MePDCL NDMC	CESC	BRPL CESC TPDDL BYPL	JVVNL

## Executive Summary – Benchmarking Study



Leading Utilities					
	TPDDL PGVCL BRPL	TPL - Surat	BYPL	BYPL BRPL	TPL - Surat BRPL
NPCL	<b>23</b>	<b>2.32</b>	<b>226</b>	<b>97.41</b>	<b>0.49</b>
	Receivables (Days)	SAIFI (No.) (w/o Load shedding for NPCL)	SAIDI (Min) (w/o Load shedding for NPCL)	CAIDI (Min)	DTR Failure Rate (%) (Non-rural areas for NPCL)
Lacking Utilities	BYPL, APSPDCL, JVVNL, UHBVNL, TSECL, WBDESC, MSEDCL, PaVVNL, BESCOM, NBPDC, MePDCL, MVVNL, DVVNL, KESCO, PuVVNL	TPDDL BYPL BRPL South AP (Vijaywada)	BRPL TPDDL South AP (Vijaywada)	South AP (Vijaywada) TPDDL	BYPL TPDDL PGVCL CESC UHBVN
					MSEDL UHBVN BESCOM PGVCL TPL (Surat)



## Executive Summary – Benchmarking Study



Leading Utilities	APSPDCL		TPDDL BRPL BYPL DVVNL PaVVNL PuVVNL MVVNL KESCO BESCOM APSPDCL				DVVNL PaVVNL PuVVNL MVVNL KESCO	
	<b>6.1 -10.96</b>	<b>22.16</b>	<b>8.29 - 13.13</b>	<b>10.04</b>	<b>5.15</b>	<b>7.36</b>	<b>425</b>	<b>0.50 -6.79</b>
NPCL	33 kV OH Line per ckt km in Rs. Lakh	33 kV UG Line per ckt km in Rs. Lakh	11 kV OH Line per ckt km in Rs. Lakh	11 kV UG Line per ckt km in Rs. Lakh	LT OH Line per ckt km in Rs. Lakh	LT UG Line per ckt km in Rs. Lakh	33/11 kV S/s in Rs. Lakh	11/0.4 kV Dist. Transformers in Rs. Lakh (25 kVA to 400 kVA)
	TPDDL BRPL BYPL	TPDDL, BRPL, BYPL (Trench system) TPDDL, BRPL, BYPL (Trenchless) TPDDL, BRPL, BYPL (Twin Cable) DVVNL, PaVVNL, PuVVNL, MVVNL, KESCO (120 sq. mm.) DVVNL, PaVVNL, PuVVNL, MVVNL, KESCO (300 sq. mm.)		TPDDL BRPL BYPL BESCOM	TPDDL BRPL BYPL BESCOM APSPDCL DVVNL PaVVNL PuVVNL MVVNL KESCO	TPDDL BRPL BYPL	(GIS 2x25 MVA) TPDDL, BRPL, BYPL  ( 2x25 MVA) TPDDL, BRPL, BYPL	DVVNL PaVVNL PuVVNL MVVNL KESCO APSPDCL TPDDL BRPL BYPL
Lacking Utilities								

## Comparison with International Utilities -

	Country	SAIFI	SAIDI	CAIDI
Total Rank		10	10	10
NPCL	India	5	6	5
Austin Energy	USA	1	4	6
Endesa	Spain	2	3	4
Ergon Energy	Australia	6	8	8
Essential Energy	Australia	3	7	7
MERALCO	Philippines	4	5	3
AES Eletropaulo	Brazil	7	9	9
Edenor S. A.	Argentina	8	10	10
DESCO	Bangladesh	9	1	1
S. P. Distribution	Scotland	10	2	2

Amongst 9 international utilities across the world, NPCL ranks 5<sup>th</sup> and 6<sup>th</sup> across SAIFI, CAIDI and SAIDI respectively.

*END OF DOCUMENT*