

**2016**

**MULTI YEAR TARIFF (MYT)  
PETITION FOR THIRD  
CONTROL PERIOD  
FY 2016-17 TO FY 2019-20  
(Executive Summary)**

**Reliance  
Infrastructure Ltd.  
– Distribution  
(RInfra-D)**

**Contents**

1 INTRODUCTION.....4

    1.1 About RInfra-Distribution.....4

    1.2 Objective of Multi Year Tariff (MYT) Petition .....4

2 TRUING UP OF FY 14-15, PROVISIONAL TRUING UP OF FY 15-16 & AGGREGATE REVENUE REQUIREMENT FOR THIRD CONTROL PERIOD FY 16-17 TO FY 19-20 .....6

    2.1 Sales .....6

    2.2 Distribution Loss and Energy Balance.....7

    2.3 Power Procurement .....9

    2.4 O&M Expenses.....17

    2.5 Capital Expenditure and Capitalization .....25

    2.6 Depreciation.....26

    2.7 Financing Plan and Interest expenses .....27

    2.8 Return on Equity .....29

    2.9 Interest on Working Capital .....30

    2.10 Interest on Consumer Security Deposit .....30

    2.11 Provision for Bad & Doubtful Debts.....31

    2.12 Contribution to Contingency Reserve .....32

    2.13 Income Tax .....32

    2.14 Non Tariff Income.....33

---

---

2.15	Income from other business .....	34
2.16	Efficiency Gain/Loss for FY 14-15.....	35
2.17	Additional Return for Over Achievement in Wires Availability and Supply Availability for FY 14-15 .....	36
2.18	Aggregate Revenue Requirement for FY 14-15 .....	37
2.19	Revenue for FY 14-15 .....	40
2.20	Revenue Gap for FY 14-15.....	41
2.21	Aggregate Revenue Requirement for FY 15-16 .....	42
2.22	Revenue for FY 15-16 .....	45
2.23	Revenue Gap for FY 15-16.....	47
2.24	Cumulative Revenue Gap .....	48
2.25	Aggregate Revenue Requirement for Control Period .....	49
3	RECOVERY OF REGULATORY ASSET APPROVED IN MYT ORDER IN CASE NO. 9 OF 2013 .....	51
4	TARIFF PROPOSAL .....	53
4.1	Approach for Recovery of Past Revenue Gap.....	53
4.2	Wheeling Charges .....	58
4.3	Cross Subsidy Surcharge (CSS) .....	60
4.4	Additional Surcharge .....	66
4.5	Tariff Proposal for the Control Period .....	69

---

4.6	Regulatory Asset Charges for Third Control Period.....	75
4.7	Tariff Scenario in case of recovery of RAC and cumulative gap over three years from FY 16-17 to FY 18-19.....	78
4.8	Proposed Tariffs for the Control Period.....	80
4.9	Comparative Telescopic Tariffs for Residential Consumers .....	91
4.10	Other Issues in Tariff.....	91
4.11	Schedule of Charges .....	94

# **1 INTRODUCTION**

## **1.1 About RInfra-Distribution**

Reliance Infrastructure Ltd. (hereinafter RInfra), an electricity Distribution Licensee in the Suburbs of Mumbai and for areas under the Mira Bhayender Municipal Corporation, is granted a licence to distribute electricity by the Hon'ble MERC for a period of 25 years with effect from 16<sup>th</sup> August, 2011. The distribution business of RInfra is hereinafter referred to as RInfra-D.

## **1.2 Objective of Multi Year Tariff (MYT) Petition**

As per Regulation 5.1 of the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2015 (hereinafter referred to as MYT Regulations, 2015), issued by the Hon'ble Commission on 8<sup>th</sup> December 2015, a Generating Company or a Licensee is required to file its Multi Year Tariff (MYT) Petition comprising,

1. Truing-up for FY 2014-15 to be carried out under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2011 (hereinafter referred to as MYT Regulations, 2011)
2. Provisional Truing-up for FY 2015-16 to be carried out under MYT Regulations, 2011
3. Aggregate Revenue Requirement (ARR) for each year of the Control Period (from FY 16-17 to FY 19-20) under MYT Regulations, 2015
4. Revenue from the sale of power at existing Tariffs and charges and projected revenue gap for each year of the Control Period under MYT Regulations, 2015
5. Proposed category-wise Tariff or Fees & Charges for each year of the Control Period under MYT Regulations, 2015.

Accordingly, the present MYT Petition is filed by RInfra-D. As per the Regulations, the actuals for FY 14-15 and the revised estimates for FY 15-16, along with the ARR based on projections made by RInfra-D for each year of the Control Period from FY 16-17 to FY 19-20 are submitted

herewith for approval of the Hon'ble Commission. RInfra-D has also proposed retail tariffs for own consumers, wheeling charges for own, changeover and open access consumers, Cross Subsidy Surcharge for changeover and open access consumers for each year of the Control Period. Further RInfra-D has proposed category wise Regulatory Asset Charges (RAC) for own, changeover and open access consumers for each year of the Control Period for approval of the Hon'ble Commission.

RInfra-D had filed Appeals before the Hon'ble ATE against the various Tariff Orders issued by the Hon'ble Commission for RInfra-D. Hon'ble ATE has issued a common Judgment against all the Appeals on 8<sup>th</sup> April 2015. One of the issues was rental income from corporate office building on Santacruz land for the period FY 03-04 to FY 11-12. The Hon'ble ATE had remanded the matter back to the Hon'ble Commission for re-computation of rental income from corporate office building as per the methodology laid down by the Hon'ble ATE in its Judgment. However, the Hon'ble Commission had not considered the impact of the same in RInfra-D's MTR Order, stating that further due diligence on this matter needs to be undertaken by the Hon'ble Commission. In this petition, therefore, RInfra-D has presented the amount of notional rental income considered by the Hon'ble Commission in the ARR's of FY 09-10 to FY 11-12, which is now required to be reversed in accordance with the methodology laid down in the said judgment. The amount including carrying cost, to be recovered from FY 16-17 onwards works out to Rs. 478.96 Crore.

The Hon'ble Commission, in its Order dated 16<sup>th</sup> August 2013 in Case No. 69 of 2013, had approved the power purchase cost for FY 10-11 and FY 11-12, which was earlier disallowed in the true-up Order (Case No. 124 of 2012) for those years.. The Hon'ble Commission had also approved additional efficiency gains for FY 10-11 to be retained by RInfra-D. The said costs were allowed to be recovered through FAC in FY 13-14. Accordingly, RInfra-D included this amount in FAC computations of FY 13-14 and recovered the same from consumers. This amount was recovered through FAC in FY 13-14 and so it formed part of regulated revenue, which RInfra-D presented for true-up of FY 13-14 in its MTR Petition. As this amount only related to reinstatement of earlier disallowed expenditure, the Regulatory Accounts of FY 13-14 should also have included the same amount on the expenditure side as well. However, this was

inadvertently not done in the said MTR Petition. Thus, through true-up of FY 13-14, RInfra-D effectively returned the amount so recovered by it back to the consumers. Accordingly, in this petition, RInfra-D requests the Hon'ble Commission to allow the said amount as expense in the ARR of FY 16-17, so that it can be recouped. The amount with carrying cost up to FY 16-17 works out to Rs. 64.22 Crore.

## **2 TRUING UP OF FY 14-15, PROVISIONAL TRUING UP OF FY 15-16 & AGGREGATE REVENUE REQUIREMENT FOR THIRD CONTROL PERIOD FY 16-17 TO FY 19-20**

### **2.1 Sales**

**FY 14-15:** The actual own sales, changeover sales and open access consumption for FY 14-15 are shown in table below.

**FY 15-16:** The actual H1 own sales, changeover sales and open access consumption for FY 15-16 are considered and for H2, RInfra-D has estimated the sales to own consumers by considering the migration and reverse migration of consumers. RInfra-D has considered the average of number of consumers migrated in the months of September 2015, October 2015 and November 2015 as the monthly number of consumers migrating in H2 of FY 15-16. The estimated sales are shown in table below.

**Control Period:** For the projection of sales for third Control Period, RInfra-D has followed the steps explained below:

1. Forecast of base changeover sales (i.e. changeover sales if there is no further migration from or to RInfra-D) for the Control Period. For this the changeover sales for the month of November 2015 has been considered as the base changeover sales.
2. Forecast of total sales (own plus changeover) on RInfra-D network for the Control Period.

3. The category wise monthly sales of changeover consumers expected to shift back to RInfra-D over the Control Period is estimated.
4. The category wise monthly sales of own consumers expected to shift to TPC-D over the Control Period is estimated.
5. The sales of consumers shifting back to RInfra-D have been subtracted from and the sales of migrating consumers have been added to the base changeover sales to arrive at projected changeover sales for the Control Period.
6. The projected changeover sales arrived above has been subtracted from the projected total sales to arrive at projected own sales for the Control Period.

RInfra-D has considered the estimated reduction of sales due to the ongoing DSM programs and the proposed Automatic Demand Response (ADR) program for arriving at the projected sales for third Control Period. RInfra-D has also estimated the open access sales for the Control Period by considering the estimated open access consumption of FY 15-16 and by applying a nominal growth rate of 1%.

The summary of own sales and changeover sales is as shown in table below.

**Table 1 : Sales, Changeover Consumption and Open Access Consumption from FY 14-15 to FY 19-20**

Particulars / MU	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Estimates	Projections	Projections	Projections	Projections
Own Sales	7,673.12	8,007.17	8,229.27	8,446.28	8,673.76	8,909.49
Changeover Sales	1,989.74	2,047.22	2,067.64	2,099.38	2,131.69	2,165.86
OA Consumption	29.06	72.14	72.87	73.59	74.33	75.07
<b>Total Sales</b>	<b>9,691.92</b>	<b>10,126.54</b>	<b>10,369.77</b>	<b>10,619.25</b>	<b>10,879.78</b>	<b>11,150.42</b>

## **2.2 Distribution Loss and Energy Balance**

**FY 14-15:** The actual distribution loss for FY 14-15 is 9.53% as compared to 9.41% approved by the Hon'ble Commission in RInfra-D's MYT Order dated 22<sup>nd</sup> August 2013 in Case No. 9 of 2013.



**FY 15-16:** For estimating the energy requirement for FY 15-16 RInfra-D has considered distribution loss of 9.36% as per the target approved by the Hon'ble Commission in RInfra-D's MYT Order.

**Control period:** For projecting the energy requirement for each year of the Control Period, RInfra-D has considered 0.05% reduction in distribution losses year on year. RInfra-D believes that the loss reduction trajectory being proposed can be realistically achieved considering the loss reduction activities being under taken and the new capital expenditure schemes being proposed for loss reduction. However, the Hon'ble Commission will be approving the network roll out plan of TPC-D in the final Order in Case No. 182 of 2014. TPC-D has also filed another petition (bearing Case No. 50 of 2015) under directions of the Hon'ble ATE in paragraph no. 59 of the Appeal No. 246 of 2012. The Hon'ble Commission will be issuing the Order in Case No. 50 of 2015. After the issuance of these two orders, some of the RInfra-D consumers may switch over to TPC-D depending on the tariff competitiveness in future, the effect of which cannot be estimated now. In such a scenario, the network of RInfra-D presently serving such own or changeover consumers would become under-utilized and in some areas could become redundant as well (at least till the time new connections offset the effect). RInfra-D submits that such changes in power flows caused due to shifting of consumers to parallel network would result in sub-optimal loading of network equipment and would likely increase technical losses.

RInfra-D had carried out a technical loss assessment study of its distribution system for FY 11-12 upon direction of the Hon'ble Commission in its Order in Case No. 180 of 2011 dated 15<sup>th</sup> June 2012. RInfra-D had hired Administrative Staff College of India (ASCI) for the loss assessment study considering the sales and purchase units of FY 11-12 and submitted the study report during the last MYT proceedings for consideration of the Hon'ble Commission on 29<sup>th</sup> May 2013. However, the Hon'ble Commission did not consider the findings of the report in the MYT Order, stating that the report was not available for public consultation process and stated that RInfra-D may submit the same during the Mid Term Review. RInfra-D submitted the same report along with the MTR Petition (Case No. 4 of 2015). The Hon'ble Commission in the MTR Order stated that it would not be appropriate to modify the HT and LT losses to be considered for

change-over consumers in the last year of the Control Period FY 15-16, based on an old loss assessment study conducted in FY 11-12. RInfra-D has conducted another loss assessment study by ASCI by considering the sales and purchase units of FY 14-15. The technical loss at HT loss as per the above study report is 1.71% and at LT level is 9.69%. RInfra-D has considered wheeling loss of 1.71% and 9.69% (for HT and LT changeover/open access consumers) for deriving the energy requirement.

The transmission loss has been considered at 3.89% as approved by the Hon’ble Commission in RInfra-D’s MYT Order. The summary of energy balance is shown in table below.

**Table 2 : Energy Balance from FY 14-15 to FY 19-20**

Particulars	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Estimates	Projections	Projections	Projections	Projections
Total Sales (including Changeover Sales & OA consumption) - MU	9,691.92	10,126.54	10,369.77	10,619.25	10,879.78	11,150.42
Distribution Loss (%)	9.53%	9.36%	9.31%	9.26%	9.21%	9.16%
Energy Input at T-D (MU)	10,712.84	11,172.26	11,434.30	11,702.94	11,983.46	12,274.80
Energy Input at T-D for changeover & OA consumers (MU)	2,212.69	2,321.29	2,361.35	2,397.22	2,433.73	2,472.30
Energy Input at T-D for own consumers (MU)	8,500.14	8,850.97	9,072.95	9,305.72	9,549.73	9,802.50
Transmission Loss (%)	3.89%	3.89%	3.89%	3.89%	3.89%	3.89%
<b>Energy Input at G-T (MU)</b>	<b>8,844.18</b>	<b>9,209.21</b>	<b>9,440.17</b>	<b>9,682.37</b>	<b>9,936.25</b>	<b>10,199.25</b>

### 2.3 Power Procurement

RInfra-D procures power from DTPS and VIPL under long term power purchase arrangements for meeting its base load requirement. It also procures power from solar and non solar sources for meeting its RPO requirement as specified by the Hon’ble Commission for different years. The shortfall in solar / non solar RPO target, after accounting for the energy procured from solar / non solar RE sources is met through purchase of solar / non solar RECs from power exchanges. After taking into account the availability from long term sources, the shortfall in power

requirement was met through purchase from contracted short term sources and from power exchanges. Surplus energy at different time blocks of the day is sold outside license area through power exchange. Real time settlement of energy, either purchase or sale, is being done through Imbalance Pool.

**FY 14-15:** The power purchase for FY 14-15 is based on actuals and is shown in the table below.

**FY 15-16:** For FY 15-16, power purchase is based on actuals for H1 and estimates for H2. The summary of estimated power purchase in FY 15-16 is shown in table below.

**Control Period:** For the projection of power purchase for the Control Period, RInfra-D has estimated as follows:

- **Long Term:** For the Control Period from FY 16-17 to FY 19-20, the power to be sourced from DTSPS and VIPL is as projected by RInfra-G and VIPL respectively in their MYT petitions for the Control Period and to that, the reduction in quantum likely to happen on account of back down of the plants based on the likely Merit Order Dispatch schedule is considered. The net quantum is then considered as sourced from DTSPS and VIPL. The energy charges and the fixed cost of power purchase are as projected by RInfra-G and VIPL in their respective MYT Petition for each year of the Control Period.

The tenure of the said PPA ends on 23<sup>rd</sup> February 2018. As per the terms of the PPA, the PPA can be extended with the mutual agreement of the parties (RInfra-G and RInfra-D), subject to approval of the Hon'ble Commission. RInfra-D intends to extend the PPA with RInfra-G for a suitable period beyond 23<sup>rd</sup> February 2018 and RInfra-D shall separately approach the Hon'ble Commission under the Regulation 20.1 of MYT Regulations, 2015 for approval of the same.

RInfra-D submits that DTSPS has been supplying power to consumers of Mumbai for more than 20 years now. The consumers of RInfra-D are beneficiaries of DTSPS and have paid for capital cost of the plant over the said period. Further, the installation of the station in Dahanu was under a License condition of RInfra (then BSES), on the condition that power generated will be supplied to the consumers in RInfra-D license area in Mumbai. DTSPS's power is

directly injected into RInfra-D's distribution system through dedicated transmission lines forming part of RInfra-T's transmission system. The high availability of DTPS and its superior performance on all the operating parameters compared to other generating stations of similar capacity and vintage makes DTPS one of the most important elements in ensuring reliable and quality power supply in the city of Mumbai. In addition, DTPS has a long-term Fuel Supply Agreement (FSA) with South Eastern Coalfields Limited (SECL), which is valid till 2029. Under the said FSA, DTPS has always been receiving coal supply as per the Annual Coal Quantity (ACQ) agreed, which fulfils 90% of coal requirement of DTPS, thereby ensuring continuity and reliability of fuel supply to generate low cost power for the City of Mumbai.

Electricity forms a basis for providing various lifeline services in the City of Mumbai and, hence, to ensure its continuity, an Islanding scheme is in operating in the City of Mumbai, which ensures that even in case of grid disturbances, the City of Mumbai continues to get supply. The islanding scheme in Mumbai is operating successfully since 1998. Over the years, the scheme has evolved and is now based on automatic load shedding system which works on real time parameters. In case DTPS power is not available for Mumbai, the islanding scheme will have to be significantly modified. This is not desirable particularly when concerns have already been raised by the standing committee appointed by Hon'ble Commission regarding adequacy of transmission system for injecting power into the Mumbai Metropolitan Region (MMR) in the future.

At present, the demand that can be catered to safely with full availability of existing units in Mumbai is limited to 3357 MW. The maximum demand of Mumbai consumers recorded in FY 15-16 till now is 3416 MW. In case DTPS is not available for supply to Mumbai, Mumbai demand will have to be met through import of power from outside, which critically depends on the ability and adequacy of transmission infrastructure

Lastly, DTPS also has much lower fixed cost as compared to the newer plants. Its fixed cost, as projected by DTPS in its MYT Petition, is around Re. 1 per unit. Justifiably so, as DTPS is an old plant and therefore with lower historical cost. In contrast, the modern day thermal power plants are being set up at Rs. 6.50 Crore/MW to Rs. 7.50 Crore/MW.

RInfra-D, therefore, considers that purchase of power from DTPS is not only commercially a more viable option as compared to alternatives, but is also technically unavoidable due to the islanding requirement for the City of Mumbai. RInfra-D would therefore, at an appropriate time, file a petition before the Hon'ble Commission to seek extension of its power purchase arrangement with DTPS to ensure continuity of supply after expiry of the present arrangement.

- TPC-G: RInfra-D does not envisage power purchase from TPC Unit 6 during the Control Period and thus no quantum is estimated to be purchased from TPC-G.
  
- Solar RPO: The Hon'ble Commission has issued the Draft MERC (Renewable Purchase Obligation, its Compliance and REC framework Implementation) Regulations, 2016 on 24<sup>th</sup> December 2015. RInfra-D has therefore considered the Solar RPO target as specified in the Draft Regulations. For solar purchase, RInfra-D has an EPA with Dhursar Solar Power Private Ltd. for 40 MW. RInfra-D for the Control Period has considered the same generation as actual for FY 14-15.

RInfra-D's contract with DSPPL requires all energy so generated by the generator to be purchased by RInfra-D. In the previous Control Period, energy purchased from DSPPL exceeded the solar RPO target, but the same would now be fully absorbed considering the growth in demand as well as the increase in RPO target from FY 16-17 onwards.

Additional solar purchase over and above the EPA would be required for FY 17-18 to FY 19-20 and RInfra-D intends to procure the same from FY 17-18 onwards. The cost of solar power from Dhursar has been considered at the rate of Rs. 17.91/kWh as approved by the Hon'ble Commission in Case No. 20 of 2010. For the additional solar purchase to be procured from FY 17-18 onwards, the rate considered is Rs. 5.50/kWh followed by Rs. 0.50/kWh reduction each for FY 18-19 and FY 19-20. The rate of Rs. 5.50/kWh is considered based on the likely preferential tariff for solar in FY 16-17 considering the benchmark capital cost of Rs. 5.01 Cr./MW for solar plants as per the Draft Order of Hon'ble CERC, which works out to about Rs. 6.07/kWh. Based on the estimated procurement of solar

power, there is likely to be some deficit left in each year, which RInfra-D shall meet through procurement of Solar RECs. The cost of solar RECs has been considered at the presently prevailing floor price of Rs. 3.5 / kWh for each year of the Control Period.

- Non-Solar RPO: RInfra-D has existing Non-solar RE contracts, which will continue during the Control Period. The energy availability for each year of the Control Period from each contracted source is considered same as actual of FY 14-15. RInfra-D is not projecting any new contract for Non-solar RE during the Control Period. The shortfall in Non-solar energy vis-a-vis the Non-solar RPO target would be met by purchasing RECs. The cost of purchase of Non-solar energy is based on the rates as per the PPA's with the Non-Solar RE sources. For REC's, RInfra-D has considered the presently prevailing floor price of Rs. 1.5 / kWh for projecting the cost of RECs for each year of Control Period.
  - Mini/Micro RPO: Regarding compliance to Mini-Micro Hydro RPO, RInfra-D, in this petition, is assuming availability of energy from Mini-Micro Hydro source(s) during the Control Period and is correspondingly projecting purchase of energy at the preferential tariff approved by the Hon'ble Commission in its Order dated 25<sup>th</sup> January 2016 in Case No. 135 of 2015 at Rs. 5.19/kWh (for units above 500 kW and less than or equal to 1 MW).

Short Term Purchase: In the present petition, RInfra-D has projected the hourly demand and generation availability from base load sources as described above and determined, on an hourly basis, the surplus and shortfall in energy terms. The energy availability from base load sources (RInfra-G and VIPL) has been considered after factoring in the likely backing down of these generating stations. The short term power requirement will be procured either from Traders /IPPs as per Guidelines issued by Ministry of Power for Short Term Power Purchase or from power exchanges, depending upon the price of power available and the period in which power is required. As far as FY 16-17 is concerned, RInfra-D has already invited bids for short-term purchases in the period April 2016 to June 2016 in different time slots. The rates discovered in the bid range from 3.02 to 3.12 in different time slots, which have been considered in the period April 2016 to June 2016. Considering the hourly / periodic distribution as per the quotes finalised, the weighted average rate of short-term power purchase as per bids works out to Rs.

3.08 per unit. Accordingly RInfra-D has considered the rate of short term power purchase as Rs. 3.08 / kWh for FY 16-17. It is anticipated at this time that the gradual reduction seen in power purchase rates in power exchanges and consequently the cost of power traded through traders will bottom out in FY 16-17 and short-term power rates from FY 17-18 onwards will either rise or will remain at the same level. For FY 17-18 and FY 18-19 also, the rate of short term power purchase rate has been considered at Rs. 3.08 / kWh. For FY 19-20, the rate of short term power purchase has been estimated by considering an escalation of 5% over the rate for FY 18-19, in view of the anticipated increase in demand for electricity due to Union Election in FY 19-20.

- Short Term Sale: RInfra-D has projected hourly surplus power that will be available during the Control Period for sale, considering availability of different sources and likely backing down of based load sources. RInfra-D has assumed that all surplus power will be sold through power exchanges or through traders. Regarding the rate of sale of surplus power, the estimated difference between short term purchase rate and sale rate in H2 of FY 15-16 is approx. Re. 1.00/kWh. RInfra-D has considered the same margin for estimating the rate of surplus power sale in FY 16-17. The rates of surplus power sale for FY 17-18 and FY 18-19 are derived by applying an escalation of 5% to the rates for FY 16-17 and FY 17-18 respectively. The rate of surplus power sale for FY 19-20 as been determined by applying 10% escalation over the rate for FY 18-19.
- Imbalance Pool: No increment or decrement to the State Imbalance Pool has been estimated now. Similarly no purchase from standby arrangement with MSEDCL has been estimated now.
- Transmission charges: FY 15-16 vide Order dated dated 26<sup>th</sup> June 2015 in Case No. 57 of 2015. RInfra-D submits that transmission charges payable by RInfra-D depend upon the ARR of each transmission licensee as approved by the Hon'ble Commission and the demand—share as approved considering CPD and NCPD of different TSUs. RInfra-D is in no position to estimate the ARRs of other transmission licensees, and therefore has considered the transmission charges payable for each year of the Control Period at the same level as the approved transmission charges for FY 15-16.
- SLDC charges: The Hon'ble Commission has approved SLDC charges of Rs. 1.34 Crore for RInfra-D for FY 15-16 vide Order dated 20<sup>th</sup> October 2015 in Case No. 218 of 2014. As

RInfra-D is in no position to estimate the budget of MSLDC as approved by the Hon’ble Commission for the Control Period, RInfra-D has considered the SLDC charges payable in each year of the Control Period at the same level as the approved SLDC charges for FY 15-16.

- **Standby charges:** The Hon’ble Commission has approved standby charges of Rs. 172.11 Crore for RInfra-D for FY 15-16 in RInfra-D’s MTR Order dated 26<sup>th</sup> June 2015. Standby charges depend upon the demand-share of RInfra-D in terms of average of CPD and NCPD. Since the likely share of RInfra-D during the Control Period is not known now, RInfra-D has considered the standby charges at the same level as that of FY 15-16.

The summary of quantum of power purchase is as follows:

**Table 3 : Power Purchase Quantum from FY 14-15 to FY 19-20**

Particulars / MU	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Estimates	Projections	Projections	Projections	Projections
DTPS	3,642.26	3,633.61	3,552.96	3,579.08	3,475.59	3,509.64
VIPL	3297.70	3,718.31	4,201.21	4,226.71	4,263.98	4,297.42
TPC Unit 6	198.04	7.16	-	-	-	-
Renewable Solar	68.52	65.66	68.52	143.41	193.35	243.44
Renewable Non Solar	204.59	198.15	206.48	206.63	206.78	207.18
Short Term Purchase	1379.40	1,294.07	1,468.51	1,555.50	1,809.50	1,951.16
Imbalance Pool	60.37	345.65	-	-	-	-
Surplus Sale	(46.22)	(72.82)	(57.49)	(28.97)	(12.94)	(9.58)
Purchase under Standby Arrangement	38.69	19.43	-	-	-	-
RE Energy purchased from Non Firm OA consumer	0.67	-	-	-	-	-
RE Energy from Non Firm OA consumers	0.16	-	-	-	-	-



Particulars / MU	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Estimates	Projections	Projections	Projections	Projections
(towards Banking Fee)						
<b>Total</b>	<b>8,844.18</b>	<b>9,209.21</b>	<b>9,440.18</b>	<b>9,682.37</b>	<b>9,936.26</b>	<b>10,199.25</b>

The summary of cost of power purchase from different sources over the Control Period is shown below:

**Table 4 : Power Purchase Cost from FY 14-15 to FY 19-20**

Source / Rs. Crore	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
DTPS	1,371.31	1,411.35	1,513.05	1,508.36	1,506.23	1,557.96
VIPL	1,450.83	2,054.51	2,167.92	2,168.48	2,171.76	2,176.51
WPCL	95.00	-	-	-	-	-
TPC Unit 6	261.27	-	-	-	-	-
Renewable - Solar	114.31	98.14	122.71	163.91	188.87	211.91
Renewable - Non Solar	100.08	98.34	104.24	105.99	107.75	109.64
Short Term Power Purchase	525.28	423.08	452.30	479.09	557.33	631.00
Surplus Sale	(13.29)	(18.95)	(11.96)	(6.03)	(2.69)	(2.09)
Imbalance Pool	23.89	115.61	-	-	-	-
Purchase under standby	15.95	8.67	-	-	-	-
Surplus RE energy bought from Non firm OA consumers	-	0.33	-	-	-	-
Solar REC	-	-	9.06	0.64	1.88	3.86
Non Solar REC	81.74	87.69	110.63	121.50	132.93	144.86
Transmission Charges	431.07	350.36	319.32	319.32	319.32	319.32
SLDC Charges	2.04	1.69	1.34	1.34	1.34	1.34
Standby Charges	137.00	172.11	172.11	172.11	172.11	172.11
WRPC Incidental charge	-	0.01	-	-	-	-
<b>Total</b>	<b>4,596.48</b>	<b>4,802.94</b>	<b>4,960.73</b>	<b>5,034.73</b>	<b>5,156.84</b>	<b>5,326.43</b>

## **2.4 O&M Expenses**

### **2.4.1 Employee expenses**

**FY 14-15:** The Hon'ble Commission in the MTR Order itself permitted an inflationary increase of about 6.15% over the actuals of FY 13-14. RInfra-D submits that the actual employee expenses of FY 14-15 have witnessed an inflationary increase over FY 13-14 to about the same extent as permitted by the Hon'ble Commission in the MTR Order. However, during FY 14-15, there have been certain one-time payments to unionized staff of RInfra-D on account of provisions of certain Agreements executed between RInfra and Bombay Electric Worker's Union amounting to about Rs. 45.44 Crore. By removing the above impacts from the actual employee expenses for FY 14-15, the increase in employee expenses for FY 14-15 over that for FY 13-14 works out to 6.27%.

**FY 15-16:** For FY 15-16, RInfra-D has used an escalation factor of 8.48%, which is the average of point to point inflation in CPI (Industrial Workers) between September and August of last 5 years, so as to factor in a realistic level of inflation related escalation which is applied to the actual employee expense for FY 14-15 (after removing the component of one time impact of gratuity payment and arrears paid to cashiers/office supervisors).

### **2.4.2 A&G expenses**

**FY 14-15:** The actual A&G Expense for FY 14-15 is Rs. 176.56 Crore as against Rs. 177.66 Crore approved for FY 14-15 in RInfra-D's MTR Order.

**FY 15-16:** For FY 15-16, RInfra-D has used an escalation factor of 7.36 %, which is derived with 60% weight of 5 year average of point to point inflation in CPI and 40% weight of 5 year average of point to point inflation in WPI which is applied to the actual A&G expense for FY 14-15. RInfra-D submits that A&G Expenses include the service tax component. Till May 2015, the service tax applicable was 12.36%. From June 2015 onwards, service tax has been increased to 14.00% and it has been further increased to 14.50% from November 2015 onwards (through inclusion of Swachh Bharat Cess of 0.50%). The increase in service tax will increase the A&G Expenses for FY 15-16 beyond the level estimated with inflation factors. For taking into account

the effect of increase in service tax on A&G Expense, RInfra-D has estimated service tax differential and has added it to the estimated A&G Expenses for FY 15-16.

### 2.4.3 R&M expenses

**FY 14-15:** The actual R&M Expense for FY 14-15 is Rs. 208.15 Crore, as against Rs. 217.57 Crore approved for FY 14-15 in RInfra-D’s MTR Order. The said actual amount of Rs. 208.15 Crore is inclusive of Rs. 9 Crore provision for wage revision in FY 14-15. Like the wage revision agreement with unionized employees, a wage revision for contract labour is also expected to materialize in FY 16-17. For the purpose of truing up of FY 14-15, RInfra-D has not considered the wage revision provision of Rs. 9 Crore, as the same will be considered at the time of actual payout. The actual R&M Expenses for FY 14-15 are significantly less than the approved R&M Expense for FY 14-15. This is because RInfra-D has been able to defer to FY 15-16 some R&M jobs earlier planned for FY 14-15.

**FY 15-16:** As stated above, RInfra-D has been able to defer to FY 15-16 some R&M jobs earlier planned for FY 14-15. Since the jobs planned for FY 14-15 will be carried out in FY 15-16, in addition to the jobs planned for FY 15-16, R&M Expense for FY 15-16 will not be sufficient if allowed on the basis of actual R&M Expense for FY 14-15. By considering the trend of R&M Expense in first half and second half of FY 14-15, the estimated R&M Expense for FY 15-16 works out to Rs. 238.35 Crore. However, RInfra-D expects that R&M Expense for FY 15-16 will remain at the same level as approved by the Hon’ble Commission in the MTR Order. Hence, RInfra-D has considered the number as approved by the Hon’ble Commission in the MTR Order.

**Table 5 : Summary of O&M Expense for FY 14-15 and FY 15-16**

Particulars / Rs. Crore	FY 14-15	FY 14-15	FY 14-15	FY 15-16	FY 15-16	FY 15-16
	Wire	Supply	Total	Wire	Supply	Total
Employee	375.52	259.20	634.72	394.60	272.39	666.98
A&G	106.36	70.28	176.65	115.28	76.18	191.46
R&M	186.39	12.72	199.10	214.99	15.02	230.01
<b>Total</b>	<b>668.27</b>	<b>342.21</b>	<b>1,010.47</b>	<b>724.86</b>	<b>363.58</b>	<b>1,088.45</b>

#### **2.4.4 O&M expenses for the Control Period**

Regulations 72.2 and 81.2 of the MYT Regulations, 2015 state that the Wires and Supply O&M Expenses shall be derived based on average of the trued-up O&M expenses after adding/deducting the share of efficiency gains/losses, for the three years ending March 31, 2015, excluding abnormal O&M expenses, if any, subject to prudence check by the Commission and such averaged expenses shall be considered for year ending March 31, 2014 and will be escalated by 5.72% each year up to FY 15-16.

Accordingly RInfra-D has removed the abnormal components in O&M expenses over the period FY 12-13 to FY 14-15.

- For FY 12-13, the abnormal expenses included in employee expenses were wage revision arrears pertaining to FY 10-11 and FY 11-12 for contract labour and hence has been removed from O&M expense for FY 12-13. For FY 13-14, there is no abnormal expense in employee expenses. For FY 14-15, there is one time impact on gratuity payment to employees and are removed from O&M expense for FY 14-15.
- The increase in salary due to absorption of junior categories into regular categories and increase in overtime expenses due to the same are recurring in nature. Since they had been booked for the first time in FY 14-15, they are removed from O&M expense for FY 14-15 for determining O&M expense for the Control Period. These expenses are separately escalated and added back to the O&M expense for the Control Period determined on the basis of average of expenses from FY 12-13 to FY 14-15.
- The arrears (for the period FY 2010-11 to FY 13-14) paid to cashiers cum Assistants and Office Supervisors pursuant to the Agreement with Bombay Electric Worker's Union on 10th October 2014 in FY 14-15 is Rs. 2.51 Crore. These arrears pertain to the period FY 10-11 to FY 13-14, which was paid in FY 14-15. RInfra-D has removed this arrears component from the O&M expense of FY 14-15 and has added the contributions of FY 12-13 and FY 13-14 in this arrear to the O&M expenses of FY 12-13 and FY 13-14 respectively, for normalization.

Further, RInfra-D in accordance with the Regulations has added its share of efficiency gains and deducted its share of efficiency losses.

- RInfra-D has calculated the efficiency gains/losses for A&G Expenses and R&M Expenses for 14-15 in the section on truing up of FY 14-15. The efficiency gains/losses have been added / subtracted from the O&M expenses for FY 14-15 while determining the O&M expenses for the Control Period. RInfra-D submits that the O&M expenses of FY 12-13 and FY 13-14 were approved at actuals and hence there were no efficiency gains in these years.

In addition to above, certain additional expenses are being claimed over and above the applicable escalation factor for O&M expenses.

- RInfra-D is carrying out DSM programs which are being met through LMC fund. The balance amount lying in the LMC fund will be utilized for the ongoing DSM programs and therefore the likely expenses of 2 new DSM schemes i.e. Large Scale Ceiling Fan program and Large Scale Refrigerator program have been included in ARR.
- RInfra-D intends to launch the Automatic Demand Response Program in its area of supply, which also have O&M Expenses associated with it. RInfra-D requests the Hon'ble Commission to allow the additional O&M Expenses on all these DSM programs separately, as these expenses were not incurred in the past and hence not included in the base average expenses till March 31, 2015.
- Service Tax has been increased from 12.36% to 14% from June 2015 onwards and further to 14.5% from October 2015 onwards. A new cess called Krishi Kalyan Cess of 0.5% has been introduced in the Budget 2016, which will make the effective Service Tax 15% from June 2016 onwards. RInfra-D has calculated the service tax differential for each year of the Control Period and has added the same to the O&M Expenses derived on the basis of averaging of expenses from FY 12-13 to FY 14-15 separately. Rental payable and receivable between RInfra-D and RInfra-T for land usage charges is accounted for as per the arrangement formalised under the Minutes of Meeting dated 15<sup>th</sup> March 2013. The said MOM was applicable up to FY 15-16 and will be extended further before the end of FY 15-16 to cover the next Control Period. Since the present Mom allows escalation of land usage charges by 5% year on year, RInfra-D has considered the land usage charges payable in FY 15-16 and has escalated it by 5% to determine land usage charges for the Control Period. RInfra-D has, for the purpose of forecasting the O&M expenses, considered the Base O&M expenses for FY 12-13 to <sup>FY</sup> 14-15 (for determining the average expenses as per MYT

Regulations, 2015), without including land usage charges in it, since it is being claimed separately in Wires O&M expense.

- The share of Corporate Expenses getting allocated to a given business is a factor of turnovers and therefore expenses allocated in a given year to a given regulated business would vary from the expenses allocated in the previous year based on factors, not necessarily accounted for in a simple inflation based allowance. Thus, RInfra-D has, for the purpose of forecasting the O&M expenses, considered the Base O&M expenses for FY 12-13 to FY 14-15 (for determining the average expenses as per MYT Regulations, 2015), without including Corporate Allocation in it. In order to factor in Corporate Allocation, the share of Corporate Expenses as actually accounted in FY 14-15 is considered and the same are escalated by 5.72% for FY 15-16 (as provided in MYT Regulations, 2015) and by 7.34% from FY 16-17 onwards to arrive at the Corporate Allocation for each year of the Control Period.

RInfra-D further submits that the MYT Regulations, 2015 do not mention anything related to whether the O&M expenses to be considered for averaging and determination of base expenses should be gross or net. RInfra-D submits that the Hon'ble Commission may appreciate that the normative O&M expenses to be permitted should be at gross level only, as expense capitalization depends on capital projects undertaken and whether any staff or employees of RInfra-D were dedicated to such project execution. Therefore, for the purpose of projecting the O&M expenses for Control Period RInfra-D has considered gross O&M expenses from FY 12-13 to FY 14-15, i.e. after adding back the expenses capitalized from FY 12-13 to FY 14-15. For estimating the expense capitalization in each year of the Control Period, RInfra-D has considered the ratio of expense capitalization to gross O&M expenses of the period FY 12-13 to FY 14-15, averaged the same and applied the average ratio so determined to the projected gross O&M expenses during each such year of the Control Period.

Further pursuant to the new Corporate Office being built at Santacruz, it has been decided that the rent for RNA Corporate office at Kalanagar will be borne by RInfra Corporate, which was being borne by RInfra-D till now. RInfra-D has deducted the rent payable for RNA Corporate Office park from the projected wires O&M expense from FY 16-17 to FY 19-20.

**2.4.4.1 Escalation Factor for projecting O&M Expenses from FY 16-17 onwards**

As per MYT Regulations 2015, the average of base O&M expenses from FY 12-13 to FY 14-15 should be escalated by 5.72% twice to arrive at the normative O&M expenses of FY 15-16. The Regulation further states that to arrive at the normative O&M expenses for each subsequent year, the base expenses determined above for FY 15-16, needs to be escalated at the inflation factor considering 60% weightage for the actual point to point inflation over Wholesale Price Index numbers as per Office of Economic Advisor of Government of India in the previous year i.e. FY 14-15 and 40% weightage for the actual Consumer Price Index for Industrial Workers (all India) as per Labour Bureau, Government of India in FY 14-15, reduced by Efficiency Factor of 1%. By considering the CPI and WPI inflation of FY 14-15, the escalation rate works out to 3.75%. After reducing the efficiency factor of 1%, the escalation rate becomes measly 2.75%, which is not sufficient to cover the O&M expenses for the Control Period.

RInfra-D has used average point to point inflation for last 3 years and considered the escalation factor as 60% CPI and 40% WPI. The data used for inflation used is shown below:

**Table 6 : CPI and WPI Inflation from FY 14-15 and FY 15-16**

<b>Inflation %</b>	<b>FY 12-13</b>	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>Average</b>
CPI	10.43	9.72	6.30	8.82
WPI	7.36	5.98	2.05	5.13
60% CPI + 40% WPI				7.34

The MYT Regulations, 2015 provides for an efficiency factor of 1% to be reduced from the escalation factor while projecting O&M expenses. RInfra-D submits that it has been able to limit the rise of its O&M expenses up to the inflationary level indicated by WPI and CPI in earlier years. Even though the size of business has grown considerably, the number of employees has reduced over the years. This itself shows the efficiency in operations. Therefore, in RInfra-D's view, consideration of additional efficiency factor of 1% is unjustified. RInfra-D has not considered the efficiency factor in the escalation rate while projecting the O&M expense for each year of the Control Period.

Based on the approach followed above and escalation rate as derived above, RInfra-D has projected the Wires O&M expenses from FY 16-17 to FY 19-20, as below:

**Table 7 : Wires O&M Expense from FY 16-17 to FY 19-20**

<b>Particulars / Rs. Crore</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Base Wires O&M Expenses	767.44	823.77	884.24	949.15
Add:				
Increase in salary due to absorption of Junior employees into regular grades	17.16	18.42	19.77	21.22
Increase in expenses due to increase in Service Tax in FY 15-16	4.39	4.86	5.22	5.60
Land Usage Charges	1.09	1.15	1.21	1.27
Corporate Allocation - Wires Business	2.64	2.83	3.04	3.26
Less: Expense Capitalized	38.74	41.58	44.63	47.91
Less: RNA Corporate Office Rent	8.76	8.76	9.20	9.64
<b>Total Wires O&amp;M Expense</b>	<b>745.22</b>	<b>800.69</b>	<b>859.64</b>	<b>922.95</b>

The summary of Supply O&M Expense projected from FY 16-17 to FY 19-20 is as below:

**Table 8 : Supply O&M Expense from FY 16-17 to FY 19-20**

<b>Particulars/ Rs. Crore</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Base Supply O&M Expenses	320.03	343.52	368.74	395.81
Add:				
Increase in salary due to absorption of Junior employees into regular grades	11.85	12.71	13.65	14.65
Increase in expenses due to increase in Service Tax in FY 15-16	1.41	1.56	1.67	1.80
Expenses related to DSM programs	8.55	12.18	13.10	15.12
Corporate Allocation - Supply Business	59.72	64.10	68.81	73.86
Less: Expense Capitalized	-	-	-	-
<b>Total Supply O&amp;M Expense</b>	<b>401.55</b>	<b>434.08</b>	<b>465.97</b>	<b>501.23</b>

The summary of total O&M Expense projected from FY 16-17 to FY 19-20 is as below:

**Table 9 : Total O&M Expense from FY 16-17 to FY 19-20**

<b>Particulars/ Rs. Crore</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Base O&M Expenses	1,087.47	1,167.29	1,252.98	1,344.95



<b>Particulars/ Rs. Crore</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Add:				
Increase in salary due to absorption of Junior employees into regular grades	29.01	31.13	33.42	35.87
Increase in expenses due to increase in Service Tax	5.79	6.42	6.89	7.40
Land Usage Charges	1.09	1.15	1.21	1.27
Expenses related to DSM programs	8.55	12.18	13.10	15.12
Corporate Allocation	62.36	66.94	71.85	77.12
Less: Expense Capitalized	38.74	41.58	44.63	47.91
Less: RNA Corporate Office Rent	8.76	8.76	9.20	9.64
<b>Total Wires O&amp;M Expense</b>	<b>1,146.77</b>	<b>1,234.77</b>	<b>1,325.61</b>	<b>1,424.18</b>

RInfra-D submits that the Hon’ble Commission may be kind enough to consider the above submissions and, wherever required, exercise its powers under Regulation 102 of MYT Regulations, 2015: Power to Remove Difficulties to allow for deviations from MYT Regulations, 2015 as sought herein.

For the purpose of comparing the expenses as projected in this petition with the expenses that would be allowed in case the MYT Regulations, 2015 are followed exactly, the O&M expenses of distribution business using the provisions of the MYT Regulations have been worked out and provided below:

**Table 10: Total O&M Expense from FY 16-17 to FY 19-20 as per Escalation rate as per MYT Regulations, 2015**

<b>Particulars / Rs. Crore</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Base O&M Expenses	1,040.95	1,069.55	1,098.95	1,129.15
Add:				
Increase in salary due to absorption of Junior employees into regular grades	27.76	28.53	29.31	30.12
Increase in expenses due to increase in Service Tax	5.55	5.88	6.04	6.21
Land Usage Charges	1.09	1.15	1.21	1.27
Expenses related to DSM programs	8.55	12.18	13.10	15.12

<b>Particulars / Rs. Crore</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Corporate Allocation	59.69	61.33	63.02	64.75
Less: Expense Capitalized	37.08	38.10	39.15	40.22
Less: RNA Corporate Office Rent	8.76	8.76	9.20	9.64
<b>Total Wires O&amp;M Expense</b>	<b>1,097.75</b>	<b>1,131.76</b>	<b>1,163.28</b>	<b>1,196.75</b>

The impact of the difference between O&M Expense claimed by RInfra-D and the O&M Expense as per the escalation rate in accordance with the MYT Regulations on tariff is Rs. 0.06 per unit in FY 16-17.

## **2.5 Capital Expenditure and Capitalization**

**FY 14-15:** RInfra-D had incurred capital expenditure of Rs. 343.31 Crore (Rs. 327.75 Crore for wires business and Rs. 15.55 Crore for supply business) and capitalization of Rs. 375.35 Crore (Rs. 359.79 Crore for wires business and Rs. 15.55 Crore for supply business) for FY 14-15. Hon’ble Commission in the MTR Order had approved total capitalization for wires and supply business of Rs. 322.95 Crore for FY 14-15. Some capex jobs in FY 12-13 and FY 13-14 could not be executed due to revision in MCGM’s Trenching Policy, due to which MCGM had a lot of backlog of trenching requests from the utilities. The Trenching Policy was restored to original in October 2013. Thus, the delayed works were executed to the latter half of FY 13-14 and in FY 14-15, due to which the Capital Expenditure and Capitalization in FY 14-15 is higher than the amount approved for FY 14-15 in the MTR Order.

**FY 15-16:** RInfra-D has estimate capital expenditure of Rs. 363.71 Crore (Rs. 323.71 Crore for wires business and Rs. 40.00 Crore for supply business) and capitalization of Rs. 385.10 Crore (Rs. 345.10 Crore for wires business and Rs. 40.00 Crore for supply business) for FY 15-16. The Hon’ble Commission had approved total capitalization of Rs. 409.12 Crore in the MTR Order.

**Control Period:** The capital expenditure and capitalization plan for the MYT Period FY 16-17 to 19-20 has been prepared based on various factors like demand projection, pocket-wise growth expectations, requirements of system improvement, statutory requirements, etc. The broad level schemes are classified here under:

- Receiving station and 33kV Network Reconfiguration

- 11kV Network Strengthening
- Low Tension mains
- Low Tension services
- Street Lights
- Metering
- Automatic Demand Side Management (ADSM) / Automatic Demand Response (ADR)
- Instruments (Non-DPR)
- Information Technology (IT) infrastructure (Non-DPR)
- Civil (Non-DPR)
- R&D, Safety and DSM (Non-DPR)
- Others such as procurement of various tools, tackles & vehicles etc. (Non-DPR)

Based on the above, the capital expenditure and capitalization estimated for FY 16-17 to FY 19-20 is as follows:

**Table 11 : Capital Expenditure & Capitalization from FY 16-17 to FY 19-20**

Particulars/ Rs. Crore	FY 16-17	FY 17-18	FY 18-19	FY 19-20
<b>Wires Business</b>				
Capital Expenditure	492.72	499.30	501.52	509.29
Capitalization	469.79	488.67	494.54	504.40
<b>Supply Business</b>				
Capital Expenditure	119.73	74.62	88.50	102.47
Capitalization	119.73	74.62	88.50	102.47
<b>Wires &amp; Supply Business</b>				
Capital Expenditure	612.45	573.93	590.02	611.75
Capitalization	589.53	563.29	583.04	606.87

## 2.6 Depreciation

**FY 14-15:** Regulation 31 of MYT Regulations, 2011 provides for the methodology for computation of depreciation. Depreciation is computed according to the said Regulation. Depreciation has been claimed on the Opening GFA (Gross Fixed Asset) and also on the assets added during the year (proportionately based on actual date of addition) for FY 14-15. The effect

of retirement of assets and withdrawal of corresponding accumulated depreciation has been considered while computing depreciation in FY 14-15.

**FY 15-16:** Regulation 31 of MYT Regulations, 2011 provides for the methodology for computation of depreciation. Depreciation is computed according to the said Regulation. For FY 15-16, the opening balance of assets as on 01.04.2015, is considered and depreciation for FY 15-16 on such assets is determined considering the limit of 70% and wherever any such asset reaches 70% depreciation, the balance depreciable value is spread over the balance useful life of such asset. On both the asset added in H1 of FY 15-16 and estimated addition in H2 of FY 15-16, depreciation for half year is computed, considering mid-year addition. Asset retirement, both in Wires Business and Supply Business, has been provisionally considered at the same level as that of FY 14-15 and assets to this extent are assumed retired at the mid of the year.

**Control Period:** For the Control Period, in order to work out depreciation according to the MYT Regulations, 2015, the opening balance of assets as on 01.04.2015, is considered and depreciation for each year of the Control Period on such assets is determined by considering the depreciation rates as per MYT Regulations, 2015 and by considering the limit of 70%. Wherever any such asset reaches 70% depreciation, the balance depreciable value is spread over the balance useful life of such asset. Depreciation on actual projected asset addition in each year of the Control Period is determined by simply applying the depreciation rates for asset classes as specified in the MYT Regulations, 2015. Asset retirement has not been projected at this time, as no estimate for the same is presently available. Actual asset retirement for each year would be presented at the time of true-up.

## **2.7 Financing Plan and Interest expenses**

RInfra-D has been incurring capital expenditure for various MERC approved schemes. The funding of capital expenditure till FY 2010-11 has been done through internal accruals. During FY 2011-12, RInfra-D had raised Rs. 1000 Crore by way of Non-Convertible Debentures (NCD) and had taken a loan of Rs. 350 Crore from Central Bank of India, for which RInfra-D had offered for security the assets created and capitalized before the disbursement of loans. During FY 2013-14, RInfra-D has raised Rs. 500 Crore (from IDBI Bank) and Rs. 650 Crore (from Axis Bank) by way of Non-Convertible Debentures for various purposes. The entire NCD of Rs. 650

Crore has been secured by creating a pari-passu charge on assets of RInfra spread across different businesses. Certain fixed assets of Mumbai distribution business are also securitized against this NCD. Based on the book value of assets of Mumbai distribution business (RInfra-D) securitized, the part of NCD attributable to RInfra-D is Rs. 250 Crore. As regards the NCD of Rs. 500 Crore, entire amount is attributable to RInfra-D.

In accordance with the MYT Regulations, 2011, the interest rate approved by the Hon'ble Commission was derived as the weighted average rate using the outstanding debt balances and interest rates thereon as on 01-04-2012 and 01-04-2013 for FY 12-13 and FY 13-14 respectively.

**FY 14-15:** In accordance with the ruling of the Hon'ble Commission, RInfra-D, for calculation of interest expenses for FY 14-15, has considered the weighted average interest rate of all actual loans of RInfra-D as on 01-04-2014. RInfra-D submits that no new borrowing has been made for the distribution division of RInfra in FY 14-15. Considering the loan addition during FY 14-15 as 70% of net capitalization (capitalization net of consumers contribution), the interest charges claimed for true-up of FY 14-15 are worked out.

**FY 15-16:** For FY 15-16, other than the loans provided above, no further borrowing has been made in the distribution business for capital expenditure purposes. For calculation of interest expenses for FY 15-16, RInfra-D has considered the weighted average interest rate of all actual loans of RInfra-D at the beginning of FY 15-16, in accordance with Regulation 33.5 of the MYT Regulations, 2011. Considering the loan addition during FY 15-16 as 70% of net capitalization (capitalization net of consumers contribution), the interest charges claimed for provisional true-up of FY 15-16 are worked out.

**Control Period:** No fund tie-ups have been made as of now with regard to new capex during each year of the Control Period, as estimated in this petition. At this time, RInfra-D has considered that new capital expenditure/capitalisation in each year of the Control Period will be funded in a ratio of 70:30 debt: equity. Regulation 29.5 of the MYT Regulations, 2015 state that the rate of interest for allowing interest expenses shall be the weighted average rate of interest computed on the basis of the actual loan portfolio at the beginning of each year. The Hon'ble Commission, in RInfra-D's MTR Order, had accepted the submissions of RInfra-D regarding

availing actual loans at better terms than the prevailing market interest rates. Therefore RInfra-D has considered weighted average rate of interest on the opening balance of loan/NCDs mentioned above for determining interest expenses for each year of the Control Period. The rates of interest of NCDs remain constant and do not vary. As regards the term loan from Central Bank of India, RInfra-D has considered the presently prevailing rate of interest to be the rate of interest for each year of the Control Period. Repayment for each year of the Control Period has been considered as equal to depreciation (on assets net of consumer contribution) projected for each year of the Control Period. Considering the loan addition during each year of the Control Period as 70% of net capitalization (capitalization net of consumer's contribution), the interest charges for each year of the Control Period is worked out.

## **2.8 Return on Equity**

**FY 14-15:** For FY 14-15, Return on equity has been determined by applying the rates for wires and retail supply businesses as specified in the MYT Regulations, 2011. The equity portion of new capitalization in FY 14-15 has been considered as 30% of actual capitalization in FY 14-15. Consumer contribution received in FY 14-15 has been reduced from the capitalization to determine the equity portion of new capitalization, eligible for return, in FY 14-15.

**FY 15-16:** For FY 15-16, Return on equity has been determined by applying the rates as specified in the MYT Regulations, 2011. Consumer contribution received in H1 of FY 15-16 has been reduced from capitalization in H1 of FY 15-16 to derive capitalization net of consumer contribution. 30% of this capitalization net of consumer contribution is treated as the equity portion of capitalization in H1 of FY 15-16. In the same manner equity portion of capitalization has been derived for H2 of FY 15-16. Consumer contribution in H2 of FY 15-16 is assumed to be at the same level as that of H2 of FY 15-16.

**Control Period:** For the Control Period, Return on equity has been determined as per Regulation 28 of MYT Regulations, 2015. Estimated consumer contribution for each year of the Control Period has been deducted from the projected asset addition for corresponding years to derive

capitalization, net of consumer contribution. 30% of the capitalization net of consumer contribution has been considered as equity deployed for asset creation.

## **2.9 Interest on Working Capital**

**FY 14-15 & FY 15-16:** For FY 14-15 and FY 15-16, RInfra-D has calculated the interest on working capital for Wires Business and Supply Business in accordance with Regulation 35.3 and 35.4 of the MYT Regulations, 2011. The Hon'ble Commission had considered the rate of interest of 14.75% for determining interest on Working Capital in RInfra-D's MTR Order for FY 14-15 and FY 15-16. Accordingly, for truing up of FY 14-15 and provisional truing up for FY 15-16, RInfra-D has considered the rate of 14.75% for computation of Interest on working capital.

**Control Period:** For the Control Period, RInfra-D has calculated interest on Working Capital as per Regulation 31.3 and Regulation 31.4 of the MYT Regulations, 2015. At present the prevailing base rate of SBI is 9.30%. So RInfra-D has considered interest rate of 10.80% for determining interest on Working Capital (Base Rate plus 150 basis points as per Regulations).

## **2.10 Interest on Consumer Security Deposit**

**FY 14-15:** The security deposit available with RInfra-D from RInfra-D's own consumers as on 31<sup>st</sup> March 2015 is Rs. 329.50 Crore. RInfra-D has provided interest on security deposit by considering the Bank Rate as the interest rate, which is as per Regulation 35.4 (c) of the MYT Regulations, 2011. The Bank Rate in FY 2013-14 has varied from 8.5% to 9.00%. Accordingly, interest on Security Deposit has been provided to the consumers.

**FY 15-16:** For FY 15-16, the security deposit available with RInfra-D from RInfra-D's own consumers as on 30<sup>th</sup> September 2015 is Rs. 354.53 Crore. RInfra-D estimates that the same would grow by Rs. 25.03 Crore to Rs. 379.56 Crore by the end of FY 15-16. The actual Interest on CSD paid in H1 of FY 15-16 is Rs. 13.96 Crore. For H2, it is estimated at the prevailing Bank Rate of 7.75% applied on the average balance of CSD for H2 of FY 15-16.

**Control Period:** Regulation 29.11 of the MYT Regulations, 2015 state that interest shall be allowed on the amount held in cash as security deposit from retail consumers at the Base Rate of SBI as on 1<sup>st</sup> April of the year plus 150 basis points. Accordingly, considering the prevailing Base Rate of SBI at 9.30%, RInfra-D has considered interest rate of 10.80% for projecting the interest on consumer security deposit for each year of the Control Period.

## **2.11 Provision for Bad & Doubtful Debts**

**FY 14-15:** RInfra-D has made a provision of Rs. 15.12 Crore towards bad and doubtful debts for FY 14-15 in its accounts. As per the MYT Regulations, 2011, a provision of up to 1.5% of receivables (as shown in Audited Accounts duly allocated to wires and supply business) is allowable as bad debts. As actual provision is more than the allowable amount, RInfra-D has restricted its claim towards provision for bad and doubtful debts at the maximum limit allowed by the Regulations.

**FY 15-16:** RInfra-D has made a provision of Rs. 9.25 Crore towards bad and doubtful debts for H1 of FY 15-16. As per the MYT Regulations, 2011, a provision of up to 1.5% of receivables (as shown in Audited Accounts duly allocated to wires and supply business) is allowable as bad debts. RInfra-D has considered the Receivables as on 30.09.2015 for RInfra-D as a whole, as the closing balance of receivables for FY 15-16 and considered 1.5% of the same as the Provision for Bad and Doubtful Debts.

**Control Period:** In accordance with the first proviso to the Regulations 73 and 82 of the MYT Regulations 2015, RInfra-D has considered the provision for bad debts for FY 16-17 onwards at the same level as the actual provision made in the audited accounts of FY 14-15. RInfra-D submits that the last proviso of the Regulations stated above are required to be applied only at the time of true-up, when the audited accounts of the Company are available i.e. at the time of true-up of respective years of the Control Period. Accordingly, the relevant Annexure in the petition demonstrates that at the end of FY 14-15, this provision did not exceed 5% of receivables as per audited accounts of FY 14-15. Therefore, the Provision for Bad and Doubtful Debts for each year of the Control Period is directly considered at the same level as the actual provision made in FY 14-15 audited accounts, in accordance with the first proviso to the above Regulations.



## **2.12 Contribution to Contingency Reserve**

**FY 14-15 & FY 15-16:** RInfra-D, in accordance with Regulation 36.1 of MYT Regulations, 2011, has calculated the contribution to contingency reserve at 0.25% of the opening GFA of Supply Business and Wires Business for FY 14-15 and FY 15-16.

**Control Period:** Regulation 34.1 of the MYT Regulations state that a sum not less than 0.25 per cent and not more than 0.5 per cent of the original cost of fixed assets shall be allowed as Contribution to Contingency Reserve. It also provides that when the cumulative contribution to contingency reserves exceeds 5% of the original cost of fixed assets, no further contribution will be allowed. RInfra-D has calculated the contribution to contingency reserve for each year of the Control Period as 0.25% of the opening GFA of that year for Wires Business and Supply Business separately. The calculation showing the cumulative contribution to contingency reserve for each year of the Control Period does not exceed 5% of the opening GFA for that year.

## **2.13 Income Tax**

**FY 14-15:** RInfra-D has computed Income tax for FY 14-15 based on stand-alone Regulatory Profit before Tax (PBT) for Distribution business. This methodology has also been followed by Hon'ble Commission at the time of issuing order for truing up for FY 12-13 and FY 13-14 in Case No. 4 of 2015. RInfra-D has computed Income Tax at Corporate Tax rate as well as at MAT rate on Book Profit, after determining the Taxable Income as per the formats. Higher of the two is then considered as allowable income tax for FY 14-15.

**FY 15-16:** For FY 15-16, the Income Tax for RInfra-D has been provisionally considered at the same level as worked out for FY 14-15 based on Regulatory Profit before Tax.

**Control Period:** Vide Regulation 33.1 of the MYT Regulations, 2015, the Income Tax for RInfra-T has been provisionally considered, for each year of the Control Period, at the same level as worked out for FY 14-15 in this petition.

## **2.14 Non Tariff Income**

**FY 14-15 & FY 15-16:** For FY 14-15 and FY 15-16, RInfra-D has claimed non tariff income under the heads of rebate on power purchase cost, interest on contingency reserve investment, land usage charges, liabilities written back, income from sale of scrap, income from recovery against theft, and other miscellaneous receipts.

**Control Period:** For the Control Period, the non tariff income is estimated as follows:

- **Interest on contingency reserve investment:** Weighted average interest rate of contingency reserve investments made as per Annual Accounts of FY 14-15 has been used for determining the interest on contingency reserves for each year of the Control Period.
- **Land usage charges:** As stated in the section on O&M Expenses for the Control Period, the MoM for the land usage charges is applicable up to FY 15-16 and will be extended beyond FY 15-16 before the end of FY 15-16. RInfra-D has provisionally considered escalation rate of 5% for estimating the land usage charges for the next Control Period. The land usage charges payable by RInfra-T to RInfra-D have been considered in Non Tariff Income.
- **Income from sale of scrap:** Income from sale of scrap depends upon the actual scrap generated and the same does not increase year on year. Although the income from sale of scrap has increased in FY 15-16, there is no certainty that the income from sale of scrap will remain the levels of FY 15-16 in future years. So income from sale of scrap for Wires Business during the Control Period has been kept at the same level as that of FY 14-15. For Supply Business the income from sale of scrap during each year of the next Control Period has been kept at the same level as the estimated income from sale of scrap in FY 15-16.
- **Income from recovery against theft:** Income from recovery against theft for each year of third Control Period has been kept at the same level as that of estimated income from recovery against theft for FY 15-16.
- **Other miscellaneous receipts of Supply business:** A major portion of other / miscellaneous receipts in the Non Tariff Income of Supply Business comes from maintenance charges received from MCGM for street light maintenance. RInfra-D expects monthly maintenance charges of Rs. 6 Crore per month in each year of the Control Period. Accordingly, other

miscellaneous receipt of Supply Business has been kept at Rs. 72 Crore for each year of the Control Period.

- **Liabilities written back:** Liabilities written back for Wires Business and Supply Business have been kept at the same level as the estimated written back amounts for both the businesses for FY 15-16.
- **Other components:** All other components of Non-Tariff Income have been projected for each year of the Control Period by considering the escalation rate of 5% year on year (i.e. FY 16-17 over FY 15-16 and so on).

## **2.15 Income from other business**

**FY 14-15:** For FY 14-15, RInfra-D has considered the rent from Devidas Lane Office as Income from Other Business as per the Hon'ble ATE Judgment dated 8th April 2015 in Appeal No. 274 of 2013. The utilization of receiving station rooftops for BTS Towers of RCOM and the pole monetization by using advertisement kiosks in Mira Bhayander area are the other two activities which are considered as Other Businesses of RInfra-D. RInfra-D submits that the income from such other businesses should be considered net of tax and thereafter one third of such income net of tax should be reduced from the ARR. Therefore RInfra-D has calculated Income from Other Business net of tax and thereafter considered one third of the amounts net of tax for passing on in ARR.

**FY 15-16:** For FY 15-16, rent from Devidas Lane Office and rental income from utilization of receiving station rooftops for BTS Towers of RCOM are considered. There had been no income from advertisement kiosks in H1 of FY 15-16. Therefore no income from the same has been considered in H2 of FY 15-16. As elaborated above, RInfra-D has calculated Income from Other Business net of tax and thereafter considered one third of the amounts net of tax for passing on in ARR.

**Control Period:** Regulation 75 and 84 of the MYT Regulations, 2015 state that if the Distribution Licensee has engaged in other business for optimum utilization of assets, an amount equal to two thirds of the revenue from such other business after deduction of all direct and

indirect costs attributed to such other business shall be deducted from the ARR in calculating the tariffs for wheeling and retail supply of electricity respectively. The income considered as other business are as follows:

- There has been no income from advertisement kiosks in H1 of FY 15-16. Therefore no income from the same had been considered in any year of the Control Period.
- Income from BTS towers of RCOM for each year of the Control Period has been kept at the same level as that of FY 15-16.
- Rental income from Devidas Lane office for each year of the Control Period has been projected by escalating the estimated rental income for FY 15-16 by 10% as per the existing MoM. However, the MoM is valid till FY 15-16 and is likely to be extended beyond before the end of FY 15-16.
- Pursuant to the new office being built at Santacruz, RInfra-Corporate will pay rent to RInfra-D for utilizing the office space at Santacruz earmarked for RInfra-D. The rent receivable from RInfra Corporate has been considered as Income from Other Business.

RInfra-D has considered income from other business net of tax and thereafter determined two third of the same for deducting from ARR.

## **2.16 Efficiency Gain/Loss for FY 14-15**

### **2.16.1 Distribution loss**

The distribution loss approved by the Hon'ble Commission in RInfra-D's MTR Order (Case No. 4 of 2015) for FY 14-15 was 9.41%. However, the actual distribution loss for RInfra-D system for FY 14-15 is 9.53%. The efficiency loss calculated as per the Hon'ble Commission's approach in the past Tariff Orders amounts to Rs. 9.76 Crore out of which Rs. 3.25 Crore would be passed on to consumers and balance Rs. 6.51 Crore would be absorbed by RInfra-D.

### **2.16.2 O&M expenses**

Since the deviation in employee expenses is only a result of Agreements with Unionized Employees, the same should be held as Uncontrollable. Accordingly, RInfra-D submits that the

actual employee expense may kindly be allowed and no efficiency loss may kindly be considered by the Hon'ble Commission on the same.

There has been a reduction in A&G expenses in FY 14-15 compared to the target expenses and the same is considered as Efficiency Gains and shared with the consumers in accordance with the MYT Regulations, 2011. The amount shared is Rs. 0.34 Crore.

There has been a reduction in R&M expenses in FY 14-15 compared to the target expenses. The said reduction is largely a result of deferment of certain expenses which were planned in FY 14-15 but could not be executed for various reasons and the same are being executed in FY 15-16. Thus, the reduced R&M expenses are actually an abnormality, not representing business as usual. However, the said reduction is considered as Efficiency Gains and shared with the consumers in accordance with the MYT Regulations, 2011. The amount shared is Rs. 6.16 Crore.

## **2.17 Additional Return for Over Achievement in Wires Availability and Supply Availability for FY 14-15**

The actual Wires Availability achieved by RInfra-D for FY 14-15, as per Regulation 84 of the MYT Regulations, 2011 is 99.99%. The Hon'ble Commission, in RInfra-D's MYT Order dated 22<sup>nd</sup> August 2013 (Case No. 9 of 2013) had stipulated Wires Availability target of 99.98%. The computation of additional return in Wires Business by considering the additional RoE of 0.001% is Rs. 0.02 Crore.

The actual Base Load Supply Availability achieved by RInfra-D for FY 14-15, as per Regulation 97 of the MYT Regulations, 2011 is 104%. The actual Peak Load Supply Availability achieved by RInfra-D for FY 14-15, as per Regulation 97 of the MYT Regulations, 2011 is 100%. Therefore, the actual Supply Availability of RInfra-D considering 75% of Base Load Supply Availability and 25% of Peak Load Supply Availability works out to 103%. In RInfra-D's MYT Order dated 22<sup>nd</sup> August 2013 (Case No. 9 of 2013), the Supply Availability for RInfra-D was stipulated as 100%. The computation of additional return in Supply Business by considering the additional RoE of 0.4% is Rs. 0.54 Crore.

## 2.18 Aggregate Revenue Requirement for FY 14-15

The following table gives the summary of the ARR for the Wires Business of RInfra-D for FY 14-15:

**Table 12 : Wires Business ARR for FY 14-15**

<b>Particulars / Rs. Crore</b>	<b>Actual</b>	<b>MTR Order</b>	<b>Deviation</b>	<b>Controllable</b>	<b>Uncontrollable</b>	<b>Net Entitlement</b>
Operation & Maintenance Expenses	668.27	658.07	10.19	(16.70)	26.89	679.40
<i>Employee Expense</i>	<i>375.52</i>	<i>348.63</i>	<i>26.89</i>		<i>26.89</i>	<i>375.52</i>
<i>A&amp;G Expense</i>	<i>106.36</i>	<i>106.09</i>	<i>0.27</i>	<i>0.27</i>		<i>106.18</i>
<i>R&amp;M Expense</i>	<i>186.39</i>	<i>203.36</i>	<i>(16.97)</i>	<i>(16.97)</i>		<i>197.70</i>
Depreciation	173.61	178.30	(4.69)		(4.69)	173.61
Interest on Long-term Loan Capital	137.29	134.61	2.68		2.68	137.29
Interest on Working Capital	44.44	45.71	(1.27)		(1.27)	44.44
Provisioning for Bad & Doubtful Debts	2.44	2.90	(0.46)		(0.46)	2.44
Contribution to contingency reserves	10.22	10.23	(0.00)		(0.00)	10.22
Income Tax	84.39	-	84.39		84.39	84.39
<b>Total Revenue Expenditure</b>	<b>1,120.67</b>	<b>1,029.81</b>	<b>90.84</b>	<b>(16.70)</b>	<b>107.55</b>	<b>1,131.80</b>
Return on Equity Capital	247.47	245.56	1.91		1.91	247.47
<b>Aggregate Revenue Requirement</b>	<b>1,368.13</b>	<b>1,275.37</b>	<b>92.75</b>	<b>(16.70)</b>	<b>109.45</b>	<b>1,379.27</b>
Less: Non Tariff Income	38.00	40.11	(2.11)		(2.11)	38.00
Less: Income from Other Business	2.18	3.48	(1.30)		(1.30)	2.18
Additional Returns due to Wires Availability	0.02	-	0.02		0.02	0.02
<b>Net Aggregate Revenue Requirement</b>	<b>1,327.96</b>	<b>1,231.78</b>	<b>96.16</b>	<b>(16.70)</b>	<b>112.87</b>	<b>1,339.09</b>

The following table gives the summary of the ARR for the Supply Business of RInfra-D for FY 14-15:

**Table 13 : Supply Business ARR for FY 14-15**

<b>Particulars / Rs. Crore</b>	<b>Actual</b>	<b>MTR Order</b>	<b>Deviation</b>	<b>Controllable</b>	<b>Uncontrollable</b>	<b>Net Entitlement</b>
Power Purchase Expenses	4,163.37	4,123.41	39.96		39.96	4,163.37
Operation & Maintenance Expenses	342.21	325.76	16.45	(2.78)	19.22	344.06
<i>Employee Expense</i>	<i>259.20</i>	<i>239.98</i>	<i>19.22</i>		<i>19.22</i>	<i>259.20</i>
<i>A&amp;G Expense</i>	<i>70.28</i>	<i>71.57</i>	<i>(1.29)</i>	<i>(1.29)</i>		<i>71.14</i>
<i>R&amp;M Expense</i>	<i>12.72</i>	<i>14.21</i>	<i>(1.49)</i>	<i>(1.49)</i>		<i>13.71</i>
Depreciation	19.39	19.27	0.12		0.12	19.39
Interest on Long-term Loan Capital	12.49	13.26	(0.77)		(0.77)	12.49
Interest on Working Capital	43.43	38.23	5.20		5.20	43.43
Interest on Consumer Security Deposits	27.53	28.92	(1.39)		(1.39)	27.53
Provisioning for Bad & Doubtful Debts	10.86	9.56	1.30		1.30	10.86
Contribution to contingency reserves	1.24	1.23	0.00		0.00	1.24
Intra State Transmission Charges	431.07	431.07	-		-	431.07
MSLDC Charges	2.04	2.04	-		-	2.04
Income Tax	219.11	-	219.11		219.11	219.11
<b>Total Revenue Expenditure</b>	<b>5,272.73</b>	<b>4,992.75</b>	<b>279.97</b>	<b>(2.78)</b>	<b>282.75</b>	<b>5,274.58</b>
Return on Equity Capital	27.11	27.64	(0.53)		(0.53)	27.11
<b>Aggregate Revenue Requirement</b>	<b>5,299.84</b>	<b>5,020.38</b>	<b>279.44</b>	<b>(2.78)</b>	<b>282.22</b>	<b>5,301.69</b>
Less: Non Tariff Income	238.75	169.72	69.03		69.03	238.75
Efficiency Gain/(Loss)	(6.51)	-	(6.51)		(6.51)	(6.51)

<b>Particulars / Rs. Crore</b>	<b>Actual</b>	<b>MTR Order</b>	<b>Deviation</b>	<b>Controllable</b>	<b>Uncontrollable</b>	<b>Net Entitlement</b>
Additional Returns due to Supply Availability	0.54	-	0.54		0.54	0.54
<b>Net Aggregate Revenue Requirement</b>	<b>5,055.13</b>	<b>4,850.66</b>	<b>204.45</b>	<b>(2.78)</b>	<b>207.23</b>	<b>5,056.98</b>

The following table gives the summary of the ARR for the Wires and Supply Business of RInfra-D for FY 14-15:

**Table 14 : Wires and Supply Business ARR for FY 14-15**

<b>Particulars / Rs. Crore</b>	<b>Actual</b>	<b>MTR Order</b>	<b>Deviation</b>	<b>Controllable</b>	<b>Uncontrollable</b>	<b>Net Entitlement</b>
Power Purchase Expenses	4,163.37	4,123.41	39.96		39.96	4,163.37
Operation & Maintenance Expenses	1,010.47	983.83	26.63	(19.48)	46.11	1,023.46
<i>Employee Expense</i>	<i>634.72</i>	<i>588.61</i>	<i>46.11</i>		<i>46.11</i>	<i>634.72</i>
<i>A&amp;G Expense</i>	<i>176.65</i>	<i>177.66</i>	<i>(1.01)</i>	<i>(1.01)</i>		<i>177.32</i>
<i>R&amp;M Expense</i>	<i>199.10</i>	<i>217.57</i>	<i>(18.47)</i>	<i>(18.47)</i>		<i>211.41</i>
Depreciation	193.00	197.57	(4.57)		(4.57)	193.00
Interest on Long-term Loan Capital	149.78	147.87	1.91		1.91	149.78
Interest on Working Capital	87.88	83.94	3.94		3.94	87.88
Interest on Consumer Security Deposits	27.53	28.92	(1.39)		(1.39)	27.53
Provisioning for Bad & Doubtful Debts	13.30	12.46	0.84		0.84	13.30
Contribution to contingency reserves	11.46	11.46	0.00		0.00	11.46
Intra State Transmission Charges	431.07	431.07	-		-	431.07
MSLDC Charges	2.04	2.04	-		-	2.04
Income Tax	303.50	-	303.50		303.50	303.50
<b>Total Revenue Expenditure</b>	<b>6,393.39</b>	<b>6,022.56</b>	<b>370.82</b>	<b>(19.48)</b>	<b>390.30</b>	<b>6,406.38</b>
Return on Equity Capital	274.58	273.20	1.38		1.38	274.58



<b>Particulars / Rs. Crore</b>	<b>Actual</b>	<b>MTR Order</b>	<b>Deviation</b>	<b>Controllable</b>	<b>Uncontrollable</b>	<b>Net Entitlement</b>
<b>Aggregate Revenue Requirement</b>	<b>6,667.97</b>	<b>6,295.75</b>	<b>372.19</b>	<b>(19.48)</b>	<b>391.67</b>	<b>6,680.96</b>
Less: Non Tariff Income	276.75	209.83	66.92		66.92	276.75
Less: Income from Other Business	2.18	3.48	(1.30)		(1.30)	2.18
Efficiency Gain/(Loss)	(6.51)	-	(6.51)		(6.51)	(6.51)
Additional Returns due to Wires & Supply Availability	0.56	-	0.56		0.56	0.56
<b>Net Aggregate Revenue Requirement</b>	<b>6,383.09</b>	<b>6,082.44</b>	<b>300.62</b>	<b>(19.48)</b>	<b>320.10</b>	<b>6,396.07</b>

## **2.19 Revenue for FY 14-15**

### **2.19.1 Revenue from Tariff**

In FY 14-15, RInfra-D has charged tariffs as approved by the Hon'ble Commission in RInfra-D's MYT Order in Case No. 9 of 2013. The revenue (excluding RA recovery) earned from sale of energy and FAC charged to the consumers in FY 14-15 is Rs. 5,826.48 Crore. The Hon'ble Commission had approved Rs. 5,827.65 Crore as revenue from sales for FY 14-15 in RInfra-D's Mid Term Review Order (Case No. 4 of 2015) excluding RA recovery from RInfra-D's own consumers.

### **2.19.2 Revenue from Wheeling Charges from Changeover & OA Consumers**

The revenue earned from wheeling charges in FY 14-15, paid by changeover consumers and open access consumers is Rs. 269.74 Crore. The Hon'ble Commission, in RInfra-D's MTR Order (Case 4 of 2015), had also approved revenue from wheeling charges of Rs. 269.74 Crore.

### **2.19.3 Revenue from Cross Subsidy Surcharge (CSS) and Revenue from Transmission Charges from OA Consumers**

The total revenue from CSS received from changeover and OA consumers in FY 14-15 and the revenue from transmission charges from OA consumers in FY 14-15 is Rs. 227.01 Crore, as

against Rs. 222.79 Crore approved by the Hon’ble Commission for FY 14-15 in RInfra-D’s MTR Order (Case No. 4 of 2015).

### **2.19.4 Regulatory Asset Recovery**

RInfra-D has charged the category wise RAC, approved in RInfra-D’s MYT Order dated 22<sup>nd</sup> August 2013 (Case No. 9 of 2013) to its own consumers in FY 14-15. RAC from changeover consumers has been accounted for by RInfra-D, as remitted by TPC-D. The Regulatory Asset recovered from own consumers in FY 14-15 is Rs. 714.86 Crore, while the Regulatory Asset recovered from changeover consumers in FY 14-15 is Rs. 170.08 Crore.

The Hon’ble Commission, in RInfra-D’s MYT Order (Case No. 9 of 2013), had directed RInfra-D to separately account for RA recovery; hence the revenue received though RAC from own consumers is not included in the revenue from tariff shown above. The revenue received through RAC from own and changeover consumers vis a vis the RA recovery approved by the Hon’ble Commission in RInfra-D’s MYT Order (Case No. 9 of 2013) for FY 14-15 is presented below.

**Table 15 : RA Recovery in FY 14-15**

Particulars	Rs. Crore
RA Recovery approved by Hon'ble Commission in RInfra-D's MYT Order (Case No. 9 of 2013)	924.82
Actual RA Recovery	884.94
<b>Under Recovery</b>	<b>39.88</b>

### **2.20 Revenue Gap for FY 14-15**

The summary of revenue gap for Wires Business for FY 14-15 is shown in table below:

**Table 16 : Wires Business Revenue Gap for FY 14-15**

Particulars / Rs. Crore	Actual	MTR Order	Difference
<b>Wires ARR</b>	<b>1,339.09</b>	<b>1,231.78</b>	<b>107.31</b>
Revenue from Wheeling Charges from Changeover Consumers	269.74	269.74	-
<b>Net Wires ARR</b>	<b>1,069.36</b>	<b>962.05</b>	<b>107.31</b>

Particulars / Rs. Crore	Actual	MTR Order	Difference
Revenue from Wheeling Charges from Own Consumers	888.53	888.53	-
<b>Revenue Gap of Wires Business</b>	<b>180.82</b>	<b>73.51</b>	<b>107.31</b>

The summary of revenue gap for Supply Business for FY 14-15 is shown in table below:

**Table 17 : Supply Business Revenue Gap for FY 14-15**

Particulars / Rs. Crore	Actual	MTR Order	Difference
<b>Supply ARR</b>	<b>5,056.98</b>	<b>4,850.66</b>	<b>206.32</b>
Revenue from CSS and Revenue from Transmission charges from OA consumers	227.01	222.79	4.22
<b>Net Supply ARR</b>	<b>4,829.97</b>	<b>4,627.87</b>	<b>202.10</b>
Revenue from Sales	4,937.95	4,939.12	(1.17)
<b>Revenue Gap of Supply Business</b>	<b>(107.98)</b>	<b>(311.25)</b>	<b>203.27</b>

The summary of revenue gap of both Wires Business and Supply Business for FY 14-15 is shown in table below:

**Table 18 : Wires and Supply Business Revenue Gap for FY 14-15**

Particulars / Rs. Crore	Actual	MTR Order	Difference
<b>Total ARR</b>	<b>6,396.07</b>	<b>6,082.44</b>	<b>313.63</b>
Revenue from Wheeling Charges / CSS from Changeover and OA Consumers / Transmission charges from OA consumers	496.75	492.53	4.22
<b>Net ARR</b>	<b>5,899.33</b>	<b>5,589.91</b>	<b>309.42</b>
Revenue from Sales	5,826.48	5,827.65	(1.17)
<b>Revenue Gap</b>	<b>72.84</b>	<b>(237.74)</b>	<b>310.59</b>

## 2.21 Aggregate Revenue Requirement for FY 15-16

The following table gives the summary of the ARR for the Wires Business of RInfra-D for FY 15-16:

**Table 19 : Wires Business ARR for FY 15-16**

Particulars / Rs. Crore	FY 15-16		
	Estimates	MTR Order	Difference

Particulars / Rs. Crore	FY 15-16		
	Estimates	MTR Order	Difference
Operation & Maintenance Expenses	724.86	695.72	29.14
Depreciation	197.71	191.82	5.89
Interest on Long-term Loan Capital	139.20	137.85	1.35
Interest on Working Capital	56.89	50.54	6.35
Provisioning for Bad & Doubtful Debts	4.24	2.90	1.34
Contribution to contingency reserves	11.11	10.92	0.19
Income Tax	100.03	29.39	70.64
<b>Total Revenue Expenditure</b>	<b>1,234.04</b>	<b>1,119.12</b>	<b>114.92</b>
Return on Equity Capital	262.59	259.42	3.17
<b>Aggregate Revenue Requirement</b>	<b>1,496.63</b>	<b>1,378.53</b>	<b>118.09</b>
Less: Non Tariff Income	25.29	44.21	(18.92)
Less: Income from Other Business	2.35	3.78	(1.43)
<b>Net Aggregate Revenue Requirement</b>	<b>1,468.99</b>	<b>1,330.54</b>	<b>138.45</b>

The following table gives the summary of the ARR for the Supply Business of RInfra-D for FY 15-16:

**Table 20 : Supply Business ARR for FY 15-16**

Particulars / Rs. Crore	FY 15-16		
	Estimates	MTR Order	Difference
Power Purchase Expenses	4,450.89	3,866.70	584.19
Operation & Maintenance Expenses	363.58	344.39	19.19
Depreciation	22.71	20.62	2.09
Interest on Long-term Loan Capital	12.04	13.81	(1.77)
Interest on Working Capital	28.22	25.95	2.26
Interest on Consumer Security Deposit	28.19	33.84	(5.65)
Provisioning for Bad & Doubtful Debts	12.71	9.56	3.15
Contribution to contingency reserves	1.26	1.32	(0.07)
Intra State Transmission Charges	350.36	319.32	31.04
SLDC Charges	1.69	2.04	(0.35)
Income Tax	203.48	88.14	115.34
<b>Total Revenue Expenditure</b>	<b>5,475.12</b>	<b>4,725.70</b>	<b>749.42</b>
Return on Equity Capital	28.23	29.51	(1.28)
<b>Aggregate Revenue Requirement</b>	<b>5,503.35</b>	<b>4,755.21</b>	<b>748.14</b>

Particulars / Rs. Crore	FY 15-16		
	Estimates	MTR Order	Difference
Less: Non Tariff Income	219.98	186.73	33.25
<b>Net Aggregate Revenue Requirement</b>	<b>5,283.37</b>	<b>4,568.48</b>	<b>714.89</b>

The following table gives the summary of the ARR for the Wires and Supply Business of RInfra-D for FY 15-16:

**Table 21 : Wires and Supply Business ARR for FY 15-16**

Particulars / Rs. Crore	FY 15-16		
	Estimates	MTR Order	Difference
Power Purchase Expenses	4,450.89	3,866.70	584.19
Operation & Maintenance Expenses	1,088.45	1,040.11	48.34
Depreciation	220.42	212.44	7.98
Interest on Long-term Loan Capital	151.24	151.66	(0.42)
Interest on Working Capital	85.10	76.49	8.62
Interest on Consumer Security Deposit	28.19	33.84	(5.65)
Provisioning for Bad & Doubtful Debts	16.94	12.46	4.48
Contribution to contingency reserves	12.37	12.24	0.13
Intra State Transmission Charges	350.36	319.32	31.04
SLDC Charges	1.69	2.04	(0.35)
Income Tax	303.50	117.53	185.97
<b>Total Revenue Expenditure</b>	<b>6,709.16</b>	<b>5,844.82</b>	<b>864.34</b>
Return on Equity Capital	290.82	288.93	1.89
<b>Aggregate Revenue Requirement</b>	<b>6,999.98</b>	<b>6,133.74</b>	<b>866.24</b>
Less: Non Tariff Income	245.27	230.94	14.33
Less: Income from Other Business	2.35	3.78	(1.43)
<b>Net Aggregate Revenue Requirement</b>	<b>6,752.36</b>	<b>5,899.02</b>	<b>853.34</b>

### 2.21.1 Past Revenue Gap allowed in FY 15-16 in RInfra-D's MTR Order

The past revenue gap of RInfra-D and the past gap of TPC-G allowed for recovery in FY 15-16 in RInfra-D's MTR Order dated 26<sup>th</sup> June 2015 (Case No. 4 of 2015) is as under:

**Table 22 : Past Gap Allowed in MTR Order**

Particulars / Rs. Crore	Wires Business	Supply Business	Total
-------------------------	----------------	-----------------	-------

<b>Particulars / Rs. Crore</b>	<b>Wires Business</b>	<b>Supply Business</b>	<b>Total</b>
Stand alone Revenue Gap/(Surplus) of FY 12-13	-	475.43	475.43
Stand alone Revenue Gap/(Surplus) of FY 13-14	226.15	(457.22)	(231.07)
Carrying Cost on Standalone Revenue Gap/ (Surplus) for FY 12-13 & FY 13-14	66.52	(59.17)	7.35
Stand alone Revenue Gap/(Surplus) of FY 14-15	73.51	(311.25)	(237.74)
Impact of ATE Judgments	-	134.53	134.53
Carrying Cost on Impact of ATE Judgments	-	4.46	4.46
TPC-G Gap for FY 12-13 to FY 14-15 including carrying cost & impact of ATE Judgment	-	93.43	93.43
<b>Total</b>	<b>366.18</b>	<b>(119.79)</b>	<b>246.39</b>

The above amounts are required to be added to the revised ARR for FY 15-16 while comparing them with the estimated revenue for FY 15-16 for determination of revenue gap or surplus.

## **2.22 Revenue for FY 15-16**

### **2.22.1 Revenue from Tariff**

In H1 of FY 15-16, RInfra-D has charged the tariff approved by the Hon'ble Commission in RInfra-D's MYT Order dated 22nd August 2013 (Case No. 9 of 2013) for the months of April 2015 and May 2015. Post the issuance of RInfra-D's MTR Order dated 26th June 2015 (Case No. 4 of 2015), RInfra-D has charged the tariffs approved in the MTR Order for energy consumption from 1st June 2015 onwards. The actual revenue (excluding the revenue from RAC) from energy sales along with the FAC charged in accordance with the MYT Regulations, 2011 in H1 of FY 15-16 is Rs. 3,159.56 Crore. Further the revenue expected from energy sales in H2 of FY 15-16 is Rs. 2,981.40 Crore after considering H2 estimated sales and approved tariff (plus likely FAC). RInfra-D submits that the FAC per unit charged in September 2015, as per MYT Regulations, 2011, was 52.24 paise per unit. Therefore, for the last six months of FY 15-

16, RInfra-D has estimated the revenue from FAC by considering FAC per unit of 52.24 paisa per unit only. The total revenue estimated for FY 15-16 is Rs. 6,140.96 Crore.

### **2.22.2 Revenue from Wheeling Charges from Changeover & OA Consumers**

The actual revenue from wheeling charges from changeover and OA consumers in H1 of 15-16 is Rs. 182.94 Crore and estimated for H2 is Rs. 173.48 Crore based on estimated changeover sales of H2 and approved wheeling charges.

### **2.22.3 Revenue from Cross Subsidy Surcharge (CSS) and Revenue from Transmission Charges from OA consumers**

The actual revenue from CSS from changeover and OA consumers in H1 of 15-16 and the actual revenue from transmission charges from OA consumers in H1 of 15-16 is Rs. 30.76 Crore and the same estimated for H2 is Rs. 14.81 Crore. There is sharp reduction in CSS revenue between H1 and H2 CSS charges for April and May 2015 were based on previous approval and were much higher than what was approved from June 2015 onwards in the MTR Order.

### **2.22.4 Regulatory Asset Recovery**

The actual RA recovery in H1 of FY 15-16 from own consumers is Rs. 368.81 Crore, while the actual RA recovery in H1 of FY 15-16 from changeover and OA consumers is Rs. 86.73 Crore. The under recovery of Regulatory Asset considering the actual RA recovery from own and changeover consumers in H1 of FY 15-16 and the estimated RA recovery from own and changeover consumers in H2 of FY 15-16, based on the approved RA Charges for FY 15-16 (in RInfra-D's MYT Order dated 22<sup>nd</sup> August 2013) is shown in table below:

**Table 23 : RA Recovery in FY 15-16**

<b>Particulars</b>	<b>Rs. Crore</b>
RA Recovery approved by the Commission	924.82
Estimated RA recovery in FY 15-16	858.81
Under Recovery	66.01

## 2.23 Revenue Gap for FY 15-16

The summary of estimated revenue gap for Wires Business for FY 15-16 is shown in table below:

**Table 24 : Wires Business Revenue Gap for FY 15-16**

<b>Particulars/ Rs. Crore</b>	<b>Estimates</b>	<b>MTR Order</b>
Wires ARR for FY 15-16	1,468.99	1,330.54
Past Gap of Wires Business	366.18	366.18
Total Recoverable amount in Wires Business	1,835.17	1,696.72
Less : Recovery from Wheeling from changeover & OA consumers	356.42	426.51
Net Wires ARR for FY 15-16	1,478.75	1,270.21
Revenue from Wheeling Charges from own consumers	1,279.73	1,270.21
<b>Revenue Gap / (Surplus)</b>	<b>199.02</b>	<b>-</b>

The summary of estimated revenue gap for Supply Business for FY 15-16 is shown in table below:

**Table 25 : Supply Business Revenue Gap for FY 15-16**

<b>Particulars / Rs. Crore</b>	<b>Estimates</b>	<b>MTR Order</b>
Supply ARR for FY 15-16	5,283.37	4,568.48
Past Gap of Supply Business	(119.79)	(119.79)
Total Recoverable amount in Supply Business	5,163.58	4,448.69
Less : Recovery from CSS	45.57	24.89
Net Supply ARR for FY 15-16	5,118.01	4,423.80
Revenue from retail tariff	4,861.23	4,423.80
<b>Revenue Gap / (Surplus)</b>	<b>256.77</b>	<b>-</b>

The summary of estimated revenue gap of both Wires Business and Supply Business for FY 15-16 is shown in table below:

**Table 26 : Wires and Supply Business Revenue Gap for FY 15-16**

<b>Particulars/ Rs. Crore</b>	<b>Estimates</b>	<b>MTR Order</b>
Wires & Supply ARR for FY 15-16	6,752.36	5,899.02
Past Gap of Wires & Supply Business	246.39	246.39
Total Recoverable amount in Wires & Supply Business	6,998.75	6,145.41
Less : Recovery from Wheeling from Changeover & OA consumers	356.42	426.51



<b>Particulars/ Rs. Crore</b>	<b>Estimates</b>	<b>MTR Order</b>
Less : Recovery from CSS	45.57	24.89
Net Wires & Supply ARR for FY 15-16	6,596.75	5,694.01
Revenue from sales	6,140.96	5,694.01
<b>Revenue Gap / (Surplus)</b>	<b>455.79</b>	<b>-</b>

## 2.24 Cumulative Revenue Gap

All the past revenue gap, including the impact of the judgment of the Hon’ble ATE, which could not be addressed in the previous Mid-Term Review Order and the true-up and provisional true-up revenue gap of FY 14-15 and FY 15-16 respectively, is accumulated, along with carrying cost. Without prejudice to our submissions in the Appeal No. 237 of 2015, filed against the Hon’ble Commission’s MTR Order on the issue of carrying cost, the carrying cost worked out in this petition up to close of FY 15-16 as per the methodology prescribed by the Hon’ble Commission in the MTR Order i.e. on simple interest basis, as against compound interest basis, as contended in the said Appeal by RInfra-D.

As all years up to FY 15-16 are covered under the MYT Regulations, 2011, the carrying cost interest rate in each intervening year up to FY 14-15, is considered as the weighted average State Bank Advance Rate (SBAR), in accordance with the interest rate allowed by the Hon’ble Commission in its previous Orders issued under the said Regulations. For FY 15-16, the carrying cost interest rate is considered same as the interest rate considered for working capital (which is the prevailing SBAR).

The cumulative revenue gap / (surplus) of Wires Business up to close of FY 15-16 is as shown below:

**Table 27 : Wires Business Cumulative Revenue Gap for FY 15-16**

<b>Particulars</b>	<b>Rs. Crore</b>
Incremental Revenue Gap/(Surplus) FY 14-15	107.31
Carrying Cost on Gap/(Surplus) of FY 14-15	40.01
Revenue Gap/(Surplus) of FY 15-16	199.02
Impact of Santacruz property	433.32
<b>Total</b>	<b>779.65</b>

The cumulative revenue gap / (surplus) of Supply Business up to close of FY 15-16 is as shown below:

**Table 28 : Supply Business Cumulative Revenue Gap for FY 15-16**

Particulars	Rs. Crore
Incremental Revenue Gap/(Surplus) FY 14-15	203.27
Carrying Cost on Gap/(Surplus) of FY 14-15	(23.89)
Revenue Gap/(Surplus) of FY 15-16	256.77
Impact of Santacruz property	45.65
Impact of Case 69 of 2013	64.22
<b>Total</b>	<b>546.01</b>

The cumulative revenue gap / (surplus) of Wires and Supply Business up to close of FY 15-16 is as shown below:

**Table 29 : Wires and Supply Business Cumulative Revenue Gap for FY 15-16**

Particulars	Rs. Crore
Incremental Revenue Gap/(Surplus) FY 14-15	310.58
Carrying Cost on Gap/(Surplus) of FY 14-15	16.12
Revenue Gap/(Surplus) of FY 15-16	455.79
Impact of Santacruz property	478.96
Impact of Case 69 of 2013	64.22
<b>Total</b>	<b>1,325.67</b>

The recovery of the same is proposed in the ensuing section on Tariff Proposal.

## 2.25 Aggregate Revenue Requirement for Control Period

The summary of ARR of Wires Business for each year of the Control Period is shown in table below:

**Table 30 : Wires Business ARR from FY 16-17 to FY 19-20**

Particulars / Rs. Crore	FY 16-17	FY 17-18	FY 18-19	FY 19-20
Operation & Maintenance Expenses	745.22	800.69	859.64	922.95
Depreciation	202.75	224.51	240.28	262.21
Interest on Long-term Loan Capital	147.67	158.23	167.09	177.06
Interest on Working Capital	32.38	37.33	41.59	45.04
Provisioning for Bad & Doubtful Debts	3.30	3.57	3.81	3.90
Contribution to contingency reserves	11.96	13.14	14.36	15.60
Income Tax	100.03	100.03	100.03	100.03
<b>Total Revenue Expenditure</b>	<b>1,243.31</b>	<b>1,337.50</b>	<b>1,426.79</b>	<b>1,526.78</b>

<b>Particulars / Rs. Crore</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Return on Equity Capital	280.27	301.51	323.32	345.50
<b>Aggregate Revenue Requirement</b>	<b>1,523.58</b>	<b>1,639.01</b>	<b>1,750.11</b>	<b>1,872.28</b>
Less: Non Tariff Income	21.77	23.13	24.59	26.18
Less: Income from Other Business	11.62	12.10	12.62	14.17
<b>Net Aggregate Revenue Requirement</b>	<b>1,490.19</b>	<b>1,603.79</b>	<b>1,712.90</b>	<b>1,831.94</b>

Based on the above, the summary of ARR of Supply Business for each year of the Control Period is shown in table below:

**Table 31 : Supply Business ARR from FY 16-17 to FY 19-20**

<b>Particulars / Rs. Crore</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Power Purchase Expenses	4,640.07	4,714.06	4,836.18	5,005.77
Operation & Maintenance Expenses	401.55	434.08	465.97	501.23
Depreciation	26.84	31.80	34.26	36.83
Interest on Long-term Loan Capital	15.46	19.47	21.84	25.30
Interest on Working Capital	8.17	9.34	10.32	12.31
Interest on Consumer Security Deposit	41.61	42.86	44.14	45.47
Provisioning for Bad & Doubtful Debts	11.82	11.55	11.31	11.22
Contribution to contingency reserves	1.34	1.64	1.83	2.05
Intra State Transmission Charges	319.32	319.32	319.32	319.32
SLDC Charges	1.34	1.34	1.34	1.34
Income Tax	203.48	203.48	203.48	203.48
<b>Total Revenue Expenditure</b>	<b>5,671.00</b>	<b>5,788.94</b>	<b>5,950.00</b>	<b>6,164.31</b>
Return on Equity Capital	32.09	37.20	41.48	46.49
<b>Aggregate Revenue Requirement</b>	<b>5,703.10</b>	<b>5,826.13</b>	<b>5,991.48</b>	<b>6,210.80</b>
Less: Non Tariff Income	118.29	118.86	119.48	120.13
<b>Net Aggregate Revenue Requirement</b>	<b>5,584.81</b>	<b>5,707.28</b>	<b>5,872.01</b>	<b>6,090.67</b>

The summary of ARR of Wires and Supply Business for each year of the Control Period is shown in table below:

**Table 32 : Wires and Supply Business ARR from FY 16-17 to FY 19-20**

<b>Particulars / Rs. Crore</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Power Purchase Expenses	4,640.07	4,714.06	4,836.18	5,005.77
Operation & Maintenance Expenses	1,146.77	1,234.77	1,325.61	1,424.18
Depreciation	229.59	256.31	274.55	299.04
Interest on Long-term Loan Capital	163.14	177.71	188.93	202.36
Interest on Working Capital	40.55	46.67	51.91	57.35

<b>Particulars / Rs. Crore</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Interest on Consumer Security Deposit	41.61	42.86	44.14	45.47
Provisioning for Bad & Doubtful Debts	15.12	15.12	15.12	15.12
Contribution to contingency reserves	13.31	14.78	16.19	17.65
Intra State Transmission Charges	319.32	319.32	319.32	319.32
SLDC Charges	1.34	1.34	1.34	1.34
Income Tax	303.50	303.50	303.50	303.50
<b>Total Revenue Expenditure</b>	<b>6,914.31</b>	<b>7,126.44</b>	<b>7,376.79</b>	<b>7,691.10</b>
Return on Equity Capital	312.37	338.70	364.80	391.99
<b>Aggregate Revenue Requirement</b>	<b>7,226.68</b>	<b>7,465.15</b>	<b>7,741.59</b>	<b>8,083.09</b>
Less: Non Tariff Income	140.06	141.98	144.07	146.31
Less: Income from Other Business	11.62	12.10	12.62	14.17
<b>Net Aggregate Revenue Requirement</b>	<b>7,075.00</b>	<b>7,311.07</b>	<b>7,584.90</b>	<b>7,922.61</b>

The recovery of the same is proposed in the ensuing section on Tariff Proposal.

### **3 RECOVERY OF REGULATORY ASSET APPROVED IN MYT ORDER IN CASE NO. 9 OF 2013**

The Hon’ble Commission, in RInfra-D’s MYT Order dated 22<sup>nd</sup> August 2013 in Case No. 9 of 2013, had approved regulatory asset recovery of Rs. 924.82 Crore from FY 13-14 to FY 18-19, for cumulative revenue gaps approved till FY 11-12. As against the above plan, the actual RA recovery in FY 13-14 and FY 14-15 along with the estimated RA recovery in FY 15-16 is shown in table below:

**Table 33 : RA under recovery from FY 16-17 to FY 19-20**

<b>Particulars / Rs. Crore</b>	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>
RA Recovery Allowed	924.82	924.82	924.82
Actual RA recovery	497.92	884.94	858.81
Under recovery	426.90	39.88	66.01

The higher under recovery in FY 13-14 is because recovery of RA through the approved RA Charges began from September 2013 onwards after the issuance of MYT Order on 22<sup>nd</sup> August 2013, instead of April 2013. The under recovery in RA in FY 14-15 and FY 15-16 is because of actual sales being different from what was estimated in the MYT Order.

The objective here is therefore to determine the principal RA amount remaining to be recovered at the close of FY 15-16, out of the opening balance of Rs. 3866.83 Crore approved in the MYT Order, and for which the plan for recovery was approved then.

As the RA amount shown as recovered in the table contain both principal as well as the interest, in order to determine the principal RA amount remaining to be recovered at the close of FY 15-16, the RA amount recovered in each year from FY 13-14 to FY 15-16 (estimated) is segregated between Principal and Interest. Thus, the carrying cost and principal recovered from the opening RA amount of Rs. 3866.83 Crore till FY 15-16 is as under:

**Table 34 : Carrying Cost and Principal recovered from FY 13-14 to FY 15-16**

<b>Particulars</b>	<b>Notation</b>	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>
Carrying Cost Rate	A	14.58%	14.75%	14.75%
Opening Balance	B	3,866.83	3,937.87	3,609.56
Recovery (Principal+Interest)	C	497.92	884.94	858.81
Carrying Cost recoverable/Recovered	$D = (2*B-C)/((2/A)-1)$	568.96	556.62	506.42
Principal Recovered	$E = \text{Max}(C-D,0)$	-	328.32	352.39
Carrying Cost not recovered	$F = \text{Max}(D-C,0)$	71.04	-	-
Closing Balance	$G = B-E+F$	3,937.87	3,609.56	3,257.17

Thus the unrecovered RA amount at the end of FY 15-16 is Rs. 3,257.17 Crore. The recovery of the same is proposed in the ensuing section on Tariff Proposal.

## 4 TARIFF PROPOSAL

### 4.1 Approach for Recovery of Past Revenue Gap

As stated earlier, the cumulative revenue gap up to the close of FY 15-16 is Rs. 1,325.67 Crore, shown in table below:

**Table 35: Cumulative Revenue Gap up to FY 15-16**

Particulars / (Rs. Crore)	Wires Business	Supply Business	Wires & Supply Business
Incremental Revenue Gap/(Surplus) FY 14-15	107.31	203.27	310.58
Carrying Cost on Gap/(Surplus) of FY 14-15	40.01	(23.89)	16.12
Revenue Gap/(Surplus) of FY 15-16	199.01	256.77	455.79
Impact of Santacruz property	433.32	45.65	478.96
Impact of Case 69 of 2013	-	64.22	64.22
<b>Total</b>	<b>779.65</b>	<b>546.01</b>	<b>1,325.67</b>

This cumulative revenue gap can be recovered either entirely in FY 16-17 or in a phased manner over a number of years. In the first case, carrying cost for half year of FY 16-17 has to be borne by the consumers, whereas in the second case carrying cost for each year, corresponding to outstanding amount will be borne by the consumers. In case the cumulative revenue gap is recovered in FY 16-17 itself, the average tariff is required to be increased by 19.16%, which will give a tariff shock to the consumers. Since there will be no past gap for recovery in FY 17-18, the average tariff for FY 17-18 will then drop by 12.91% in comparison to the average tariff for FY 16-17, followed by 0.62% and 1.30% tariff hike in FY 18-19 and FY 19-20 respectively, based on the ARR of these years as projected in this petition. The average tariff hikes/reduction required in case the entire past gap is recovered in FY 16-17 are shown in table below:

**Table 36: Tariff Hike/Reduction if entire past gap is recovered in FY 16-17**

Particulars / (Rs. Crore)	FY 16-17	FY 17-18	FY 18-19	FY 19-20
Wires and Supply ARR	7,091.50	7,306.26	7,577.38	7,913.22
Past Gaps for Wires & Supply Business	1,348.46	-	-	-
<b>Total to be recovered</b>	<b>8,439.96</b>	<b>7,306.26</b>	<b>7,577.38</b>	<b>7,913.22</b>
Revenue at revised Wheeling Charge & CSS from changeover consumers	695.53	471.13	484.82	501.43

<b>Particulars / (Rs. Crore)</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
<b>Net ARR to be recovered from own consumers</b>	<b>7,744.43</b>	<b>6,835.13</b>	<b>7,092.56</b>	<b>7,411.79</b>
RA Recovery from revised RAC	807.72	812.67	816.63	820.38
<b>ARR recovery and RA recovery from own consumers</b>	<b>8,552.15</b>	<b>7,647.80</b>	<b>7,909.19</b>	<b>8,232.17</b>
Revenue at existing tariff from own consumers	6,467.05	7,951.42	7,025.06	7,286.96
RA Recovery from existing RAC	709.77	830.04	835.55	839.63
Revenue and RA Recovery from existing tariff & RAC	7,176.82	8,781.46	7,860.61	8,126.59
<b>Short fall at existing Tariff</b>	<b>1,375.33</b>	<b>(1,133.66)</b>	<b>48.57</b>	<b>105.58</b>
<b>Tariff Hike required</b>	<b>19.16%</b>	<b>-12.91%</b>	<b>0.62%</b>	<b>1.30%</b>

The Hon’ble Commission would appreciate that in the last MYT Order, a similar situation was encountered when, at the then existing tariffs, there was wide difference in revenue gap/surplus across the period FY 13-14 to FY 15-16 leading to abrupt changes in tariff. In order to avoid such abrupt changes and consequent tariff shock to consumers, the Hon’ble Commission had normalised the resultant revenue gap / surplus so as to provide a near even tariff reduction over the then MYT Period. The relevant extract of the MYT Order of RInfra-D (Case No. 9 of 2013) is given below:

*“5.3.4.7 The Commission has further normalised adjustment of surplus in order to avoid tariff shock to the consumers and considered holding cost at interest rate of 14.5% similar to carrying cost allowed to RInfra-D for recovery of Regulatory Asset.”*

In the present case also, as shown above, there are significantly abrupt changes in tariff if entire revenue gap up to FY 15-16 is recovered in FY 16-17 itself. It is not only desirable to prevent such abrupt changes in tariff (in particular a shock of about 19% in the first year), but this would also not be in line with the Hon’ble Commission’s own approach in the past.

The Hon’ble Commission would appreciate that a multi-year process of tariff approval is to be viewed differently from a single year process, because tariffs are being decided in advance for a four year period and hence any recovery of past revenue gap / surplus of the past Control Period is to be viewed with reference to likely tariff changes over the multi-year period of the next

Control Period as a whole, rather than in any single year in such multi-year period. This proposal subsequently goes on to show that in case the cumulative revenue gap up to FY 15-16 is to be staggered over the four years of the Control Period, along with holding cost @ 10.80% (rate as per MYT Regulations, 2015), the average tariff hike in each year is even and varies between 2.35% to 5.26%, as against a single year recovery where the average tariff hike in the first year is itself about 19%.

The impact of abrupt tariff changes resulting from a first year recovery of all past gap versus the impact of smooth tariff changes with staggered recovery of past gap is shown for a given consumer below:

**Table 37: Impact of tariff hikes**

<b>Particulars / (Rs.)</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>	<b>Present Value @ 8% Rate</b>
Tariff Hike/Reduction in Scenario I		19.16%	-12.91%	0.62%	1.30%	
Annual Electricity Bill	30000	35749	31134	31326	31733	127765
Tariff Hike/Reduction in Scenario II		5.26%	2.44%	2.45%	2.35%	
Annual Electricity Bill	30000	31578	32349	33141	33918	127974

*\*Considering the annual electricity bill of the consumer to be Rs. 30,000/-, which is about the same as the average annual revenue billed per customer of RInfra-D network and supply.*

The workings above show that if a given consumer is subject to average tariff changes as per the two proposals, the Present Value of its total outgo on the electricity bill over the four year period would remain by and large same in both the scenarios. Admittedly, the above workings do depend on the consumer’s annual bill amount and the discount rate considered for the purpose of working out the Present Value (discount rate of 8% is considered as the opportunity cost for a consumer i.e. return from an alternate investment in Fixed/Term Deposits), but these variables will not have a major effect on the computations (this can be examined by changing the variables).



The above workings are independent of inflationary changes. It is submitted that if inflation is also factored in, the Real increase in tariff (net of inflation) in the second proposal of four year recovery would be negligible or NIL. In other words, this means that an increase of tariff in later years is a much better proposition from the point of view of consumers, as compared to an immediate increase, because of time value of money. This also clearly implies that the inclusion of Carrying Cost on account of phased recovery of revenue gap has absolutely no adverse effect on the consumers' electricity outgo over the Control Period, because the effect of accrual of carrying cost is largely neutralised by the discounting effect of Time Value of Money.

Based on the above, in the tariff proposal discussed in this section, RInfra-D has proposed to stagger the recovery of the cumulative revenue gap up to FY 15-16 over the Control Period, so as to produce year on year overall tariff increases as shown in the table above (i.e. from 2.35% to 5.26 %) thereby keeping impact on consumer's total outgo on electricity bill similar in Present Value terms when compared to the outgo if total cumulative revenue gap is recovered in FY 16-17 itself. The details of the proposal are discussed below:

1. There will be no recovery of past gap in FY 16-17. However, since the past gap is being deferred for recovery to future years, carrying cost on the same is allowed to be recovered in FY 16-17 to avoid cash flow problems to RInfra-D and also to prevent compounding effect of interest, in accordance with the direction of Hon'ble ATE in OP 1 of 2011 dated 11<sup>th</sup> November 2011.
2. There will be phased recovery of past gap from FY 17-18 to FY 19-20, with higher amounts to be recovered in later years so as to have a smoothed tariff hike. The carrying cost on past gap for FY 16-17, considering carrying cost rate of 10.80% (prevailing SBI Base Rate of 9.30% plus 150 basis points) is shown in table below:

**Table 38: Carrying Cost on Past Gaps for FY 16-17**

<b>Particulars / Rs. Crore</b>	<b>Wires Business</b>	<b>Supply Business</b>	<b>Wires &amp; Supply Business</b>
Past Gap of Wires Business	779.65	546.01	1,325.67
Carrying Cost Rate (%)	10.80%	10.80%	10.80%
Carrying Cost for FY 16-17	84.20	58.97	143.17

The amounts recoverable from FY 17-18 to FY 19-20 so as to recover Wires Business past gap are shown table below:

**Table 39: Recovery of Wires Business Past Gap**

<b>Particulars / RS. Crore</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Opening Balance	779.65	649.65	369.65
Principal Recovered	130.00	280.00	369.65
Carrying Cost	77.18	55.04	19.96
Closing Balance	649.65	369.65	-
Total Recovery	207.18	335.04	389.61

The amounts recoverable from FY 17-18 to FY 19-20 so as to recover Supply Business past gap are shown table below:

**Table 40: Recovery of Supply Business Past Gap**

<b>Particulars / Rs. Crore</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Opening Balance	546.01	456.01	281.01
Principal Recovered	90.00	175.00	281.01
Carrying Cost	54.11	39.80	15.17
Closing Balance	456.01	281.01	-
Total Recovery	144.11	214.80	296.18

The amounts recoverable from FY 17-18 to FY 19-20 so as to recover Wires and Supply Business past gap are shown table below:

**Table 41: Recovery of Wires and Supply Business Past Gap**

<b>Particulars/ Rs. Crore</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Opening Balance	1,325.67	1,105.67	650.67
Principal Recovered	220.00	455.00	650.67
Carrying Cost	131.29	94.84	35.14
Closing Balance	1,105.67	650.67	-
Total Recovery	351.29	549.84	685.79

With the above submissions, the different charges proposed for the Control Period are explained subsequently.

## 4.2 Wheeling Charges

RInfra-D has calculated the wheeling charges for each year of the Control Period as per the methodology followed in the past by the Hon’ble Commission. The total wires revenue requirement is distributed between HT and LT based on the ratio of assets, which is 55:45 (HT:LT) and thereafter the cost allocated to HT level is shared between HT and LT levels and wheeling charges are determined by the distributing the allocated cost over the sales volume at HT and LT level. The wheeling charges determined for each year of the Control Period is as under:

**Table 42: Wheeling Charges from FY 16-17 to FY 19-20**

Particulars	FY 16-17	FY 17-18	FY 18-19	FY 19-20
Wires ARR (Rs. Crore)	1,490.19	1,603.79	1,712.90	1,831.94
Wires Past Gap (Rs. Crore)	84.20	207.18	335.04	389.61
Wires Recovery (Rs. Crore)	1,574.39	1,810.97	2,047.94	2,221.55
GFA attributable to HT Network (%)	55%	55%	55%	55%
GFA attributable to LT Network (%)	45%	45%	45%	45%
Charge recoverable from HT consumers (Rs. Crore)	865.91	996.03	1,126.37	1,221.85
Charge recoverable from LT consumers (Rs. Crore)	708.48	814.94	921.57	999.70
	-	-	-	-
HT Sales (MU) - Own	1,026.65	1,026.62	1,028.70	1,029.00
HT Sales (MU) - Changeover	25.23	25.48	25.74	25.99
HT Sales (MU) - Open Access	72.87	73.59	74.33	75.07
Total HT Sales (MU)	1,124.75	1,125.70	1,128.77	1,130.07
	-	-	-	-
LT Sales (MU) - Own	7,202.61	7,419.65	7,645.06	7,880.49
LT Sales (MU) - Changeover	2,042.41	2,073.90	2,105.96	2,139.87
Total LT Sales (MU)	9,245.02	9,493.55	9,751.02	10,020.36
	-	-	-	-
Charge recoverable from HT consumers (Rs. Crore)	93.92	105.59	116.86	123.83
Charge recoverable from LT consumers (Rs. Crore)	1,480.47	1,705.39	1,931.08	2,097.72
	-	-	-	-
HT Wheeling Charge (Rs./kWh)	0.84	0.94	1.04	1.10

<b>Particulars</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
LT Wheeling Charge (Rs./kWh)	1.60	1.80	1.98	2.09

The summary of proposed wheeling charges for each year of the Control Period along with the prevailing wheeling charges is shown in table below:

**Table 43: Existing Wheeling Charges & Proposed Wheeling Charges**

<b>Particulars</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
	<b>Existing</b>	<b>Proposed</b>	<b>Proposed</b>	<b>Proposed</b>	<b>Proposed</b>
HT Wheeling Charge (Rs./kWh)	0.94	0.84	0.94	1.04	1.10
LT Wheeling Charge (Rs./kWh)	1.80	1.60	1.80	1.98	2.09

Based on the above proposed rates, the increase / decrease in wheeling charges year on year as proposed in this petition is as follows:

**Table 44: Year on Year Reduction/Hike in Wheeling Charges**

<b>Particulars / % Change over previous year</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
	<b>Proposed</b>	<b>Proposed</b>	<b>Proposed</b>	<b>Proposed</b>
HT Wheeling Charge (Rs./kWh)	-11%	12%	10%	6%
LT Wheeling Charge (Rs./kWh)	-11%	12%	10%	6%

As can be seen from above, RInfra-D is proposing a reduction in wheeling charges in the first year of the Control Period. The Wheeling Charges for the second year of the Control Period (FY17-18) are proposed to be almost same as existing for FY 15-16.

The income from wheeling charges from the changeover and open access consumers have been estimated by applying the above charges to the sales of changeover and open access consumers for the relevant year. The balance Wires revenue requirement is met from recovery from wheeling revenue from own consumers. The estimated revenue from wheeling charges from changeover and open access consumers is shown in table below:

**Table 45: Revenue from Wheeling Charges from Changeover & OA consumers**

<b>Particulars</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
HT Wheeling Charge (Rs./kWh)	0.84	0.94	1.04	1.10
LT Wheeling Charge (Rs./kWh)	1.60	1.80	1.98	2.09

<b>Particulars</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
HT Sales (MU) - Changeover	25.23	25.48	25.74	25.99
HT Sales (MU) - Open Access	72.87	73.59	74.33	75.07
LT Sales (MU) - Changeover	2,042.41	2,073.90	2,105.96	2,139.87
HT Revenue - Changeover (Rs. Crore)	2.11	2.39	2.66	2.85
HT Revenue - Open Access (Rs. Crore)	6.08	6.90	7.70	8.23
LT Revenue - Changeover (Rs. Crore)	327.06	372.55	417.06	447.97
Total Revenue (Rs. Crore)	335.26	381.84	427.42	459.05

The Hon’ble Commission is requested to approve the wheeling charges for each year of the Control Period.

### **4.3 Cross Subsidy Surcharge (CSS)**

The Hon’ble Commission, in RInfra-D’s MYT Order dated 22<sup>nd</sup> August 2013, had computed CSS for different consumer categories using the formula prescribed by Tariff Policy notified in 2006. However, the Hon’ble Commission has, in RInfra-D’s MTR Order dated 26<sup>th</sup> June 2015, determined CSS for FY 15-16 using the formula  $75\%*(ABR-ACoS)$ . In the said MTR Order, the Hon’ble Commission had stated that computation of CSS using the Tariff Policy formula results in very high CSS for most categories and the actual loss of cross subsidy to RInfra-D on account of consumers migrating from it through open access is the difference between category wise ABR and the ACoS.

RInfra-D submits that CSS need not be equal to cross subsidy of the consumer category, which has been upheld by the Hon’ble ATE in its Judgment in Appeal No. Nos. 294, 299, 331 and 333 of 2013. RInfra-D has filed an Appeal against the MTR Order (Appeal No. 237 of 2015), in which it has raised this issue of computing CSS using the formula  $75\%*(ABR-ACoS)$  and not by using Tariff Policy formula.

RInfra-D submits that revised Tariff Policy has been notified on 28<sup>th</sup> Jan 2016, which has prescribed changes to the formula of Cross-Subsidy Surcharge as under:

$$S= T - [C/ (1-L/100) + D+ R]$$

Where:

S is the surcharge

T is the tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation

C is the per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation

D is the aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level

L is the aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level

R is the per unit cost of carrying regulatory assets.

The new Tariff Policy also provides that the surcharge shall not exceed 20% of the tariff applicable to the category of the consumers seeking open access.

RInfra-D submits that in view of the new Tariff Policy and the various changes made to the formula therein (e.g. weighted average cost of power including renewable, total distribution losses, etc), including the upper limit of 20% of applicable category's tariff, the formula will no longer produce a high Surcharge, as was the case earlier. The CSS values produced by the new formula would therefore no longer be considered as hampering competition and this is likely to make the formula and the corresponding CSS values acceptable to all stakeholders.

RInfra-D submits that the present Cross-Subsidy Surcharge as approved by the Hon'ble Commission is unduly suppressed – a sanction for which is not found in the Act or in the Tariff Policy, both of which prescribe cross-subsidy surcharge to compensate the licensees for loss of cross-subsidy in its area of supply. The debate therefore centers around the determination of loss of cross-subsidy, which cannot be found unless the cost of supply of eligible category of consumers is found. Both the earlier as well as the new Tariff Policy provided the formula for

determining Cost of Supply for such consumers (eligible to migrate). It is RInfra-D's submission, therefore, that the methodology to determine cost of supply for such consumers is prescribed in the Policy, no other Cost of Supply should be used to work out the CSS applicable to such consumers, irrespective of what Cost of Supply is used for setting retail tariffs.

RInfra-D's submits that the objective of the Cross-Subsidy Surcharge should be to allow fair competition and not promote migration of consumers from the fold of the distribution licensees, by not providing the licensee with a level playing field. The Hon'ble Commission would appreciate that with wheeling charges being levied on all network users, the delivered cost of power by the Licensee to a consumer's doorstep is the differentiator of tariff between the Licensee and any other supplier. It should not so happen that the CSS is suppressed so much that even if the Licensee's cost of power purchase (at consumer end) is lower than the tariff offered by another supplier that even after adding CSS, the other supplier remains competitive vis-à-vis the Licensee. The intent of CSS cannot possibly be to promote inefficient and expensive alternate sources of power for the consumer.

RInfra-D further submits that the present suppressed CSS has so far not adversely affected consumer migration from RInfra-D mainly because of increase in TPC-D's energy charges in the previous MTR Order, which was largely a result of past revenue gaps included in TPC-D's retail ARR. As this is likely to be a one time issue, the retail ARR of TPC-D is expected to drop, which could lead to lower tariff, primarily in subsidizing categories, because of the consumer mix advantage that TPC-D continues to possess. This could expose RInfra-D to large scale consumer migration, worsening its already skewed consumer mix and resulting in revenue gap, which would get loaded on balance low end consumers, leading to tariff shock. It is important, therefore, that CSS is not artificially suppressed and is approved at representative levels. It is clarified that RInfra-D is not advocating increase in CSS so as to gain competitive advantage, but is only asking for CSS to be determined at representative levels, as advocated by the new Tariff Policy, for the sake of level playing field and fair competition between the licensees.

Accordingly, RInfra-D has considered the formula as per the Tariff Policy notified on 28<sup>th</sup> Jan 2016 for determining the Cross-Subsidy Surcharge, for the purposes of this petition and requests the Hon'ble Commission to adopt the said formula.

---

The different components of the formula for each year of the Control Period are explained below:

- “T” is the proposed revised Tariff of the consumer category (excluding the category wise RAC proposed subsequently in this Petition)
- “C” is the weighted average cost of power purchase for each year of the Control Period, including RPO, but excluding transmission, standby and SLDC charges
- “L” is the aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level. The estimated distribution losses (including commercial) losses applicable to HT and LT are shown in table below. Effectively the total distribution losses at system level are apportioned between HT and LT consumers considering the fact there are no commercial losses in the HT system and hence all commercial losses are considered in LT system only:

**Table 46: Distribution Loss for HT & LT**

<b>Particulars</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
HT Loss	1.71%	1.71%	1.71%	1.71%
LT Loss	10.29%	10.19%	10.09%	9.99%

The transmission loss applicable to both HT and LT are shown in table below:

**Table 47: Transmission Loss**

<b>Particulars</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Transmission Loss	3.89%	3.89%	3.89%	3.89%

- “D” is the aggregate of transmission and wheeling charge applicable to the relevant voltage level. The transmission and wheeling charges for each year of the Control Period are shown in table below:

**Table 48: Aggregate Transmission and Wheeling Charge for HT & LT**

<b>Particulars / (Rs./kWh)</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
<b>HT:</b>				
Wheeling Charge	0.84	0.94	1.04	1.10
Transmission Charge	0.39	0.38	0.37	0.36



<b>Particulars / (Rs./kWh)</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
(Transmission Charges in Rs. cr.*10 /Sales in MU)				
<b>Total</b>	1.22	1.32	1.40	1.45
<b>LT:</b>				
<b>Wheeling Charge</b>	1.60	1.80	1.98	2.09
<b>Transmission Charge (Transmission Charges in Rs. cr.*10 /Sales in MU)</b>	0.39	0.38	0.37	0.36
<b>Total</b>	1.99	2.17	2.35	2.45

- “R” is per unit carrying cost. The per unit carrying cost for each year of the Control Period as shown in table below is computed by separating the past revenue gap proposed to be recovered in this petition each year into Principal and Interest components (please note that this does not include carrying cost on RAC as RAC is a separate element and is not included in the Tariff “T” either):

**Table 49: Per Unit Carrying Cost**

<b>Particulars / (Rs./kWh)</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Per unit Carrying Cost	0.17	0.16	0.11	0.04

RInfra-D has ensured that category wise CSS determined using the formula as per the new Tariff Policy does not exceed 20% of the tariff (ABR without RAC) applicable to the category. The category wise CSS determined for each year of the Control Period along with the prevailing CSS are shown in table below:

**Table 50: Existing CSS and Proposed CSS**

<b>Particulars / (Rs./kWh)</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
	<b>Existing</b>	<b>Proposed</b>	<b>Proposed</b>	<b>Proposed</b>	<b>Proposed</b>
<b>LT</b>					
LT I - BPL	-	-	-	-	-
<b>LT -I Residential Single Phase</b>					
0-100	-	-	-	-	-
101-300	-	-	0.18	0.30	0.45

Particulars / (Rs./kWh)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Existing	Proposed	Proposed	Proposed	Proposed
301-500	-	1.20	1.36	1.52	1.71
> 500	0.75	2.10	2.15	2.19	2.24
<b>LT -I Residential Three phase</b>					
0-100	-	-	-	-	-
101-300	-	-	-	-	-
301-500	-	0.90	1.06	1.20	1.39
> 500	0.75	2.00	2.05	2.09	2.14
LT II (a)-Commercial (0-20kW)	-	1.28	1.36	1.52	1.71
LT II (b)-Commercial (20-50kW)	0.62	1.95	1.99	2.04	2.08
LT II (c)-Commercial (>50kW)	1.22	2.20	2.25	2.30	2.35
LT III-Industry (0-20kW)	-	1.45	1.53	1.60	1.71
LT IV-Industry (>20kW)	0.03	1.36	1.44	1.52	1.62
LT V-Advertizing & Hoarding	7.67	3.95	4.04	4.13	4.21
LT VI-Street Light	-	0.38	0.60	0.82	1.08
LT VII(A)-Temporary Supply S Religious	-	-	0.18	0.38	0.63
LT VII(B)-Temporary Supply Others	7.40	2.49	2.55	2.61	2.67
LT VIII - Crematorium	-	-	0.18	0.38	0.63
LT IX-Agriculture	-	-	-	-	-
LT X(A)-Public Service (Govt EI & Hospitals)	-	0.54	0.68	0.82	0.99
LT X (B)-Public Service (Others)	0.04	1.28	1.44	1.52	1.71
<b>HT</b>					
HT I-Industry	0.20	1.87	1.93	1.97	2.01
HT II-Commercial	1.19	2.00	1.86	1.90	1.94
HT III-Group Housing	-	1.75	1.79	1.83	1.86
HT IV-Temp Supply	2.24	2.38	2.43	2.49	2.54
HT V-Metro & Monorail	0.14	1.80	1.84	1.88	1.92
HT VI(A)-Public Service (Govt EI & Hospitals)	-	1.67	1.72	1.76	1.79
HT VI(B)-Public Service (Others)	0.12	1.87	1.93	1.97	2.01

RInfra-D had preferred an appeal (under Appeal No. 140 of 2011) with the Hon’ble ATE on recovery of cross subsidy surcharge on all migrating consumers, including Group III consumers. In its judgment, the Hon’ble ATE rejected the contentions of RInfra-D. However, RInfra-D has appealed against the judgment in the Hon’ble Supreme Court (under Civil Appeal No. 3326 of 2014), which is pending. In the present petition, recovery of CSS has been considered only from

change-over and open access (i.e. Group II) consumers and its applicability on switchover (i.e. Group III) consumers, if any, will be based on the outcome of the above said Appeal. The summary of revenue from changeover and open access consumers through the proposed CSS for each year of the Control Period is shown in table below:

**Table 51: Revenue from Proposed CSS**

<b>Particulars / Rs. Crore</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Revenue from CSS	135.59	144.00	151.86	163.64

The Hon’ble Commission is requested to approve the proposed CSS for each year of the Control Period.

RInfra-D has also projected the revenue from transmission charges from OA consumers by considering the transmission charges of Rs. 0.26 / kWh (as per the InSTS Order dated 26<sup>th</sup> June 2015 in Case No. 57 of 2015) and applying the same to the estimated OA consumption for each year of the Control Period. The projected revenue from transmission charges from OA consumers are shown in table below:

**Table 52: Revenue from Transmission Charges from OA consumers**

<b>Particulars / Rs. Crore</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Revenue from transmission charges from OA consumers	1.89	1.91	1.93	1.95

#### **4.4 Additional Surcharge**

The judgment of the Hon’ble ATE in Appeal Nos. 294 of 2013, 299 of 2013, 331 of 2013 and 333 of 2013, dated 26.11.2014 deliberates on the issue of Cross-Subsidy Surcharge vis-a-vis Additional Surcharge and states as under:

*“43. Fixed costs of the Distribution Licensees other than power purchase are generally included in the Wheeling Charges. The Cross Subsidy Surcharge then computed using the Tariff Policy formulae would not thus include such fixed costs. However, in case, the Wheeling Charges do not contain certain fixed cost of the distribution licensee then the same gets recovered by way of*

*Cross Subsidy Surcharge as in the Tariff Policy Formula. The wheeling charges are to be subtracted from the tariff payable by various categories of consumers which include such fixed costs. The State Commission, in fact adopted the Cross Subsidy Surcharge formula specified in the tariff policy. Therefore, such fixed cost is recovered through Cross Subsidy Surcharges instead of wheeling charges. Since the fixed cost of distribution licensee other than power purchase cost would be recovered by the Distribution Licensee either by way of wheeling charges or Cross Subsidy Surcharges, therefore, as per the tariff policy, the additional surcharge is limited to stranded cost of power purchase only otherwise it would amount to double recovery of fixed cost from the migrating consumers.*

*44. Where the cross subsidy surcharge is higher than the cross subsidy, it is a result of the reflection of such fixed costs in the tariff.”*

As per the judgment, therefore, the formula of CSS as specified in the erstwhile Tariff Policy of 2006 included in it recovery of fixed cost elements of distribution licensee’s costs, which get stranded as a result of migration of consumers, but are not recovered from such consumers through the Additional Surcharge provided in the Act.

The Hon’ble Commission, in its MTR Order in Case No. 4 of 2015, did not consider the formula of CSS as per the Tariff Policy 2006 and instead adopted ABR – ACoS approach. RInfra-D submits that this approach completely ignores the above judgment of the Hon’ble ATE and disregards the issue of stranded fixed costs. This is because ACoS include all the costs of the Licensee (fixed and variable) and so does the ABR. The Fixed costs such as those of power purchase contracts of the licensee and the costs relating to retail supply business, therefore, do not get recovered through CSS if this formula of CSS is adopted. Instead, if the formula as per the new Tariff Policy 2016 is adopted – which is also proposed in this petition – then the Retail Supply cost does get recovered through CSS because the element “D” does not include retail ARR, whereas element “T” does. However, fixed cost of power purchase contracts remains unrecovered even when the new formula is adopted.

Thus, determining CSS considering the presently approved method as per the MTR Order would leave the burden of stranded cost of power purchase and retail supply business on the balance

consumers of the Licensee, which should be recovered as Additional Surcharge. On the other hand, if the Hon'ble Commission adopts the formula of the Tariff Policy 2016, the Fixed Cost of power purchase as stranded separately provided for as Additional Surcharge. This would also be in line with the Tariff Policy, which itself prescribes that the Additional Surcharge should be applied when fixed cost of existing power purchase commitments of the Licensee becomes stranded.

In this petition, however, RInfra-D is not proposing Additional Surcharge as Additional Surcharge is actually a post-facto charge, depending upon the extent of demonstrable stranded costs, which would actually be known only at the end of the year, because RInfra-D is also adding new consumers and consumers who are migrating back to RInfra-D from TPC-D supply (whose demand, to some extent, would cover the stranded capacities and associated cost). Also, the elements of the Additional Surcharge, as discussed above, depend upon what formula of CSS is adopted by the Hon'ble Commission in the MYT Order.

## 4.5 Tariff Proposal for the Control Period

The presently applicable charges for consumption of electricity for RInfra-D’s own consumers along with the applicable FAC are shown in table below:

**Table 53: Existing Fixed and Variable Charges**

Particulars	Fixed Charge (Rs./Consumer/ Month)	Demand Charge (Rs./kVA/ Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	FAC (Rs./ kWh)*	RAC (Rs./ kWh)	Total Variable Charge (Rs./ kWh)
<b>LT</b>							
LT I - BPL	10		0.65	1.80	0.32	0.27	3.04
LT -I Residential (Single Phase)							
0-100	50		2.43	1.80	0.32	0.56	5.11
101-300	75		3.99	1.80	0.46	0.75	7.00
301-500	75		5.57	1.80	0.56	0.89	8.82
> 500	100		7.21	1.80	0.67	1.07	10.75
LT -I Residential Three phase							
0-100	100		2.43	1.80	0.32	0.56	5.11
101-300	100		3.99	1.80	0.43	0.75	6.97
301-500	100		5.57	1.80	0.55	0.89	8.81
> 500	100		7.21	1.80	0.65	1.07	10.73
LT II (a)-Commercial (0-20kW)	275		5.42	1.80	0.57	0.84	8.63
LT II (b)-Commercial (20-50kW)		220	6.33	1.80	0.64	1.01	9.78
LT II (c )-Commercial (>50kW)		220	7.26	1.80	0.70	1.22	10.98
LT III-Industry (0-20kW)	275		6.08	1.80	0.58	0.97	9.43

Particulars	Fixed Charge (Rs./Consumer/ Month)	Demand Charge (Rs./kVA/ Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	FAC (Rs./ kWh)*	RAC (Rs./ kWh)	Total Variable Charge (Rs./ kWh)
LT IV-Industry (>20kW)		220	6.03	1.80	0.58	0.93	9.34
LT V-Advertizing & Hoarding	450		14.83	1.80	1.31	2.19	20.13
LT VI-Street Light		220	4.19	1.80	0.58	0.93	7.50
LT VII(A)-Temporary Supply S Religious	225		4.84	1.80	0.48	0.84	7.96
LT VII(B)-Temporary Supply Others	450		16.07	1.80	1.30	2.36	21.53
LT VIII - Crematorium	225		4.80	1.80	0.48	0.86	7.94
LT IX-Agriculture	25		1.01	1.80	0.21	0.34	3.36
LT X(A)-Public Service (Govt EI & Hospitals)	275		5.50	1.80	0.53	0.92	8.75
LT X (B)-Public Service (Others)	275		6.37	1.80	0.53	0.92	9.62
<b>HT</b>							
HT I-Industry		220	7.27	0.94	0.60	1.05	9.86
HT II-Commercial		220	8.48	0.94	0.70	1.17	11.29
HT III-Group Housing		220	6.40	0.94	0.56	0.98	8.88
HT IV-Temp Supply	450		10.61	0.94	0.81	1.52	13.88
HT V-Metro & Monorail		220	7.37	0.94	0.60	1.01	9.92
HT VI(A)-Public Service (Govt EI & Hospitals)		220	5.75	0.94	0.56	1.01	8.26
HT VI(B)-Public Service (Others)		220	6.36	0.94	0.53	1.01	8.84

\*FAC charged in September 2015

With the above existing tariffs the overall increase in tariff required in FY 16-17 is shown in the table below. In the table below, in each year from FY 17-18 to FY 19-20, the “Existing Tariff” means the tariff of previous year i.e. “existing tariff” for FY 17-18 is the revised tariff of FY 16-17 as proposed in this petition and so on. Similarly, the “Existing RAC” for a given year is the “Revised RAC” of the previous year and so on.

**Table 54: Proposed Tariff Hike in each year of Control Period**

Particulars / (Rs. Crore)	FY 16-17	FY 17-18	FY 18-19	FY 19-20
Wires and Supply ARR	7,075.00	7,311.07	7,584.90	7,922.61
Past Gaps for Wires & Supply Business	143.17	351.29	549.84	685.79
<b>Total to be recovered</b>	<b>7,218.17</b>	<b>7,662.36</b>	<b>8,134.74</b>	<b>8,608.40</b>
Revenue at revised Wheeling Charge & CSS from changeover consumers	472.74	527.75	581.21	624.64
<b>Net ARR to be recovered from own consumers</b>	<b>6,745.43</b>	<b>7,134.61</b>	<b>7,553.53</b>	<b>7,983.76</b>
RA Recovery from revised RAC	808.94	810.69	814.22	817.65
<b>ARR recovery and RA recovery from own consumers</b>	<b>7,554.37</b>	<b>7,945.29</b>	<b>8,367.75</b>	<b>8,801.41</b>
Revenue at existing tariff from own consumers	6,467.05	6,924.68	7,334.25	7,762.24
RA Recovery from existing RAC	709.77	831.27	833.67	837.31
Revenue and RA Recovery from existing tariff & RAC	7,176.82	7,755.95	8,167.92	8,599.55
<b>Short fall at existing Tariff</b>	<b>377.55</b>	<b>189.35</b>	<b>199.83</b>	<b>201.86</b>
<b>Tariff Hike required</b>	<b>5.26%</b>	<b>2.44%</b>	<b>2.45%</b>	<b>2.35%</b>

*\*Proposed RA Charges for each year of the Control Period are discussed subsequently in the Petition*

The Average Cost of Supply for (ACoS) for each year of the Control Period is shown in table below:

**Table 55: Average Cost of Supply (ACoS) for each year of the Control Period**

Particulars	FY 16-17	FY 17-18	FY 18-19	FY 19-20
<b>Wires + Supply ARR (Rs. Crore)</b>	<b>7,075.00</b>	<b>7,311.07</b>	<b>7,584.90</b>	<b>7,922.61</b>
Past Gap (Rs. Crore)	143.17	351.29	549.84	685.79
<b>Total to be recovered (Rs. Crore)</b>	<b>7,218.17</b>	<b>7,662.36</b>	<b>8,134.74</b>	<b>8,608.40</b>



<b>Particulars</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
Revenue from Wheeling from Changeover (Rs. Crore)	335.26	381.84	427.42	459.05
Revenue from CSS from Changeover and revenue from transmission charges from OA consumers (Rs. Crore)	137.49	145.91	153.79	165.60
<b>Net ARR to be recovered (Rs. Crore)</b>	<b>6,745.43</b>	<b>7,134.61</b>	<b>7,553.53</b>	<b>7,983.76</b>
Own Sales (MU)	8,229.27	8,446.28	8,673.76	8,909.49
<b>ACoS (without RA Recovery) -Rs./kWh</b>	<b>8.20</b>	<b>8.45</b>	<b>8.71</b>	<b>8.96</b>
<b>Net ARR + RA Recovery (Rs. Crore)</b>	<b>7,554.37</b>	<b>7,945.29</b>	<b>8,367.75</b>	<b>8,801.41</b>
Own Sales (MU)	8,229.27	8,446.28	8,673.76	8,909.49
<b>ACoS (with RA Recovery) - Rs./kWh</b>	<b>9.18</b>	<b>9.41</b>	<b>9.65</b>	<b>9.88</b>

In this Petition, RInfra-D proposes revision in fixed charges for residential consumers, in order to recover a greater portion of revenue from residential consumers through fixed charges. The revised fixed charges proposed for residential consumers are shown in the table below:

**Table 56: Existing and Proposed Fixed Charges for Residential Consumers**

<b>Particulars / (Rs./Consumer/Month)</b>	<b>Existing Fixed Charges</b>	<b>Revised Fixed Charges</b>
<b>LT I Residential Single Phase</b>		
0-100	50	60
101-300	75	90
301-500	75	90
> 500	100	120
<b>LT I Residential Three Phase</b>		
0-100	100	120
101-300	100	120
301-500	100	120
> 500	100	120

The Fixed Charges for Three Phase residential connections is proposed to be revised to Rs. 120/consumer/month from the present Rs. 100/consumer/month, irrespective of consumption. However, the Additional Fixed charges of Rs. 100 per 10kW load or part thereof are proposed to be continued at the same level. The Hon’ble Commission, in RInfra-D’s MTR Order in Case 4 of

2015, had stated that the Hon’ble Commission would like to move towards a uniform Fixed charge for single phase consumers and RInfra-D should make its submissions in this regard during next Tariff Petition. In this regard, RInfra-D submits that if the fixed charges of single phase residential consumers are made uniform, then fixed charges of consumers consuming up to 100 units per month will have to be increased substantially. Considering that the average consumption of consumers in 0-100 slab only is less than 50 units per month (@46 units a month as per FY 14-15 actuals), there will be significant impact of the fixed charges on their average billing rate. In order to avoid such increase in electricity bill for low end residential consumers, RInfra-D has not proposed uniform fixed charges for single phase residential consumers and proposes to continue to differentiate Fixed Charges for different consumption slabs.

RInfra-D has designed the energy charges in such a way that for the categories having cross-subsidy (measured as % of ABR/ACoS) of more than 100%, the ratio is maintained at more or less at the same level, while for the categories having cross subsidy of less than 100%, the ratio increases.

To the extent possible, RInfra-D has tried to keep the total variable charge of HT consumers lower than the total variable charge of LT consumers, based on the philosophy that tariffs for consumers availing supply at higher voltage level should be lower than that for consumers availing supply at lower voltage levels. Further LT VII(b) (LT – Temporary Others) and HT IV (HT – Temporary Others) tariff is applicable for projects under construction. In order to discourage these consumers from adopting alternate sources of power in the form of DG sets and increase environmental pollution, RInfra-D is proposing reduction in the tariff of these two categories from the existing levels. The proposed energy charges for different category of consumers for each year of Control Period along with the existing energy charge of FY 15-16 (including applicable FAC) are shown below:

**Table 57: Existing and Proposed Energy Charge**

<b>Particulars / (Rs./kWh)</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
	<b>Existing</b>	<b>Proposed</b>	<b>Proposed</b>	<b>Proposed</b>	<b>Proposed</b>
<b>LT</b>					
LT I - BPL	0.97	0.80	0.90	1.00	1.10

Particulars / (Rs./kWh)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Existing	Proposed	Proposed	Proposed	Proposed
<b>LT -I Residential Single Phase</b>					
0-100	2.75	3.39	3.65	3.74	3.90
101-300	4.45	5.11	5.32	5.38	5.51
301-500	6.13	6.58	6.66	6.75	6.91
> 500	7.88	8.18	8.23	8.27	8.39
<b>LT -I Residential Three phase</b>					
0-100	2.75	3.39	3.65	3.74	3.90
101-300	4.42	5.11	5.32	5.38	5.51
301-500	6.12	6.58	6.66	6.75	6.91
> 500	7.86	8.18	8.23	8.27	8.39
LT II (a)-Commercial (0-20kW)	5.99	6.54	6.55	6.66	6.83
LT II (b)-Commercial (20-50kW)	6.97	7.45	7.48	7.50	7.58
LT II (c)-Commercial (>50kW)	7.96	8.89	8.98	9.05	9.19
LT III-Industry (0-20kW)	6.66	7.22	7.23	7.25	7.33
LT IV-Industry (>20kW)	6.61	7.13	7.13	7.14	7.21
LT V-Advertizing & Hoarding	16.14	16.43	16.69	16.97	17.29
LT VI-Street Light	4.77	5.51	5.66	5.81	6.04
LT VII(A)-Temporary Supply S Religious	5.32	5.58	5.69	5.83	6.03
LT VII(B)-Temporary Supply Others	17.37	10.64	10.74	10.86	11.03
LT VIII - Crematorium	5.28	5.92	6.05	6.20	6.42
LT IX-Agriculture	1.22	1.65	1.64	1.65	1.73
LT X(A)-Public Service (Govt EI & Hospitals)	6.03	6.74	6.78	6.85	6.99
LT X (B)-Public Service (Others)	6.90	7.43	7.51	7.52	7.67
<b>HT</b>		-	-	-	
HT I-Industry	7.87	8.53	8.71	8.81	8.94
HT II-Commercial	9.18	9.08	8.27	8.36	8.48
HT III-Group Housing	6.96	7.50	7.59	7.67	7.79
HT IV-Temp Supply	11.42	11.08	11.25	11.45	11.66
HT V-Metro & Monorail	7.97	8.28	8.36	8.45	8.57
HT VI(A)-Public Service (Govt EI & Hospitals)	6.31	6.77	6.90	6.95	7.03
HT VI(B)-Public Service (Others)	6.89	7.97	8.15	8.26	8.39

## **4.6 Regulatory Asset Charges for Third Control Period**

As has been submitted in the section on ARR projections for the Control Period, the outstanding Regulatory Assets as on 01.04.2016 would likely be Rs. 3257.17 Crore.

In case, the said amount is to be recovered over 3 years from FY 16-17 to FY 18-19, as approved by the Hon'ble Commission in RInfra-D's MYT Order, the yearly recovery will be Rs. 1,261.85 Crore, which would increase the category wise RA charges significantly over the present levels. Therefore, RInfra-D proposes to recover the same equally over 4 years of the Control Period.

The above said amount is akin to a loan which is being repaid by the consumers through equal instalments every year. Therefore for determining the yearly recovery, RInfra-D has used the PMT function of MS Excel (which is used to determine EMI for a loan). The carrying cost rate has been considered as 10.80% (prevailing SBI Base Rate of 9.30% plus 150 basis points), which is as per MYT Regulations, 2015.

The PMT (rate, #per, pv, [fv], 0) calculates the annual recovery of the equated instalment as if the recovery happens at the end of the year. However, since the actual recovery from consumers will take place throughout the year, the PMT function is adjusted appropriately.

The annual RA recovery through the above method works out to Rs. 993.14 Crore. Category wise RA charges have been presented in the Chapter on Tariff Proposal from FY 16-17 to FY 19-20.

The Hon'ble Commission would observe that this method is different from what was approved in the previous MYT Order. However, this correction is a necessity, as the previous method of "smoothed recovery" did not ensure complete recovery of the approved opening balance of Regulatory Assets of Rs. 3866.83 Crore. This can be easily checked by finding out the Present Value of the stream of Rs. 924.82 Crore over the Six year recovery approved in the last Order. The Present Value, using the same discount rate as the carrying cost rate of 14.50% approved then, will work out to Rs. 3547.61 Crore. This is actually obvious, because the said smoothing or levelisation ignores the Time Value of Money. The Hon'ble Commission would also observe that the method proposed now results in a levelised value of Rs. 993.14 Crore in each year from

FY 16-17 to FY 19-20 and the Present Value of this stream, using the same discount rate as 10.80%, is exactly same as the unrecovered opening balance of RA of Rs. 3257.17 Crore.

The Hon'ble Commission is therefore requested to approve the under-recovered RA amount of Rs. 3257.17 Crore as on 01.04.2016 as estimated in this petition, along with its recovery in equal annual instalments of Rs. 993.14 Crore for four years from FY 16-17 to FY 19-20.

Based on the above proposal, the per unit RA charge considering RInfra-D own sales, changeover sales and open access consumption is as shown below:

**Table 58: Per Unit RA Recovery from FY 16-17 to FY 19-20**

<b>Particulars</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
RA Recovery (Rs. Crore)	993.14	993.14	993.14	993.14
Total Sales (MU)	10,369.77	10,619.25	10,879.78	11,150.42
RA Recovery (Rs./kWh)	0.96	0.94	0.91	0.89

The Hon'ble Commission, in RInfra-D's last MYT Order dated 22<sup>nd</sup> August 2013 had approved the per unit RA recovery and thereafter approved the category wise RA charges by stating that the per unit RA charges should be recovered from different consumer categories on a proportionate basis. The method in which category-wise RA charges were determined from the overall per unit RA charge was not mentioned in the said MYT Order. It appears, however, that the Hon'ble Commission had used the ABR/ACoS ratio (without RAC) approved for RInfra-D consumers to determine the category-wise RA charges from the overall per unit RA charge. However, there is a flaw in computing category-wise RA charges using this method as RA charges are payable by all consumers including changeover and OA consumers and therefore the distribution of overall RA charge to consumer categories using the ABR/ACoS ratio of RInfra-D consumer categories would not be correct and there shall be either over or under-recovery of RAC at the tariff design stage itself. In fact, if one were to analyse the numbers from the last MYT Order, it would be found that the revenue from RAC (by applying the RAC to forecast sales) would be different from the total RA of Rs. 924.82 Crore approved to be recovered in a year as per the said Order. This was because the sales mix of change over consumers is different from the sales mix of RInfra-D consumers, but the category-wise RAC was determined made using the ABR/ACoS ratio approved for RInfra-D consumers only.

In order to correct this anomaly, RInfra-D has considered the total revenue from a consumer category (including changeover and open access consumption) and has determined the ABR of that category. ACoS for determination of RAC has been computed by dividing the total revenue requirement (including past gaps proposed to be recovered) with the total sales (including changeover sales and OA consumption). The ratios of ABR, as determined above to ACoS, as determined above, were applied on the per unit RA recovery to determine the category wise RAC. This ensures complete recovery of RAC of Rs. 993.14 Crore proposed in this petition. Excel sheets showing the computation of category wise RAC have been included in the MYT formats. The category wise RAC for each year of the Control Period along with the existing category wise RAC for FY 15-16 are shown in table below:

**Table 59: Proposed RA Charges from FY 16-17 to FY 19-20**

Particulars / (Rs./kWh)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Existing	Proposed	Proposed	Proposed	Proposed
<b>LT</b>					
LT I - BPL	0.27	0.27	0.27	0.27	0.27
LT -I Residential Single Phase					
0-100	0.56	0.60	0.61	0.60	0.59
101-300	0.75	0.76	0.77	0.75	0.73
301-500	0.89	0.93	0.92	0.91	0.90
> 500	1.07	1.12	1.10	1.07	1.05
LT -I Residential Three phase					
0-100	0.56	0.60	0.61	0.60	0.59
101-300	0.75	0.76	0.77	0.75	0.73
301-500	0.89	0.93	0.92	0.91	0.90
> 500	1.07	1.12	1.10	1.07	1.05
LT II (a)-Commercial (0-20kW)	0.84	1.14	1.11	1.08	1.06
LT II (b)-Commercial (20-50kW)	1.01	1.22	1.18	1.14	1.10
LT II (c )-Commercial (>50kW)	1.22	1.37	1.35	1.33	1.31
LT III-Industry (0-20kW)	0.97	1.09	1.06	1.03	1.00
LT IV-Industry (>20kW)	0.93	1.17	1.14	1.11	1.08
LT V-Advertizing & Hoarding	2.19	2.71	2.61	2.52	2.42
LT VI-Street Light	0.93	1.11	1.08	1.06	1.04
LT VII(A)-Temporary Supply S Religious	0.84	1.05	1.03	1.01	0.99

Particulars / (Rs./kWh)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Existing	Proposed	Proposed	Proposed	Proposed
LT VII(B)-Temporary Supply Others	2.36	1.71	1.65	1.59	1.54
LT VIII - Crematorium	0.86	0.82	0.82	0.82	0.82
LT IX-Agriculture	0.34	0.45	0.45	0.45	0.44
LT X(A)-Public Service (Govt EI & Hospitals)	0.92	1.13	1.10	1.06	1.03
LT X (B)-Public Service (Others)	0.92	1.23	1.19	1.15	1.12
<b>HT</b>					
HT I-Industry	1.05	1.21	1.17	1.13	1.09
HT II-Commercial	1.17	1.29	1.13	1.09	1.05
HT III-Group Housing	0.98	1.09	1.05	1.01	0.98
HT IV-Temp Supply	1.52	1.64	1.58	1.52	1.47
HT V-Metro & Monorail	1.01	1.24	1.19	1.15	1.11
HT VI(A)-Public Service (Govt EI & Hospitals)	1.01	1.15	1.12	1.07	1.03
HT VI(B)-Public Service (Others)	1.01	1.19	1.15	1.11	1.07

#### **4.7 Tariff Scenario in case of recovery of RAC and cumulative gap over three years from FY 16-17 to FY 18-19**

In case the un-recovered RA amount estimated at close of FY 15-16 is recovered over three years instead of the proposed four and the cumulative revenue gap upto FY 15-16 is also spread over three years (i.e. upto FY 18-19) uniformly, instead of the staggered recovery as proposed in this petition, the overall impact on tariff in each year of the Control Period would be as shown below:

**Table 60: Increase / Decrease in Tariff in case Past Revenue Gap and Regulatory Asset are recovered in 3 years from FY 16-17 to FY 18-19**

Particulars / (Rs. Crore)	FY 16-17	FY 17-18	FY 18-19	FY 19-20
Wires and Supply ARR	7,080.72	7,313.28	7,583.75	7,913.22
Past Gaps for Wires & Supply Business	561.19	513.47	465.75	-
<b>Total to be recovered</b>	<b>7,641.92</b>	<b>7,826.76</b>	<b>8,049.50</b>	<b>7,913.22</b>
Revenue at revised Wheeling Charge & CSS from changeover consumers	544.00	550.94	556.88	501.43
<b>Net ARR to be recovered from own consumers</b>	<b>7,097.92</b>	<b>7,275.81</b>	<b>7,492.62</b>	<b>7,411.79</b>
RA Recovery from revised RAC	1,027.41	1,031.93	1,037.02	0.00

<b>Particulars / (Rs. Crore)</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>
<b>ARR recovery and RA recovery from own consumers</b>	<b>8,125.33</b>	<b>8,307.75</b>	<b>8,529.64</b>	<b>7,411.79</b>
Revenue at existing tariff from own consumers	6,467.05	7,286.91	7,478.20	7,698.30
RA Recovery from existing RAC	709.77	1,055.78	1,060.99	1,066.24
Revenue and RA Recovery from existing tariff & RAC	7,176.82	8,342.69	8,539.19	8,764.55
<b>Short fall at existing Tariff</b>	<b>948.51</b>	<b>(34.94)</b>	<b>(9.55)</b>	<b>(1,352.75)</b>
<b>Tariff Hike required</b>	<b>13.22%</b>	<b>-0.42%</b>	<b>-0.11%</b>	<b>-15.43%</b>

As evident from above, the overall tariff increase in the first year in this scenario would be about 13%. As this is overall increase, the tariff increase for low end consumers would be significantly more because of RInfra-D's poor consumer mix. Therefore RInfra-D has proposed the past gap recovery and the RA recovery over four years from FY 16-17 to FY 19-20.



## 4.8 Proposed Tariffs for the Control Period

The summary of proposed tariff for FY 16-17 (including the proposed RAC) is shown in the table below:

**Table 61: Proposed Tariff for FY 16-17**

Particulars	Fixed Charge (Rs./Consumer /Month)	Demand Charge (Rs./kVA/Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	RAC (Rs./ kWh)	Total Variable Charge (Rs./ kWh)	% Increase in Variable Charge
<b>LT</b>							
LT I - BPL	10		0.80	1.60	0.27	2.67	-12%
LT -I Residential (Single Phase)							
0-100	60		3.39	1.60	0.60	5.60	9%
101-300	90		5.11	1.60	0.76	7.47	7%
301-500	90		6.58	1.60	0.93	9.11	3%
> 500	120		8.18	1.60	1.12	10.90	1%
LT -I Residential Three phase							
0-100	120		3.39	1.60	0.60	5.60	10%
101-300	120		5.11	1.60	0.76	7.47	7%
301-500	120		6.58	1.60	0.93	9.11	3%
> 500	120		8.18	1.60	1.12	10.90	2%
LT II (a)-Commercial (0-20kW)	275		6.54	1.60	1.14	9.29	8%
LT II (b)-Commercial (20-50kW)		220	7.45	1.60	1.22	10.27	5%
LT II (c )-Commercial (>50kW)		220	8.89	1.60	1.37	11.86	8%
LT III-Industry (0-20kW)	275		7.22	1.60	1.09	9.92	5%

Particulars	Fixed Charge (Rs./Consumer /Month)	Demand Charge (Rs./kVA/Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	RAC (Rs./ kWh)	Total Variable Charge (Rs./ kWh)	% Increase in Variable Charge
LT IV-Industry (>20kW)		220	7.13	1.60	1.17	9.90	6%
LT V-Advertizing & Hoarding	450		16.43	1.60	2.71	20.75	3%
LT VI-Street Light		220	5.51	1.60	1.11	8.22	10%
LT VII(A)-Temporary Supply S Religious	225		5.58	1.60	1.05	8.23	3%
LT VII(B)-Temporary Supply Others	450		10.64	1.60	1.71	13.95	-35%
LT VIII - Crematorium	225		5.92	1.60	0.82	8.35	5%
LT IX-Agriculture	25		1.65	1.60	0.45	3.70	10%
LT X(A)-Public Service (Govt EI & Hospitals)	275		6.74	1.60	1.13	9.46	8%
LT X (B)-Public Service (Others)	275		7.43	1.60	1.23	10.26	7%
<b>HT</b>							
HT I-Industry		220	8.53	0.84	1.21	10.57	7%
HT II-Commercial		220	9.08	0.84	1.29	11.21	-1%
HT III-Group Housing		220	7.50	0.84	1.09	9.42	6%
HT IV-Temp Supply	450		11.08	0.84	1.64	13.55	-2%
HT V-Metro & Monorail		220	8.28	0.84	1.24	10.35	4%
HT VI(A)-Public Service (Govt EI & Hospitals)		220	6.77	0.84	1.15	8.75	6%
HT VI(B)-Public Service (Others)		220	7.97	0.84	1.19	9.99	13%

As stated earlier, RInfra-D has proposed lower variable charges for LT VII (B) and HT VI (B) consumers so as to discourage these consumers from opting for DG sets.

In case of LT VI –Street lights, there was a mistake in the MTR Order, wherein while calculating revenue from revised tariffs, the Hon’ble Commission had erroneously considered the billing demand of Street light at 49,901 kVA/month, which is very high compared to the actual (21,171 kVA/month for FY 15-16). Due to higher billing demand, approved revenue from demand charges from street light was more in the MTR Order, significantly raising the ABR so computed in the Order. Therefore, in this petition, RInfra-D has corrected the said MTR Order ABR of LT VI-Street Lights, computed the revised ABR/ACoS % as would have been approved in the MTR Order (if the mistake had not been committed) and used this revised % as a reference to propose the Energy Charges for this category.

Also LT X (B) – LT Public Service and HT VI (B) – HT Public Service were two new categories created by the Hon’ble Commission in RInfra-D’s MTR Order. RInfra-D has proposed energy charges of LT X (B) by keeping the cross subsidy (ABR/ACoS) at almost the same level as that of LT II (A). For HT VI (B), RInfra-D has proposed energy charges by keeping the cross subsidy (ABR/ACoS) at same level as that of HT – I (HT-Industrial).

The summary of proposed tariff for FY 17-18 (including the proposed RAC) is shown in table below:

**Table 62: Proposed Tariff for FY 17-18**

Particulars	Fixed Charge (Rs./Consumer /Month)	Demand Charge (Rs./kVA/Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	RAC (Rs./ kWh)	Total Variable Charge (Rs./ kWh)	% Increase in Variable Charge
<b>LT</b>							
LT I - BPL	10		0.90	1.80	0.27	2.97	11%
LT -I Residential (Single Phase)							
0-100	60		3.65	1.80	0.61	6.06	8%

Particulars	Fixed Charge (Rs./Consumer /Month)	Demand Charge (Rs./kVA/Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	RAC (Rs./ kWh)	Total Variable Charge (Rs./ kWh)	% Increase in Variable Charge
101-300	90		5.32	1.80	0.77	7.88	5%
301-500	90		6.66	1.80	0.92	9.38	3%
> 500	120		8.23	1.80	1.10	11.12	2%
LT -I Residential Three phase							
0-100	120		3.65	1.80	0.61	6.06	8%
101-300	120		5.32	1.80	0.77	7.88	5%
301-500	120		6.66	1.80	0.92	9.38	3%
> 500	120		8.23	1.80	1.10	11.12	2%
LT II (a)-Commercial (0-20kW)	275		6.55	1.80	1.11	9.45	2%
LT II (b)-Commercial (20-50kW)		220	7.48	1.80	1.18	10.46	2%
LT II (c )-Commercial (>50kW)		220	8.98	1.80	1.35	12.13	2%
LT III-Industry (0-20kW)	275		7.23	1.80	1.06	10.09	2%
LT IV-Industry (>20kW)		220	7.13	1.80	1.14	10.06	2%
LT V-Advertizing & Hoarding	450		16.69	1.80	2.61	21.09	2%
LT VI-Street Light		220	5.66	1.80	1.08	8.54	4%
LT VII(A)-Temporary Supply S Religious	225		5.69	1.80	1.03	8.52	3%
LT VII(B)-Temporary Supply Others	450		10.74	1.80	1.65	14.19	2%
LT VIII - Crematorium	225		6.05	1.80	0.82	8.67	4%
LT IX-Agriculture	25		1.64	1.80	0.45	3.88	5%
LT X(A)-Public Service (Govt EI & Hospitals)	275		6.78	1.80	1.10	9.67	2%
LT X (B)-Public Service (Others)	275		7.51	1.80	1.19	10.50	2%

Particulars	Fixed Charge (Rs./Consumer /Month)	Demand Charge (Rs./kVA/Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	RAC (Rs./ kWh)	Total Variable Charge (Rs./ kWh)	% Increase in Variable Charge
<b>HT</b>							
HT I-Industry		220	8.71	0.94	1.17	10.82	2%
HT II-Commercial		220	8.27	0.94	1.13	10.34	-8%
HT III-Group Housing		220	7.59	0.94	1.05	9.58	2%
HT IV-Temp Supply	450		11.25	0.94	1.58	13.77	2%
HT V-Metro & Monorail		220	8.36	0.94	1.19	10.50	1%
HT VI(A)-Public Service (Govt EI & Hospitals)		220	6.90	0.94	1.12	8.96	2%
HT VI(B)-Public Service (Others)		220	8.15	0.94	1.15	10.24	3%

The summary of proposed tariff for FY 18-19 (including the proposed RAC) is shown in table below:

**Table 63: Proposed Tariff for FY 18-19**

Particulars	Fixed Charge (Rs./Consumer /Month)	Demand Charge (Rs./kVA/Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	RAC (Rs./ kWh)	Total Variable Charge (Rs./ kWh)	% Increase in Variable Charge
<b>LT</b>							
LT I - BPL	10		1.00	1.98	0.27	3.25	10%
LT -I Residential (Single Phase)							
0-100	60		3.74	1.98	0.60	6.32	4%
101-300	90		5.38	1.98	0.75	8.11	3%
301-500	90		6.75	1.98	0.91	9.64	3%
> 500	120		8.27	1.98	1.07	11.33	2%

Particulars	Fixed Charge (Rs./Consumer /Month)	Demand Charge (Rs./kVA/Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	RAC (Rs./ kWh)	Total Variable Charge (Rs./ kWh)	% Increase in Variable Charge
LT -I Residential Three phase							
0-100	120		3.74	1.98	0.60	6.32	4%
101-300	120		5.38	1.98	0.75	8.11	3%
301-500	120		6.75	1.98	0.91	9.64	3%
> 500	120		8.27	1.98	1.07	11.33	2%
LT II (a)-Commercial (0-20kW)	275		6.66	1.98	1.08	9.72	3%
LT II (b)-Commercial (20-50kW)		220	7.50	1.98	1.14	10.62	2%
LT II (c )-Commercial (>50kW)		220	9.05	1.98	1.33	12.36	2%
LT III-Industry (0-20kW)	275		7.25	1.98	1.03	10.27	2%
LT IV-Industry (>20kW)		220	7.14	1.98	1.11	10.23	2%
LT V-Advertizing & Hoarding	450		16.97	1.98	2.52	21.46	2%
LT VI-Street Light		220	5.81	1.98	1.06	8.85	4%
LT VII(A)-Temporary Supply S Religious	225		5.83	1.98	1.01	8.82	4%
LT VII(B)-Temporary Supply Others	450		10.86	1.98	1.59	14.43	2%
LT VIII - Crematorium	225		6.20	1.98	0.82	9.00	4%
LT IX-Agriculture	25		1.65	1.98	0.45	4.08	5%
LT X(A)-Public Service (Govt EI & Hospitals)	275		6.85	1.98	1.06	9.90	2%
LT X (B)-Public Service (Others)	275		7.52	1.98	1.15	10.64	1%
<b>HT</b>							
HT I-Industry		220	8.81	1.04	1.13	10.97	1%

Particulars	Fixed Charge (Rs./Consumer /Month)	Demand Charge (Rs./kVA/Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	RAC (Rs./ kWh)	Total Variable Charge (Rs./ kWh)	% Increase in Variable Charge
HT II-Commercial		220	8.36	1.04	1.09	10.48	1%
HT III-Group Housing		220	7.67	1.04	1.01	9.72	1%
HT IV-Temp Supply	450		11.45	1.04	1.52	14.00	2%
HT V-Metro & Monorail		220	8.45	1.04	1.15	10.63	1%
HT VI(A)-Public Service (Govt EI & Hospitals)		220	6.95	1.04	1.07	9.06	1%
HT VI(B)-Public Service (Others)		220	8.26	1.04	1.11	10.41	2%

The summary of proposed tariff for FY 19-20 (including the proposed RAC) is shown in table below:

**Table 64: Proposed Tariff for FY 19-20**

Particulars	Fixed Charge (Rs./Consumer /Month)	Demand Charge (Rs./kVA/Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	RAC (Rs./ kWh)	Total Variable Charge (Rs./ kWh)	% Increase in Variable Charge
<b>LT</b>							
LT I - BPL	10		1.10	2.09	0.27	3.46	7%
LT -I Residential (Single Phase)							
0-100	60		3.90	2.09	0.59	6.59	4%
101-300	90		5.51	2.09	0.73	8.33	3%
301-500	90		6.91	2.09	0.90	9.90	3%
> 500	120		8.39	2.09	1.05	11.53	2%
LT -I Residential Three phase							
0-100	120		3.90	2.09	0.59	6.59	4%

Particulars	Fixed Charge (Rs./Consumer /Month)	Demand Charge (Rs./kVA/Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	RAC (Rs./ kWh)	Total Variable Charge (Rs./ kWh)	% Increase in Variable Charge
101-300	120		5.51	2.09	0.73	8.33	3%
301-500	120		6.91	2.09	0.90	9.90	3%
> 500	120		8.39	2.09	1.05	11.53	2%
LT II (a)-Commercial (0-20kW)	275		6.83	2.09	1.06	9.98	3%
LT II (b)-Commercial (20-50kW)		220	7.58	2.09	1.10	10.78	2%
LT II (c )-Commercial (>50kW)		220	9.19	2.09	1.31	12.60	2%
LT III-Industry (0-20kW)	275		7.33	2.09	1.00	10.43	2%
LT IV-Industry (>20kW)		220	7.21	2.09	1.08	10.38	2%
LT V-Advertizing & Hoarding	450		17.29	2.09	2.42	21.81	2%
LT VI-Street Light		220	6.04	2.09	1.04	9.17	4%
LT VII(A)-Temporary Supply S Religious	225		6.03	2.09	0.99	9.12	3%
LT VII(B)-Temporary Supply Others	450		11.03	2.09	1.54	14.67	2%
LT VIII - Crematorium	225		6.42	2.09	0.82	9.33	4%
LT IX-Agriculture	25		1.73	2.09	0.44	4.27	5%
LT X(A)-Public Service (Govt EI & Hospitals)	275		6.99	2.09	1.03	10.11	2%
LT X (B)-Public Service (Others)	275		7.67	2.09	1.12	10.88	2%
<b>HT</b>							
HT I-Industry		220	8.94	1.10	1.09	11.12	1%
HT II-Commercial		220	8.48	1.10	1.05	10.62	1%
HT III-Group Housing		220	7.79	1.10	0.98	9.86	1%



Particulars	Fixed Charge (Rs./Consumer /Month)	Demand Charge (Rs./kVA/Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	RAC (Rs./ kWh)	Total Variable Charge (Rs./ kWh)	% Increase in Variable Charge
HT IV-Temp Supply	450		11.66	1.10	1.47	14.22	2%
HT V-Metro & Monorail		220	8.57	1.10	1.11	10.77	1%
HT VI(A)-Public Service (Govt EI & Hospitals)		220	7.03	1.10	1.03	9.16	1%
HT VI(B)-Public Service (Others)		220	8.39	1.10	1.07	10.55	1%

The category wise percentage hike in ABRs is shown in table below:

**Table 65: Category wise % hike in ABR**

Particulars / (Rs./kWh)	FY 15-16	FY 16-17	% Rise over Previous Year	FY 17-18	% Rise over Previous Year	FY 18-19	% Rise over Previous Year	FY 19-20	% Rise over Previous Year
	Existing	Proposed		Proposed		Proposed		Proposed	
<b>LT</b>									
LT I - Residential	7.06	7.58	7.27%	7.99	5.43%	8.24	3.19%	8.49	3.04%
LT II (a)-Commercial (0-20kW)	9.42	10.08	7.02%	10.23	1.51%	10.49	2.52%	10.73	2.37%
LT II (b)-Commercial (20-50kW)	10.48	10.97	4.73%	11.15	1.56%	11.33	1.62%	11.49	1.47%
LT II (c )-Commercial (>50kW)	11.47	12.35	7.66%	12.59	1.90%	12.83	1.93%	13.05	1.74%
LT III-Industry (0-20kW)	9.70	10.19	5.04%	10.36	1.60%	10.53	1.65%	10.68	1.47%
LT IV-Industry (>20kW)	9.63	10.18	5.72%	10.34	1.58%	10.51	1.63%	10.67	1.47%
LT V-Advertizing & Hoarding	21.85	22.47	2.83%	22.80	1.48%	23.15	1.55%	23.48	1.42%
LT VI-Street Light	8.42	9.14	8.54%	9.45	3.37%	9.77	3.44%	10.09	3.31%
LT VII(A)-Temporary Supply S Religious	8.40	8.67	3.29%	8.97	3.43%	9.28	3.50%	9.59	3.36%
LT VII(B)-Temporary Supply Others	21.75	14.17	-34.83%	14.41	1.65%	14.66	1.73%	14.89	1.60%

Particulars / (Rs./kWh)	FY 15-16	FY 16-17	% Rise over Previous Year	FY 17-18	% Rise over Previous Year	FY 18-19	% Rise over Previous Year	FY 19-20	% Rise over Previous Year
	Existing	Proposed		Proposed		Proposed			
LT VIII - Crematorium	8.04	8.45	5.08%	8.76	3.73%	9.09	3.77%	9.42	3.58%
LT IX-Agriculture	3.39	3.73	9.97%	3.91	4.88%	4.10	4.91%	4.30	4.72%
LT X(A)-Public Service (Govt EI & Hospitals)	8.61	9.32	8.25%	9.54	2.33%	9.77	2.41%	9.99	2.28%
LT X (B)-Public Service (Others)	9.51	10.16	6.82%	10.40	2.33%	10.55	1.47%	10.79	2.28%
<b>HT</b>									
HT I-Industry	9.85	10.55	7.16%	10.80	2.37%	10.97	1.55%	11.12	1.41%
HT II-Commercial	11.37	11.29	-0.67%	10.42	-7.69%	10.58	1.51%	10.73	1.37%
HT III-Group Housing	9.32	9.86	5.78%	10.00	1.47%	10.16	1.54%	10.30	1.39%
HT IV-Temp Supply	13.85	13.52	-2.36%	13.74	1.62%	13.97	1.70%	14.19	1.57%
HT V-Metro & Monorail	9.82	10.26	4.42%	10.40	1.40%	10.55	1.47%	10.69	1.34%
HT VI(A)-Public Service (Govt EI & Hospitals)	9.02	9.51	5.46%	9.73	2.33%	9.87	1.40%	9.99	1.27%
HT VI(B)-Public Service (Others)	9.38	10.53	12.26%	10.78	2.38%	10.95	1.57%	11.11	1.42%

The cross subsidy reduction trajectory based on the proposed tariffs is shown in table below:

**Table 66: Cross Subsidy Trajectory**

Particulars	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Existing*	Proposed	Proposed	Proposed	Proposed
<b>LT</b>					
LT I - Residential	80%	83%	86%	86%	87%
LT II (a)-Commercial (0-20kW)	108%	110%	109%	109%	109%
LT II (b)-Commercial (20-50kW)	122%	120%	118%	117%	116%
LT II (c)-Commercial (>50kW)	135%	135%	134%	133%	132%
LT III-Industry (0-20kW)	111%	111%	110%	109%	108%

Particulars	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Existing*	Proposed	Proposed	Proposed	Proposed
LT IV-Industry (>20kW)	112%	111%	110%	109%	108%
LT V-Advertizing & Hoarding	251%	245%	242%	240%	238%
LT VI-Street Light	95%	100%	100%	101%	102%
LT VII(A)-Temporary Supply S Religious	92%	94%	95%	96%	97%
LT VII(B)-Temporary Supply Others	249%	154%	153%	152%	151%
LT VIII - Crematorium	92%	92%	93%	94%	95%
LT IX-Agriculture	39%	41%	42%	43%	44%
LT X(A)-Public Service (Govt EI & Hospitals)	102%	102%	101%	101%	101%
LT X (B)-Public Service (Others)	101%	111%	111%	109%	109%
<b>LT- Total</b>		<b>97%</b>	<b>98%</b>	<b>98%</b>	<b>98%</b>
HT I-Industry	116%	115%	115%	114%	113%
HT II-Commercial	134%	123%	111%	110%	109%
HT III-Group Housing	108%	107%	106%	105%	104%
HT IV-Temp Supply	155%	147%	146%	145%	144%
HT V-Metro & Monorail	115%	112%	111%	109%	108%
HT VI(A)-Public Service (Govt EI & Hospitals)	107%	104%	103%	102%	101%
HT VI(B)-Public Service (Others)	102%	115%	115%	114%	112%
<b>HT- Total</b>		<b>119%</b>	<b>112%</b>	<b>111%</b>	<b>110%</b>
<b>Total</b>		<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

\*As per RInfra-D MTR Order in Case No. 4 of 2015 for FY 15-16

## 4.9 Comparative Telescopic Tariffs for Residential Consumers

The following table shows the effective tariff for consumers in residential category with different consumption level as a result of the telescopic benefit (i.e. tariff for each slab applicable only on incremental consumption in such slab). For illustrative purpose, the effective telescopic tariff for residential consumers (single phase and Three Phase) with consumption of 100, 300, 500 and 700 units has been shown below:

**Table 67: Effective Tariff for Residential Consumers**

(Rs./kWh)

Slab	FY 16-17		FY 17-18		FY 18-19		FY 19-20	
	Slab Tariff	Effective Tariff	Slab Tariff	Effective Tariff	Slab Tariff	Effective Tariff	Slab Tariff	Effective Tariff
0-100	5.60	5.60	6.06	6.06	6.32	6.32	6.59	6.59
101-300	7.47	6.85	7.88	7.27	8.11	7.51	8.33	7.75
301-500	9.11	7.75	9.38	8.12	9.64	8.36	9.90	8.61
>500	10.90	8.65	11.12	8.97	11.33	9.21	11.53	9.44

Note: Tariff refers to Total Variable Charge

## 4.10 Other Issues in Tariff

### 4.10.1 Applicability of Public Services tariff:

The Hon’ble Commission had created two sub-categories under LT and HT Public Services, one for Government Educational Institutions and Hospitals, and another for other Public Services. The applicability of other Public Services tariff is the following:

*“Education Institutions such as Schools and Colleges, and Hospitals, Dispensaries, Primary Health Care Centres and Diagnostic Centres/Laboratories and Libraries and Public reading rooms other than those of State or Central Government, Municipal Bodies, Zilla Parishads, Panchayat Samities or Gram Panchayat; and Sports Club / Health Club / Gymnasium / Swimming Pool attached to the Educational Institution / Hospital provided said Sports Club / Health Club / Gymnasium /*

*Swimming Pool is situated in the same premises and is primarily meant for the students/ faculty/ employees/ patients of such Educational Institutions and Hospitals.*

*This category also includes all offices of Government/Municipal Bodies, Local Authority, local self-Government, Zilla Parishad, and Gram Panchayat; Police Stations, Police Chowkies, Post Offices, Defence establishments (army, navy and air-force), Spiritual Organisations which are service oriented, Railways/Monorail/Metro except traction, State transport establishments; Railways/MonoRail/Metro and State Transport Workshops, Transport Workshops operated by Local Authority, Fire Service Stations, Jails, Prisons, Courts, Airports, Ports.”*

At present, the water and sewerage pumping stations operated by Government departments like MCGM, MBMC or MMRDA are not included in the applicable list of other Public Services tariff. RInfra-D requests the Hon’ble Commission to include the same in the list of other Public Services, as these activities are meant for public services only.

#### **4.10.2 Applicability of HT Bulk Supply:**

The tariff for HT – Bulk Supply (Residential) is applicable to the following:

“....

1. *Co-operative Group Housing Society, which owns the premises, for making electricity available to the members of such Society residing in the same premises; and*
2. *Person, for making electricity available to his employees residing in the same premises.”*

The tariff applicable to students’ or working men/women’s hostels taking supply at LT is LT – Residential tariff. However, there are hostels in RInfra-D area which have a HT connection as well. For such consumers, RInfra-D requests that the tariff applicable should be HT – Bulk Supply (Residential), similar to their counterparts in LT category. RInfra-D requests the Hon’ble Commission to include hostels taking supply at HT in the applicability list for HT – Bulk Supply (Residential).

#### **4.10.3 Applicability of 220kV supply for Metro / Monorail and Rebate on Energy Charges for supply at 100kV:**

As per the present tariff schedule, the Traction Supply for Metro / Monorail is considered at 100kV/33kV/22kV/11kV/6.6kV. However, Metro / Monorail connections being envisaged

---

for future (Metro III, VII, etc.) could also be supplied at 110 kV/ 220kV. Therefore, the tariff definition should be amended to include 110 kV/ 220kV supply as well.

Further, the present tariff schedule specifies a 2% rebate on monthly energy charges for supply at 100kV. RInfra-D submits that this is presumably done to factor in the fact that connections above 33kV are not affected with distribution losses and hence their energy delivery cost is lower. In the same context, RInfra-D submits that the connections at voltage levels above 33kV are not affected with distribution network cost as the supply cables are mostly dedicated and erected at the cost of the consumer and only maintenance remains with the Distribution Licensee. Now that the Distribution Wheeling Charges include both capital expenditure related cost as well as O&M cost, these connections are entitled to some rebate on Wheeling Charges as well, so as to account for the fact that Licensee only maintains these assets and these connections do not utilize any downstream distribution network as well. In view of the same, RInfra-D proposes that the present 2% Rebate should apply on both Energy Charges and Wheeling Charges and the applicability should be generalized to include all connections above 33kV voltage level and not just 100kV supply.

#### **4.10.4 Issues related to PF Incentive / Penalty:**

As per the MTR Order, the power factor incentive/penalty is applicable to LT Public Service (both LT X (A) and LT X (B)) among other categories. However, the Hon'ble Commission in its Order dated 16<sup>th</sup> June 2014 in Case No. 153 of 2013 had ruled that PF incentive / penalty will be applicable to LT Public Service categories with Contract Demand / Sanctioned Load above 20 kW only and not on all connections falling under LT X(A) or LT X(B). RInfra-D requests the Hon'ble Commission to correct this anomaly and clarify in the MYT Order that PF incentive / penalty will be applicable to LT Public Service categories with Contract Demand / Sanctioned Load above 20 kW only. Also PF incentive / penalty is not applicable to HT – Temporary category. RInfra-D requests the Hon'ble Commission to include HT – Temporary category in the applicability list of PF incentive / penalty, as the projects taking temporary supply at HT usually carry out works over a prolonged period (residential and commercial building construction projects on temporary supply stretch over several years). Considering the higher tariffs applicable to the category, it will be beneficial for the consumers to maintain power factor above 0.95 to avail PF incentive.

#### **4.10.5 Delayed Payment Charges**

As per the Supply Code, 2005, the due date for payment of electricity bill shall be not less than twenty-one days from the bill date in the case of residential and agricultural consumers and not less than fifteen days in the case of other consumers. However, as per the MYT Regulations, 2015, Delayed Payment Charges of 1.25% on the billed amount is applicable in case payment of bills by retail consumers is delayed beyond a period of 15 days for High Tension consumers and 21 days for Low Tension consumers. Thus, apparently, the MYT Regulations have extended the due date for bill payment for all LT consumers to 21 days from bill date, when as per Supply Code, 2005 it is limited to only LT Residential and LT Agricultural categories and not for other categories. However, as both Regulations are currently applicable and one does not supersede or over-ride the other, the Hon'ble Commission may kindly clarify as to which Regulations should be considered applicable in this regard.

#### **4.11 Schedule of Charges**

RInfra-D does not propose any change in the presently approved Schedule of Charges and would request the Hon'ble Commission to allow RInfra-D to continue with the Schedule of Charges as approved by the Hon'ble Commission vide Order dated 28<sup>th</sup> December 2012 (Case No. 73 of 2012).