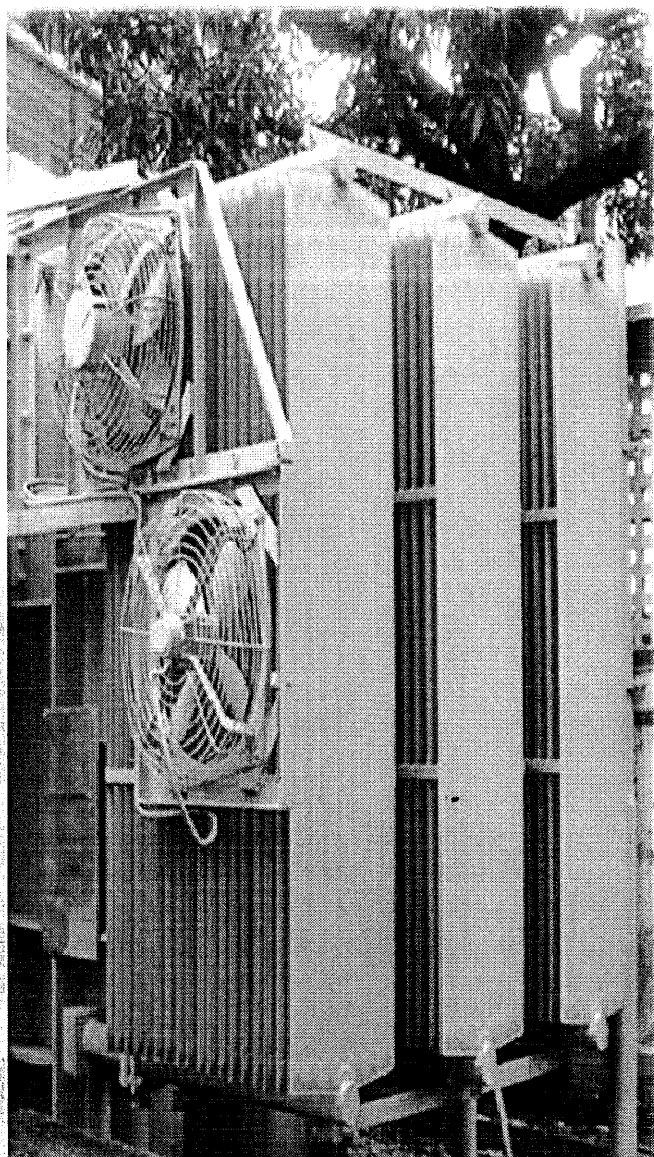


MID TERM REVIEW PETITION

FY 2016-17 TO FY 2019-20

2018



RINFRA - DISTRIBUTION

(Executive Summary - English)

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1 INTRODUCTION

1.1 Background for Submission of Mid Term Review (MTR) Petition

On 8th December 2015, the Hon'ble Commission issued the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2015 (hereinafter referred to as the "MYT Regulations, 2015"). These Regulations are effective from FY 16-17 to FY 19-20. As per Regulation 5.1 (a) of the MYT Regulations, 2015, RInfra-D had filed its Multi Year Tariff (MYT) Petition before the Hon'ble Commission. The Hon'ble Commission issued the MYT Order for RInfra-D on 21st October 2016. Further, as per Regulation 5.1(b) of the MYT Regulations, 2015, Mid Term Review (MTR) Petition is required to be filed comprising of:

- a) Truing-up for FY 15-16 to be carried out under the MYT Regulations, 2011;
- b) Truing-up for FY 16-17 to be carried out under the MYT Regulations, 2015;
- c) Provisional Truing-up for FY 17-18 to be carried out under the MYT Regulations, 2015;
- d) Revised forecast of Aggregate Revenue Requirement, expected revenue from existing Tariff and charges, expected revenue gap, and proposed category-wise Tariff for FY 18-19 and FY 19-20.

1.2 Objective of Multi Year Tariff Mid-Term Review (MTR) Petition

As stated above, a Generating Company or a Licensee is required to file its Multi Year Tariff Mid Term Review (MTR) Petition under Regulation 5.1 (b) of the MYT Regulations, 2015. Accordingly, the present MTR Petition is filed by RInfra-D. As per the Regulations, the actuals for FY 15-16 and FY 16-17 are presented for truing up. Revised ARR from FY 17-18 to FY 19-20 are presented based on the estimates of FY 17-18 and the revised projections for FY 18-19 and FY 19-20.

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 FY 18-19 and FY 19-20. Further RInfra-D has proposed category wise Regulatory Asset Charges (RAC) for own, changeover and open access consumers for FY 18-19 for approval of the Hon'ble Commission. Also RInfra-D has proposed revision in Schedule of Charges for the approval of the Hon'ble Commission.

2 TRUING UP OF FY 15-16 AND FY 16-17, PROVISIONAL TRUING UP OF FY 17-18, AGGREGATE REVENUE REQUIREMENT FOR FY 18-19 AND FY 19-20

2.1 Sales

FY 15-16 and FY 16-17: The actual own sales, changeover sales and open access consumption for FY 15-16 and FY 16-17 are shown in table below.

FY 17-18: Since FY 17-18 is over, RInfra-D has provided own sales, changeover sales and open access consumption for FY 17-18 (provisional actuals).

FY 18-19 and FY 19-20: For the projection of sales for FY 18-19 and FY 19-20, 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 FY 18-19 and FY 19-20.
2. Forecast of total sales (own plus changeover plus open access) on RInfra-D network for FY 18-19 and FY 19-20.
3. The category wise monthly sales of changeover consumers expected to shift back to RInfra-D over the Control Period is estimated for FY 18-19 and FY 19-20.
4. The category wise monthly sales of own consumers expected to shift to TPC-D as changeover consumers over the Control Period is estimated for FY 18-19 and FY 19-20.
5. The category wise monthly sales of changeover consumers expected to switch over to TPC-D network is estimated for FY 18-19 and FY 19-20.
6. 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. Thereafter the sales of consumers switching over to TPC-D network are substrated to arrive at projected changeover sales for FY 18-19 and FY 19-20.

7. The sales of consumers switching over to TPC-D network are substrated from the total sales forecasted for FY 18-19 and FY 19-20 to arrive at total sales forecast net of switchover.
8. The projected changeover sales arrived above has been subtracted from the projected total sales to arrive at projected own sales for FY 18-19 and FY 19-20.

Further expected reduction in sales due to DSM measures to be started in FY 18-19 and FY 19-20 and expected reduction in sales due to installation of roof top solar PV systems likely to be commissioned in FY 18-19 and FY 19-20 are factored in the own sales. Open access consumption in RInfra-D license area has increased significantly over the last three years. RInfra-D has forecasted the open access consumption in FY 18-19 and FY 19-20 by applying 10% escalation over the estimated open access consumption for FY 17-18. The incremental open access consumption in FY 18-19 and FY 19-20 has been reduced from the own sales for FY 18-19 and FY 19-20. The summary of own sales, changeover sales and open access consumption is shown in table below:

Table 1 : Sales, Changeover Consumption and Open Access Consumption from FY 15-16 to FY 19-20

Particulars/MU	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
Own Sales	7,989.17	7,886.67	8,321.05	8,537.89	8,800.84
Changeover Sales	1,996.83	1,808.33	1,700.91	1,703.05	1,663.38
OA Consumption	90.66	162.34	225.70	248.27	273.10
Total	10,076.67	9,857.34	10,247.66	10,489.21	10,737.31

2.2 Distribution Loss

FY 15-16 and FY 16-17: The actual distribution loss for FY 15-16 is 9.24% as compared to 9.36% approved by the Hon'ble Commission in RInfra-D's MYT Order dated 22nd August 2013 in Case No. 9 of 2013. The actual distribution loss for FY 16-17 is 8.83% as compared to 9.11% approved by the Hon'ble Commission in RInfra-D's MYT Order dated 21st October 2016 in Case No. 34 of 2016.

FY 17-18: The distribution loss (provisional actuals) for FY 17-18 is 8.12% as compared to 8.86% approved by the Hon'ble Commission in RInfra-D's MYT Order dated 21st October 2016 in Case No. 34 of 2016.

FY 18-19 and FY 19-20: For projecting the energy requirement for FY 18-19 and FY 19-20, RInfra-D has considered the distribution loss of 8.61% and 8.36% as per the target approved by the Hon'ble Commission in RInfra-D's MYT Order dated 21st October 2016 in Case No. 34 of 2016.

The energy balance from FY 15-16 to FY 19-20 is shown in table below:

Table 2 : Energy Balance from FY 15-16 to FY 19-20

Particulars/MU	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
Total Sales (including Changeover Sales & OA consumption) - MU	10,076.67	9,857.34	10,247.66	10,489.21	10,737.31
Distribution Loss (%)	9.24%	8.83%	8.12%	8.61%	8.36%
Energy Input at T-D (MU)	11,102.95	10,811.58	11,153.81	11,477.07	11,716.48
Energy Input at T-D for changeover & OA consumers (MU)	2,284.82	2,143.70	2,087.09	2,108.58	2,086.66
Energy Input at T-D for own consumers (MU)	8,818.13	8,667.88	9,066.72	9,368.49	9,629.82
Transmission Loss (%)	3.92%	3.63%	3.30%	3.30%	3.30%
Energy Input at G-T (MU)	9,177.90	8,994.38	9,376.13	9,688.20	9,958.44

2.3 Power Procurement

FY 15-16 and FY 16-17: The power purchase for FY 15-16 and FY 16-17 is based on actuals and is shown in the table below.

FY 17-18: The power purchase for FY 17-18 is based on provisional actuals and is shown in the table below.

FY 18-19 and FY 19-20: RInfra-D has estimated the power purchase for FY 18-19 and FY 19-20 as under:

Long Term: RInfra-D has signed long term PPA from RInfra-G and VIPL for procurement of power. For projecting the energy availability from RInfra-G, RInfra-D has considered the energy projections as per RInfra-G MTR Petition. For projecting the energy availability from VIPL, RInfra-D has considered the availability of 85% as per VIPL MYT Order (Case No. 91 of 2015). The reduction in

generation from RInfra-G and VIPL due to backing down instructions by SLDC has been considered and the net quantum is then considered as sourced from RInfra-G and VIPL. For projecting the power purchase cost of RInfra-G, RInfra-D has considered the fixed cost and variable cost projected by RInfra-G in its MTR Petition. For projecting the power purchase cost of VIPL, RInfra-D has considered the fixed cost and variable cost approved for VIPL by the Hon'ble Commission in VIPL's MYT Order (Case No. 91 of 2015).

The earlier PPA between RInfra-D and RInfra-G was valid till 23rd February 2018. The Hon'ble Commission vide its Order dated 8th February 2018 in Case No. 5 of 2017 had approved the PPA between RInfra-D and RInfra-G for five years up to 22nd February 2023. Accordingly RInfra-D has considered the power availability from RInfra-G beyond 23rd February 2018.

Solar power purchase: RInfra-D has an Energy Purchase Agreement (EPA) with Dhursar Solar Power Private Ltd. (DSPPL) for 40 MW. As per MERC (Renewable Purchase Obligation, its Compliance and REC framework Implementation) Regulations, 2016 (hereinafter "RPO-REC Regulations"), the solar RPO target for FY 18-19 is 2.75% and for FY 19-20 is 3.50%. RInfra-D will meet a part of solar RPO requirement through energy purchase from DSPPL. The balance solar RPO requirement of FY 18-19 will be met through purchase of solar RECs and the cost of the same has been considered in FY 18-19. The balance solar RPO requirement of FY 19-20 will be met through purchase of solar power from a new source. RInfra-D has considered the cost of the solar power from new sources in FY 19-20 at the rate of Rs. 3/kWh. The shortfall in solar RPO requirement for FY 16-17 and FY 17-18 are proposed to be met through purchase of solar RECs in FY 19-20 and hence RInfra-D has considered the cost of the solar RECs in FY 19-20.

Non Solar RPO: RInfra-D has existing Non-solar RE contracts with six non solar RE plants. The estimated energy availability for FY 18-19 and FY 19-20 from each contracted source is considered while projecting the power purchase cost. As per MERC (Renewable Purchase Obligation, its Compliance and REC framework Implementation) Regulations, 2016 (hereinafter "RPO-REC Regulations"), the non-solar RPO target for FY 18-19 is 11% and for FY 19-20 is 11.50%. RInfra-D will meet a part of non-solar RPO requirement through energy purchase from contracted sources. The balance nonsolar RPO requirement are proposed to be met through purchase of nonsolar RECs. RInfra-D has considered the cost of the nonsolar RECs in the respective years. The shortfall in

nonsolar RPO requirement for FY 16-17 and FY 17-18 are proposed to be met through purchase of nonsolar RECs in FY 19-20 and the cost of such nonsolar RECs are considered in FY 19-20.

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 from the DEEP portal of Ministry of Power (MoP) or from power exchanges, depending upon the price of power available and the period in which power is required. As regards the short term power purchase cost, RInfra-D has considered the cost of power purchase at Rs. 3.50 per kWh.

Surplus Sale: RInfra-D has forecasted surplus sales quantum based on the hourly demand and generation availability scenario. The price of short term sale has been considered at Rs. 2.40 per kWh based on the analysis of sale of night power in power exchanges.

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, SLDC Charges and Standby Charges: Transmission charges, SLDC Charges and Standby charges have been considered at the same level as approved by the Hon'ble Commission for FY 18-19 and FY 19-20 in RInfra-D's MYT Order dated 21st October 2016 in Case No. 34 of 2016. The summary of quantum of power purchase is as follows:

Table 3 : Power Purchase Quantum from FY 15-16 to FY 19-20

Particulars/MU	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
DTPS	3,480.74	3,394.37	3,189.75	3,548.87	3,607.94
VIPL	3,658.89	3,445.73	3,113.59	3,896.43	4,000.97
TPC Unit 6	10.60	0	0	0	0
Renewable - Solar	68.34	65.91	65.45	68.52	348.55
Renewable - Non Solar	211.25	228.93	200.67	204.59	204.83

Particulars/MU	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
Short Term Purchase	1,773.62	1,863.63	2,831.11	2,001.43	1,812.40
Surplus Sale	(25.54)	(4.20)	(24.45)	(31.64)	(16.25)
Total	9,177.90	8,994.38	9,376.13	9,688.20	9,958.44

The summary of power purchase cost from FY 15-16 to FY 19-20 is as follows:

Table 4 : Power Purchase Cost from FY 15-16 to FY 19-20

Particulars/(Rs. Crore)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
DTPS	1,373.63	1,382.28	1,468.76	1,644.43	1,596.25
VIPL	1,712.05	1,685.02	1,476.12	1,743.65	1,759.25
TPC Unit 6	0	77.32	0	0	0
Renewable - Solar	70.38	75.96	75.44	78.97	163.13
Solar REC	0	0	0	22.17	15.95
Renewable - Non Solar	103.67	114.24	102.27	106.03	107.82
Non Solar REC	86.12	66.05	(0.13)	96.44	218.89
Short Term Purchase	539.78	550.34	1,058.43	700.50	634.34
Surplus Sale	(8.00)	(0.79)	(8.77)	(7.59)	(3.90)
Transmission Charges	350.36	329.67	402.00	437.03	428.23
SLDC Charges	1.69	1.22	1.30	1.29	1.26
Standby Charges	166.23	173.13	171.12	167.60	164.00
Other Charges	0.10	0.01	0	0	0
Total	4,396.02	4,454.45	4,746.54	4,990.52	5,085.22

*Cost of power purchase from TPC Unit 6 has been claimed in FY 16-17 for the power purchase in FY 14-15 and FY 15-16

2.4 Operating & Maintenance Expense

2.4.1 O&M Expense for FY 15-16

The Hon'ble Commission, in RInfra-D's MYT Order dated 21st October 2016 in Case No. 34 of 2016, had approved the O&M expense of Rs. 964.36 Crore for FY 14-15 as against the actuals of Rs. 1010.47 Crore. The difference of Rs. 46.11 Crore was treated as efficiency loss and the Hon'ble Commission had allowed one third of this amount to RInfra-D as share of efficiency loss for the

purpose of truing up of FY 14-15. RInfra-D has raised this issue in its Appeal before the Hon'ble ATE against the MYT Order (Appeal No. 12 of 2017), which is pending for decision. In its Counter-Affidavit filed on the Appeal of RInfra-D against the MYT Order, the Hon'ble Commission has stated that it has considered the O&M expenses on a composite basis and not component-wise. RInfra-D submits that if that was the case, the increase in Employee Expenses in FY 14-15 should have cancelled partly with the decrease in R&M and A&G expenses in the said year and only the net increase should have been considered as an Efficiency Loss. Thus the net entitlement of O&M expense for FY 14-15 should have been Rs. 992.72 Crore as shown in table below:

Table 5 : Net Entitlement of O&M Expense for FY 14-15

Particulars/ (Rs. Crore)	MTR Order Case No 4 of 2015	Actual	Deviation	Share of Efficiency loss	Net Entitlement
Total O&M Expenses	983.84	1010.47	26.63	8.88	992.72

RInfra-D has derived the allowable expense for FY 15-16 by applying an escalation of 5.72% over Rs. 992.72 Crore, which was the normative annual escalation rate for O&M expenses in the MYT Regulations, 2011. Thus the allowable O&M expense for FY 15-16 works out to Rs. 1049.50 Crore. The actual O&M Expense for FY 15-16 was Rs. 1068.26 Crore. RInfra-D has considered the deviation of Rs. 18.76 Crore as efficiency loss and has calculated the share of efficiency loss for determining the net entitlement of O&M expense for FY 15-16 as per MYT Regulations, 2011, as shown in table below:

Table 6 : Net Entitlement of O&M Expense for FY 15-16

Particulars/ (Rs. Crore)	Allowable for FY 15-16	Actual for FY 15-16	Deviation	Share of Efficiency Loss	Net Entitlement
Total O&M Expense	1,049.50	1,068.26	18.76	6.25	1,055.75

2.4.2 O&M Expense for FY 16-17

The actual O&M Expense for FY 16-17 was Rs. 1170.52 Crore. RInfra-D submits that the above O&M expense is inclusive of wage revision impact of FY 16-17, on employee expenses and R&M expenses post the wage revision agreements entered with Bombay Electric Workers' Union on 19th September 2016 for revision of salaries of non-executive employees and with Reliance Energy Labor Contractors Association on 19th September 2016 for revision of wages of contract labors. However, as has been submitted in the MYT Petition (Case No. 34 of 2016), the said wage revision agreement

is effective from 1st July 2014. Therefore, arrears on account of wage revision pertaining to 9 months (from 1st July 2014) of FY 14-15 and the whole of FY 15-16 have also been paid in FY 16-17, which are over and above the expenses shown in the above table. It has been the practice of the Hon'ble Commission in the past that wage revision impact has been allowed subsequent to actual payout and not on provision basis. Accordingly, while RInfra-D, in its MYT Petition, showed the provisions made in the Annual Accounts for FY 14-15 and FY 15-16, it did not claim the said expenses in the MYT Petition and submitted that the same shall be claimed on actual payment basis. The wage revision arrears for FY 14-15 and FY 15-16 paid in FY 16-17 is Rs. 119.89 Crore.

For determining the allowable O&M expense for FY 16-17, RInfra-D has considered the provisions of Maharashtra Electricity Regulatory Commission (Multi Year Tariff) (First Amendment) Regulations, 2017 notified by the Hon'ble Commission on 29th November 2017. As per the said Regulations, the base year of the expense shall be the final trued up O&M expense for FY 15-16 after adding or deducting the share of efficiency gains or losses for FY 15-16. RInfra-D submits that the Net Entitlement of O&M expenses in FY 15-16 as presented herein does not include impact of wage revision, as no wage revision related payments were actually made in FY 15-16. However, as the Agreement is effective from July 2014, the arrears of FY 15-16 paid in FY 16-17 actually represent the impact of wage revision in FY 15-16. Accordingly the base O&M should be considered at the revised level of wages effective for FY 15-16 i.e. after including the wage revision impact of FY 15-16 in the actual O&M expenses of FY 15-16 after deducting the efficiency loss. Doing so would correctly represent the Base O&M expenses. Thus the base expense of FY 15-16 for determining the allowable O&M expense for FY 16-17 is Rs. 1125.05 Crore (Rs. 1055.75 Crore plus Rs. 69.30 Crore of wage revision arrears for FY 15-16 paid in FY 16-17).

As per the MERC MYT (First Amendment) Regulations, 2017, the escalation rate to be allowed for FY 16-17 shall be the inflation factor with 30% weightage to average WPI inflation from FY 12-13 to FY 16-17 and 70% weightage to average CPI inflation from FY 12-13 to FY 16-17. The escalation rate as per the above said Regulations works out to 5.05%. The same has been considered while determining the allowable expense for FY 16-17. The allowable expense for FY 16-17 based on the base expense of Rs. 1125.05 Crore and escalation rate of 5.05% works out to Rs. 1181.86 Crore. The efficiency gain in O&M expense for FY 16-17 and the net entitlement of O&M expense for FY 16-17 as per MYT Regulations, 2015 is shown in table below:

Table 7 : Net Entitlement of O&M Expense for FY 16-17

Particulars/ (Rs. Crore)	Allowable for FY 16-17	Actual for FY 16-17	Deviation	Share of Efficiency Loss	Net Entitlement
Total O&M Expense	1,181.86	1,170.52	11.35	3.78	1,174.30

The total O&M expense claimed for FY 16-17 is shown in table below:

Table 8 : Total O&M Expense for FY 16-17

Particulars	Rs. Crore
Net Entitlement of O&M Expense for FY 16-17	1,174.30
Arrears for FY 15-16	69.30
Arrears for FY 14-15	50.59
Total	1,294.19

2.4.3 O&M Expense for FY 17-18, FY 18-19 and FY 19-20

RInfra-D has projected the O&M expense for FY 17-18, FY 18-19 and FY 19-20 as per MERC MYT (First Amendment) Regulations, 2017. The escalation rate has been considered at 5.05% as per the said regulations. The total O&M expenses for FY 17-18, FY 18-19 and FY 19-20 claimed in this Petition is shown in table below:

Table 9 : Total O&M Expense for FY 17-18, FY 18-19 and FY 19-20

Particulars/ (Rs. Crore)	FY 17-18	FY 18-19	FY 19-20
Total O&M Expense	1,241.55	1,304.25	1,370.11

2.5 Capital Expenditure and Capitalization

FY 15-16 and FY 16-17: The actual capital expenditure and capitalization (including interest during construction) for FY 15-16 and FY 16-17 are shown in table below.

FY 17-18: The actual capital expenditure and capitalization (including interest during construction calculated on provisional basis) for FY 17-18 are shown in table below.

FY 18-19 and FY 19-20: RInfra-D has projected the capital expenditure and capitalization for FY 18-19 and FY 19-20 by considering the provisions of Case No. 182 of 2014 dated 12th June 2017. RInfra-D has accordingly prepared the Detailed Project Reports (DPRs) for FY 18-19 and FY 19-20 and has submitted to the Hon'ble Commission for approval. Briefly, the DPRs for FY 18-19 and FY

19-20 are those that are (1) required for augmentation / strengthening of the distribution system, (2) required for anticipated number of connections that may be released on Level 1 and Level 2 network requirements and (3) anticipated number of connections to be released on Level 3 and above network requirement, for which application for permanent supply was received by RInfra-D prior to the issue of the Order in Case No. 182 of 2014. In the said DPRs, submitted for schemes commencing in FY 18-19 and beyond, RInfra-D has not made any expenditure proposal for schemes that it may require to execute based on the recommendation and approval of Mumbai-Distribution Network Assessment Committee (M-DNAC), as those cannot be anticipated at this stage. The summary of capital expenditure and capitalization (including interest during construction) is shown in table below:

Table 10 : Capital Expenditure and Capitalization from FY 15-16 to FY 19-20

Particulars/(Rs. Crore)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
Wires Business					
Capital Expenditure	344	383	351	342	475
Capitalization	449	400	343	359	457
Supply Business					
Capital Expenditure	23	18	20	39	23
Capitalization	23	18	20	39	23
Wires & Supply Business					
Capital Expenditure	367	402	371	381	498
Capitalization	472	418	363	398	480

2.6 Depreciation

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. 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 15-16. The effect of retirement of assets and withdrawal of corresponding accumulated depreciation has been considered while computing depreciation in FY 15-16.

FY 16-17: Regulation 27 of MYT Regulations, 2015 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 16-17. The effect of retirement of assets and withdrawal of corresponding accumulated depreciation has been considered while computing depreciation in FY 16-17. Depreciation corresponding to consumer contribution has been correspondingly reduced in accordance with Regulation 25.2 (b) of the MYT Regulations, 2015.

FY 17-18: RInfra-D has provisionally calculated depreciation for FY 17-18 by applying the asset class wise depreciation rates of FY 17-18 to the average balance of Gross Fixed Assets (GFA) for FY 17-18. RInfra-D has also reduced the depreciation corresponding to actual consumer contribution received in FY 17-18 in accordance with Regulation 25.2 (b) of the MYT Regulations, 2015.

FY 18-19 to FY 19-20: RInfra-D has calculated the depreciation on estimated capitalization for FY 18-19 and FY 19-20 by applying the the asset class wise average depreciation rates for FY 16-17. RInfra-D has also reduced the depreciation corresponding to estimated consumer contribution for FY 18-19 and FY 19-20 in accordance with Regulation 25.2 (b) of the MYT Regulations, 2015. The summary of depreciation claimed from FY 15-16 to FY 19-20 is shown in table below:

Table 11 : Depreciation from FY 15-16 to FY 19-20

Particulars/(Rs. Crore)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
Depreciation - Wires Business	195.82	201.00	214.86	228.24	244.59
Depreciation - Supply Business	19.80	20.95	20.72	21.94	23.35
Depreciation - Total	215.62	221.95	235.58	250.17	267.94

2.7 Interest and Finance Charges

FY 15-16: RInfra-D has calculated the interest on loan capital for FY 15-16 in accordance with Regulation 33.5 of the MYT Regulations, 2011, i.e. by considering the weighted average interest rate of opening balance of loans for RInfra-D, which works out to 10.67%. Repayment has been considered equal to the depreciation claimed for FY 15-16.

FY 16-17: RInfra-D has calculated the interest on loan capital for FY 16-17 in accordance with first proviso to Regulation 29.5 of the MYT Regulations, 2015, i.e. by considering the weighted average

interest rate on the basis of interest paid for the actual loans for FY 16-17, which works out to 10.94%. Repayment has been considered equal to the depreciation claimed for FY 16-17.

FY 17-18: Since FY 17-18 is over, RInfra-D has calculated the interest on loan capital for FY 17-18 in accordance with first proviso to Regulation 29.5 of the MYT Regulations, 2015, i.e. by considering the weighted average interest rate on the basis of interest paid for the actual loans for FY 17-18, which works out to 11.37%. Repayment has been considered equal to the depreciation claimed for FY 17-18.

FY 18-19 to FY 19-20: RInfra-D has estimated the interest on loan capital for FY 18-19 and FY 19-20 in accordance with Regulation 29.5 of the MYT Regulations, 2015, i.e. by considering the weighted average interest rate of opening balance of loans for RInfra-D for FY 18-19 and FY 19-20. The weighted average interest rate as on 01.04.18 works out to 10.44% (estimated) and as on 01.04.19 works out to 10.52% (estimated). Repayment has been considered equal to depreciation claimed for FY 18-19 and FY 19-20. The summary of interest on loans claimed from FY 15-16 to FY 19-20 is shown in table below:

Table 12 : Interest on Loans from FY 15-16 to FY 19-20

Particulars/(Rs. Crore)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
Interest on Loans - Wires Business	144.30	156.64	161.31	153.41	157.64
Interest on Loans - Supply Business	10.90	10.33	9.89	9.00	8.99
Interest on Loans - Total	155.19	166.97	171.20	162.42	166.63

2.8 Return on Equity

Return on Equity for FY 15-16 has been calculated as per Regulation 32.2 of the MYT Regulations, 2011 and as per Regulation 28.2 of the MYT Regulations, 2015 from FY 16-17 to FY 19-20. Actual consumer contribution received during FY 15-16 and FY 17-18, estimated consumer contribution likely to be received in FY 18-19 and FY 19-20 have been deducted from the asset capitalization before determining the equity employed during the year (30% of the net asset capitalization). The summary of RoE from FY 15-16 to FY 19-20 is shown in table below:

Table 13 : Return on Equity from FY 15-16 to FY 19-20

Particulars/(Rs. Crore)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
Return on Equity - Wires Business	265.82	283.68	299.51	313.42	331.05
Return on Equity - Supply Business	27.40	27.80	27.53	28.34	29.98
Return on Equity - Total	293.23	311.48	327.05	341.77	361.03

2.9 Interest on Working Capital

Interest on Working Capital for FY 15-16 has been calculated in accordance with Regulation 35.3 and 35.4 of the MYT Regulations, 2011, where the interest rate is the State Bank Advance Rate (SBAR) as on the date on which the application for tariff was made. Interest on working capital for FY 16-17 has been calculated in accordance with Regulation 31.3 and 31.4 of the MYT Regulations, 2015, where the interest rate is the State Bank of India Base Rate plus 150 basis points. The Hon'ble Commission has notified the MERC MYT (First Amendment) Regulations, 2017 on 29th November 2017, wherein the definition of Base Rate has been changed to SBI MCLR. For FY 17-18, interest on working capital has been calculated by applying a weighted average rate of SBI Base Rate plus 150 Basis Points from 1st April 2017 to 29th November 2017 and SBI MCLR plus 150 Basis Points from 30th November 2017 to 31st March 2018. For FY 18-19 and FY 19-20, RInfra-D has calculated the interest on working capital by employing the prevailing SBI Marginal Cost of Lending Rate (MCLR) plus 150 basis points as per MERC MYT (First Amendment) Regulations, 2017. The summary of interest on working capital from FY 15-16 to FY 19-20 is shown in table below:

Table 14 : Interest on Working Capital from FY 15-16 to FY 19-20

Particulars/(Rs. Crore)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
Interest on Working Capital - Wires Business	56.41	31.72	29.74	31.26	33.02
Interest on Working Capital - Supply Business	35.38	0	1.96	4.66	3.12
Interest on Working Capital - Total	91.79	31.72	31.70	35.92	36.15

2.10 Interest on Consumer Security Deposit

In FY 15-16, RInfra-D has paid interest on consumer security deposit as per Regulation 35.4 (c) of MYT Regulations, 2011, i.e. at Bank Rate of Reserve Bank of India (RBI). In FY 16-17, RInfra-D has paid interest on consumer security deposit as per Regulation 29.11 of the MYT Regulations, 2015, i.e. at SBI Base Rate plus 150 Basis Points. The Hon'ble Commission has notified the MERC MYT (First Amendment) Regulations, 2017 on 29th November 2017, wherein the definition of Base Rate has been changed to SBI MCLR. For FY 17-18, RInfra-D has estimated the interest on consumer security deposit by applying a the SBI MCLR as on 1st April 2017 plus 150 Basis Points as per MERC MYT (First Amendment) Regulations, 2017. For FY 18-19 and FY 19-20, RInfra-D has estimated the interest on consumer security deposit by applying SBI MCLR as on 1st April 2018 plus 150 Basis Points as per MERC MYT (First Amendment) Regulations, 2017. The summary of interest on consumer security deposit from FY 15-16 to FY 19-20 is shown in table below:

Table 15 : Interest on Consumer Security Deposits from FY 15-16 to FY 19-20

Particulars/(Rs. Crore)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
Interest on Consumer Security Deposits	27.79	39.19	36.29	40.31	42.33

2.11 Provision for Bad and Doubtful Debt

For FY 15-16, RInfra-D has claimed provision for bad debts as per Regulation 78.6 and 92.9 of the MYT Regulations, 2011, which is 1.5% of the receivables as per audited accounts of FY 15-16. For FY 16-17 and FY 17-18, RInfra-D has claimed provision for bad debts as per Regulation 82 of the MYT Regulations, 2015, which is 1.5% of the receivables as per audited accounts of FY 16-17 and FY 17-18. For FY 18-19 and FY 19-20, RInfra-D has claimed provision for bad debts on provisional basis at the same level as claimed for FY 17-18 in accordance with Regulation 82 of MYT Regulations, 2015. The summary of provision for bad debt claimed from FY 15-16 to FY 19-20 is shown in table below:

Table 16 : Provision for Bad and Doubtful Debts from FY 15-16 to FY 19-20

Particulars/(Rs. Crore)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
Provision for Bad Debts - Wires Business	3.90	3.84	2.61	2.61	2.61
Provision for Bad Debts - Supply Business	11.81	11.61	9.13	9.13	9.13
Provision for Bad Debts - Total	15.70	15.45	11.74	11.74	11.74

2.12 Contribution to Contingency Reserve

For FY 15-16, RInfra-D has calculated the contribution to contingency reserve as per Regulation 36.1 of the MYT Regulations, 2011, i.e. at 0.25% of the opening GFA for FY 15-16. For FY 16-17 to FY 19-20, RInfra-D has calculated the contribution to contingency reserve as per Regulation 34.1 of the MYT Regulations, 2015, i.e. at 0.25% of the opening GFA for each year of the Control Period. The summary of contribution to contingency reserve from FY 15-16 to FY 19-20 is shown in table below:

Table 17 : Contribution to Contingency Reserve from FY 15-16 to FY 19-20

Particulars/(Rs. Crore)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
Contribution to Contingency Reserve - Wires Business	11.15	12.24	13.23	14.03	14.92
Contribution to Contingency Reserve - Supply Business	1.24	1.27	1.25	1.27	1.36
Contribution to Contingency Reserve - Total	12.40	13.50	14.48	15.29	16.29

2.13 Demand Side Measures (DSM) Exepenses

There had not been any DSM expense by RInfra-D in FY 16-17 and FY 17-18. The estimated DSM Expenses for FY 18-19 and FY 19-20 based on the new DSM programs to be launched by RInfra-D is shown in table below:

Table 18 : DSM Expenses from FY 16-17 to FY 19-20

Particulars/(Rs. Crore)	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Provisional Actuals	Projections	Projections
DSM Expenses	0	0	2.61	4.16

2.14 Non Tariff Income

The actual Non Tariff Income (NTI) for FY 15-16 and FY 16-17 and provisional actuals for FY 17-18 are shown in table below. RInfra-D submits that it had received a show cause cum demand notice from the Central Board of Excise and Customs, Govt. on India, Mumbai regarding payment of service tax on Street Light Maintenance (SLM) charges received from MCGM. Through this notice, the Central Board of Excise and Customs has raised the demand of Rs. 46,20,65,214 /- (Rs. Fourty Six Crore Twenty Lakh Sixty Five Thousand Two Hundred Fourteen), which is the service tax on SLM charges received from MCGM from April 2011 to December 2016. The same has been deducted from the revenue from AIH charges received from Municipal Corporation of Greater Mumbai (MCGM) for FY 15-16 and FY 16-17, which is part of NTI for FY 15-16 and FY 16-17. Also till FY 14-15, revenue from AIH charges was being considered in the NTI of Supply Business, whereas the the street light assets are being considered in Wires Business. In order to correct the anomaly, RInfra-D has shifted the revenue from AIH charges from NTI of Supply Business to the NTI of Wires Business from FY 15-16 onwards. NTI for FY 18-19 and FY 19-20 has been estimated by escalating the recurring items of NTI by 5% over the amounts for FY 17-18 and by keeping other (non-recurring) items of NTI constant. The summary of NTI from FY 15-16 to FY 19-20 is shown in table below:

Table 19 : Non Tariff Income from FY 15-16 to FY 19-20

Particulars/(Rs. Crore)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
NTI - Wires Business	114.38	83.79	159.58	115.04	113.50
NTI - Supply Business	94.36	38.33	35.46	37.01	38.99
NTI - Total	208.75	122.12	195.04	152.05	152.49

2.15 Income from Other Business

As per MYT Regulations, 2011, one third of the actual income from other business for FY 15-16 has been considered for reduction from Wires ARR for FY 15-16. From FY 16-17 onwards, two thirds of the income from other business has been considered for reduction from Wires ARR from FY 16-17 to FY 19-20, in accordance with Regulation 75 of the MYT Regulations, 2015. A new arrangement has been made between RInfra-D and RInfra-Corporate for use of land at Santacruz belonging to RInfra-D. RInfra-D will receive rent from RInfra-Corporate for usage of its land at Santacruz. The rent payable by RInfra-Corporate to RInfra-D for its Santacruz land has been calculated in accordance with the methodology stipulated by Hon'ble ATE in its Judgment dated 8th April 2015 in Appeal No. 160 of 2012 and batch. The summary of income from other business considered for reduction from Wires ARR from FY 15-16 to FY 19-20 is shown in table below:

Table 20 : Income from Other Business from FY 15-16 to FY 19-20

Particulars/(Rs. Crore)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Provisional Actuals	Projections	Projections
Income from Other Business	3.65	25.88	25.98	25.58	25.58

2.16 Income Tax

RInfra-D has calculated income tax for FY 15-16 and FY 16-17 based on regulatory PBT method (income minus permissible expenses) and also in accordance with the provisions of Income Tax Act, 1961 (i.e. income tax liability is the higher of income tax as per corporate tax rate and income tax as per MAT). For FY 17-18 to FY 19-20, RInfra-D has provisionally considered the income tax at the same level as that of FY 16-17 as per first proviso to Regulation 33.1 of the MYT Regulations, 2015. The summary of income tax from FY 15-16 to FY 19-20 is shown in table below:

Table 21 : Income Tax from FY 15-16 to FY 19-20

Particulars/(Rs. Crore)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Estimates	Projections	Projections
Income Tax - Wires Business	88.09	61.63	61.63	61.63	61.63
Income Tax - Supply Business	265.57	189.86	189.86	189.86	189.86

Particulars/(Rs. Crore)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
	Actuals	Actuals	Estimates	Projections	Projections
Income Tax - Total	353.66	251.50	251.50	251.50	251.50

2.17 Efficiency Gain/Loss for FY 15-16

2.17.1 Efficiency Gain/Loss – Distribution Loss

The actual distribution loss for FY 15-16 was 9.24% as against the target of 9.36% approved by the Hon’ble Commission in RInfra-D’s MYT Order dated 22nd August 2013 in Case No. 9 of 2013. RInfra-D has calculated the efficiency gain for FY 15-16 in accordance with the methodology adopted by the Hon’ble Commission in previous Tariff Orders. Two thirds of the efficiency gain has been considered for inclusion in Supply ARR as per MYT Regulations, 2011.

2.17.2 Efficiency Gain/Loss – O&M Expenses

As stated earlier, the allowable O&M expense for FY 15-16 works out to Rs. 1049.50 Crore, whereas the actual O&M Expense for FY 15-16 was Rs. 1068.26 Crore. RInfra-D has considered the deviation of Rs. 18.76 Crore as efficiency loss and has determined the share of efficiency loss as one third of this amount to arrive at net entitlement for FY 15-16, in accordance with MYT Regulations, 2011.

2.18 Additional Returns due to Higher Wires and Supply Availability for FY 15-16

RInfra-D has calculated the additional returns due to higher Wires availability as Rs. 0.02 Crore and due to higher supply availability as Rs. 0.33 Crore for FY 15-16. The same have been included in the Wires ARR and Supply ARR for FY 15-16 respectively.

2.19 Efficiency Gain/Loss for FY 16-17

2.19.1 Efficiency Gain/Loss – Distribution Loss

The actual distribution loss for FY 16-17 was 8.83% as against the target of 9.11% approved by the Hon’ble Commission in RInfra-D’s MYT Order dated 21st October 2016 in Case No.34 of 2016. RInfra-D has calculated the efficiency gain for FY 16-17 in accordance with the methodology

adopted by the Hon'ble Commission in previous Tariff Orders. One third of the efficiency gain has been considered for inclusion in Supply ARR as per MYT Regulations, 2015.

2.19.2 Efficiency Gain/Loss – O&M Expense

As stated earlier, the allowable O&M expense for FY 16-17 works out to Rs. 1181.86 Crore, whereas the actual O&M Expense for FY 16-17 was Rs. 1170.52 Crore. RInfra-D has considered the deviation of Rs. 11.35 Crore as efficiency gain and has determined the share of efficiency gain as one third of this amount to arrive at net entitlement for FY 15-16, in accordance with MYT Regulations, 2015.

2.20 Aggregate Revenue Requirement for FY 15-16

The Wires Business ARR for FY 15-16 is shown in table below:

Table 22 : Wires ARR for FY 15-16

Particulars/(Rs. Crore)	Actual	MYT Order (Prov. True up)	Deviation
Operation & Maintenance Expenses	712.21	678.06	16.73
<i>Employee Expense</i>	<i>389.49</i>	<i>368.57</i>	<i>20.92</i>
<i>A&G Expense</i>	<i>114.00</i>	<i>112.45</i>	<i>1.55</i>
<i>R&M Expense</i>	<i>208.72</i>	<i>197.05</i>	<i>(5.74)</i>
Depreciation	195.82	201.56	(5.74)
Interest on Long-term Loan Capital	144.30	141.05	3.25
Interest on Working Capital	56.41	56.31	0.10
Provisioning for Bad & Doubtful Debts	3.90	4.24	(0.34)
Contribution to contingency reserves	11.15	11.11	0.04
Income Tax	88.09	80.49	7.60
Total Revenue Expenditure	1,211.88	1,172.82	21.64
Return on Equity Capital	265.82	262.59	3.23
Aggregate Revenue Requirement	1,477.71	1,435.41	24.87
Less: Non Tariff Income	114.38	41.85	72.53
Less: Income from Other Business	3.65	3.64	0.01
Efficiency Gain/(Loss) - O&M Expense	(8.60)	0	(8.60)
Additional Returns due to Wires Availability	0.02	0	0.02
Net Aggregate Revenue Requirement	1,351.09	1,389.92	(56.25)

The Supply Business ARR for FY 15-16 is shown in table below:

Table 23 : Supply ARR for FY 15-16

Particulars/(Rs. Crore)	Actual	MYT Order (Prov. True up)	Deviation
Power Purchase Expenses	4,043.96	4,124.80	(80.84)
Operation & Maintenance Expenses	356.05	341.45	14.60
<i>Employee Expense</i>	<i>274.72</i>	<i>253.70</i>	<i>21.02</i>
<i>A&G Expense</i>	<i>67.00</i>	<i>74.30</i>	<i>(7.30)</i>
<i>R&M Expense</i>	<i>14.32</i>	<i>13.45</i>	<i>0.87</i>
Depreciation	19.80	22.56	(2.76)
Interest on Long-term Loan Capital	10.90	12.07	(1.17)
Interest on Working Capital	35.38	31.28	4.10
Interest on Consumer Security Deposits	27.79	28.19	(0.40)
Provisioning for Bad & Doubtful Debts	11.81	12.71	(0.90)
Contribution to contingency reserves	1.24	1.26	(0.02)
Intra State Transmission Charges	350.36	350.36	0.00
MSLDC Charges	1.69	1.79	(0.10)
Income Tax	265.57	208.98	56.59
Total Revenue Expenditure	5,124.54	5,135.44	(10.90)
Return on Equity Capital	27.40	28.23	(0.83)
Aggregate Revenue Requirement	5,151.94	5,163.67	(11.73)
Less: Non Tariff Income	94.36	219.98	(125.62)
Efficiency Gain/(Loss) - Distribution Loss	7.43	0	7.43
Efficiency Gain/(Loss) - O&M Expense	(3.90)	0	(3.90)
Additional Returns due to Supply Availability	0.33	0	0.33
Net Aggregate Revenue Requirement	5,061.43	4,943.69	117.74

The Wires and Supply Business ARR for FY 15-16 is shown in table below:

Table 24 : Wires and Supply ARR for FY 15-16

Particulars/(Rs. Crore)	Actual	MYT Order (Prov. True up)	Deviation
Power Purchase Expenses	4,043.96	4,124.80	(80.84)
Operation & Maintenance Expenses	1,068.26	1,019.51	48.74
<i>Employee Expense</i>	<i>664.21</i>	<i>622.27</i>	<i>41.94</i>
<i>A&G Expense</i>	<i>181.01</i>	<i>186.75</i>	<i>(5.74)</i>
<i>R&M Expense</i>	<i>223.04</i>	<i>210.50</i>	<i>12.54</i>
Depreciation	215.62	224.12	(8.50)
Interest on Long-term Loan Capital	155.19	153.12	2.07
Interest on Working Capital	91.79	87.59	4.20

Particulars/(Rs. Crore)	Actual	MYT Order (Prov. True up)	Deviation
Interest on Consumer Security Deposits	27.79	28.19	(0.40)
Provisioning for Bad & Doubtful Debts	15.70	16.95	(1.25)
Contribution to contingency reserves	12.40	12.37	0.02
Intra State Transmission Charges	350.36	350.36	0.00
MSLDC Charges	1.69	1.79	(0.10)
Income Tax	353.66	289.47	64.19
Total Revenue Expenditure	6,336.42	6,308.26	28.15
Return on Equity Capital	293.23	290.82	2.41
Aggregate Revenue Requirement	6,629.65	6,599.07	30.55
Less: Non Tariff Income	208.75	261.83	(53.08)
Less: Income from Other Business	3.65	3.64	0.01
Efficiency Gain/(Loss) - Distribution Loss	7.43	0	7.43
Efficiency Gain/(Loss) - O&M Expense	(12.51)	0	(12.51)
Additional Returns due to Wires & Supply Availability	0.35	0	0.35
Net Aggregate Revenue Requirement	6,412.52	6,333.60	78.90

2.21 Revenue Gap for FY 15-16

The revenue related to Wires Business for FY 15-16 is shown in table below:

Table 25 : Revenue Related to Wires Business for FY 15-16

Particulars	Rs. Crore
Revenue from Wheeling Charge from own consumers	1,277.40
Revenue from Wheeling Charge from changeover and OA consumers	348.96
Total	1,626.36

Based on the revenue related to Wires Business for 15-16, the revenue gap/(surplus) for Wires Business for FY 15-16 is shown in table below:

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

Particulars/(Rs. Crore)	Actual	MYT Order (Prov. True up)	Difference
Wires ARR	1,351.09	1,389.92	(38.83)

Particulars/(Rs. Crore)	Actual	MYT Order (Prov. True up)	Difference
Revenue Gap allowed in MTR Order (Case No. 4 of 2015)	366.18	366.18	0
Wires ARR with Revenue Gap	1,717.27	1,756.10	(38.83)
Revenue from Wheeling Charges from changeover and OA consumers	348.96	348.96	0
Net Wires ARR	1,368.31	1,407.14	(38.83)
Revenue from Wheeling Charges from Own Consumers	1,277.40	1,277.40	(0)
Revenue Gap of Wires Business	90.91	129.74	(38.83)
Carrying Cost (%)	14.29%		
Carrying Cost	6.50		6.50
Revenue Gap with carrying cost	97.41	129.74	(32.33)

The revenue related to Supply Business for FY 15-16 is shown in table below:

Table 27 : Revenue Gap Related to Supply Business for FY 15-16

Particulars	Rs. Crore
Revenue from own consumers	4,893.32
Revenue from CSS	28.79
Revenue from transmission charges from OA consumers	3.23
Total	4,925.34

Based on the revenue related to Supply Business for 15-16, the revenue gap/(surplus) for Supply Business for FY 15-16 is shown in table below:

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

Particulars/(Rs. Crore)	Actual	MYT Order (Prov. True up)	Difference
Supply ARR	5,061.43	4,943.69	117.74
Revenue Gap allowed in MTR Order (Case No. 4 of 2015)	(119.79)	(119.79)	0
Supply ARR with Revenue Gap	4,941.64	4,823.88	117.76
Revenue from CSS from changeover and OA consumers	32.02	28.79	3.23
Net Supply ARR	4,909.62	4,795.09	114.53
Revenue from Sales	4,893.32	4,890.54	2.78
Revenue Gap of Supply Business	16.30	(95.45)	111.75

Particulars/(Rs. Crore)	Actual	MYT Order (Prov. True up)	Difference
Carrying Cost (%)	14.29%		
Carrying Cost	1.16		1.16
Revenue Gap with carrying cost	17.46	(95.45)	112.91

The revenue related to both Wires and Supply Business in FY 15-16 is shown in table below:

Table 29 : Revenue Related to Wires and Supply Business for FY 15-16

Particulars	Rs. Crore
Revenue from own consumers	6,170.72
Revenue from Wheeling Charges and CSS from changeover and OA consumers	377.75
Revenue from transmission charges from OA consumers	3.23
Total	6,551.70

The revenue gap/(surplus) for both Wires and Supply Business in FY 15-16 is shown in table below:

Table 30 : Revenue Gap of Wires and Supply Business for FY 15-16

Particulars/(Rs. Crore)	Actual	MYT Order (Prov. True up)	Difference
Wires & Supply ARR	6,412.52	6,333.60	78.91
Revenue Gap allowed in MTR Order (Case No. 4 of 2015)	246.39	246.39	0
Wires & Supply ARR with Revenue Gap	6,658.91	6,579.99	78.91
Revenue from Wheeling Charges / CSS from Changeover Consumers	380.98	377.75	3.23
Net ARR	6,277.93	6,202.24	75.67
Revenue from Sales	6,170.72	6,167.94	3
Revenue Gap	107.21	34.30	72.90
Carrying Cost (%)	14.29%		
Carrying Cost	7.66		7.66
Revenue Gap with carrying cost	114.88	34.30	80.56

RInfra-D submits that the carrying cost corresponding to the revenue gap as projected above for half year is also added to the revenue gap as shown above. This is done in accordance with the Judgment of the Hon'ble ATE dated 11th November 2011 in OP 1 of 2011, which states that carrying cost on

Regulatory Assets should be allowed to the Distribution Licensees in order to avoid the problem of cash flow to the regulated entity. The relevant section of the Order is reproduced below:

“In determination of ARR/tariff, the revenue gaps ought not to be left and Regulatory Asset should not be created as a matter of course except where it is justifiable, in accordance with the Tariff Policy and the Regulations. The recovery of the Regulatory Asset should be time bound and within a period not exceeding three years at the most and preferably within Control Period. Carrying cost of the Regulatory Asset should be allowed to the utilities in the ARR of the year in which the Regulatory Assets are created to avoid problem of cash flow to the distribution licensee.”(Emphasis added)

As per the above judgment, as the regulatory asset / gap is recognised in a given year, the carrying cost on the same is required to be allowed in the said year itself. The Hon’ble Commission would appreciate that the revenue gap for a given year is realised mid-year (assuming even generation of revenue gap throughout the year) and is required to be financed in the said year itself. Therefore, revenue gap of a given financial year should be considered by including the cost of funding such gap in the said year itself and the total revenue gap (principal plus half year interest) should be considered as the total revenue gap carried forward till year of recovery, along with further carrying cost, determined on simple interest basis. RInfra-D submits that this is not only a fair principle, as not only is this in line with the ruling of the Hon’ble ATE, but would also be in conformance with the MYT Regulations, which permit simple interest on revenue gap.

2.22 Aggregate Revenue Requirement for FY 16-17

The Wires ARR for FY 16-17 is shown in table below:

Table 31 : Wires Business ARR for FY 16-17

Particulars/(Rs. Crore)	Actual	MYT Order	Deviation
O&M Expenses	861.55	702.94	158.61
<i>Base O&M Expenses</i>	<i>728.84</i>	<i>702.94</i>	<i>25.90</i>
<i>Impact of wage agreements in FY 16-17</i>	<i>49.83</i>		<i>49.83</i>
<i>Wage revision arrears of FY 15-16</i>	<i>48.04</i>		<i>48.04</i>
<i>Wage revision arrears of FY 14-15</i>	<i>34.84</i>		<i>34.84</i>
Depreciation	201.00	193.67	7.33
Interest on Long-term Loan Capital	156.64	142.09	14.55
Interest on Working Capital	31.72	30.16	1.56

Particulars/(Rs. Crore)	Actual	MYT Order	Deviation
Provisioning for Bad & Doubtful Debts	3.84	2.44	1.40
Contribution to contingency reserves	12.24	11.96	0.27
Income Tax	61.63	80.49	(18.86)
Total Revenue Expenditure	1,328.61	1,163.75	164.86
Return on Equity Capital	283.68	277.09	6.59
Aggregate Revenue Requirement	1,612.29	1,440.84	171.45
Less: Non Tariff Income	83.79	44.13	39.66
Less: Income from Other Business	25.88	14.26	11.62
Add: Eff. Gain/(Loss) - O&M Expense	3.65	0	3.65
Net Aggregate Revenue Requirement	1,506.27	1,382.45	123.82

The Supply ARR for FY 16-17 is shown in table below:

Table 32 : Supply Business ARR for FY 16-17

Particulars/(Rs. Crore)	Actual	MYT Order	Deviation
Power Purchase Expenses	4,123.56	4,302.48	(178.92)
O&M Expenses	428.86	348.86	80.00
<i>Base O&M Expenses</i>	<i>370.38</i>	<i>348.86</i>	<i>21.52</i>
<i>Impact of wage agreements in FY 16-17</i>	<i>21.47</i>		<i>21.47</i>
<i>Wage revision arrears of FY 15-16</i>	<i>21.26</i>		<i>21.26</i>
<i>Wage revision arrears of FY 14-15</i>	<i>15.75</i>		<i>15.75</i>
Depreciation	20.95	24.00	(3.05)
Interest on Long-term Loan Capital	10.33	12.02	(1.69)
Interest on Working Capital	0.00	5.06	(5.06)
Interest on Consumer Security Deposits	39.19	42.22	(3.03)
Provisioning for Bad & Doubtful Debts	11.61	10.86	0.75
Contribution to contingency reserves	1.27	1.34	(0.07)
Intra State Transmission Charges	329.67	333.11	(3.44)
MSLDC Charges	1.22	1.06	0.16
DSM Expenses	0	2.45	(2.45)
Income Tax	189.86	208.98	(19.12)
Total Revenue Expenditure	5,156.52	5,292.40	(135.92)
Return on Equity Capital	27.80	29.71	(1.91)
Aggregate Revenue Requirement	5,184.32	5,322.11	(137.83)
Less: Non Tariff Income	38.33	165.49	(127.16)
Add: Eff. Gain/(Loss) - Distribution loss	8.65	0	8.65
Add: Eff. Gain/(Loss) - O&M Expense	0.13	0	0.13
Net Aggregate Revenue Requirement	5,154.77	5,156.62	(1.89)

The Wires and Supply ARR for FY 16-17 is shown in table below:

Table 33 : Wires and Supply Business ARR for FY 16-17

Particulars/(Rs. Crore)	Actual	MYT Order	Deviation
Power Purchase Expenses	4,123.56	4,302.48	(178.92)
O&M Expenses	1,290.41	1,051.80	238.61
<i>Base O&M Expenses</i>	<i>1,099.22</i>	<i>1,051.80</i>	<i>47.42</i>
<i>Impact of wage agreements in FY 16-17</i>	<i>71.30</i>		<i>71.30</i>
<i>Wage revision arrears of FY 15-16</i>	<i>69.30</i>		<i>69.30</i>
<i>Wage revision arrears of FY 14-15</i>	<i>50.59</i>		<i>50.59</i>
Depreciation	221.95	217.67	4.28
Interest on Long-term Loan Capital	166.97	154.11	12.86
Interest on Working Capital	31.72	35.22	(3.50)
Interest on Consumer Security Deposits	39.19	42.22	(3.03)
Provisioning for Bad & Doubtful Debts	15.45	13.30	2.15
Contribution to contingency reserves	13.50	13.30	0.20
Intra State Transmission Charges	329.67	333.11	(3.44)
MSLDC Charges	1.22	1.06	0.16
DSM Expenses	0	2.45	(2.45)
Income Tax	251.50	289.47	(37.97)
Total Revenue Expenditure	6,485.13	6,456.15	28.94
Return on Equity Capital	311.48	306.80	4.68
Aggregate Revenue Requirement	6,796.61	6,762.95	33.62
Less: Non Tariff Income	122.12	209.62	(87.50)
Less: Income from Other Business	25.88	14.26	11.62
Add: Eff. Gain/(Loss) - Distribution loss	8.65	0	8.65
Add: Eff. Gain/(Loss) - O&M Expense	3.78	0	3.78
Net Aggregate Revenue Requirement	6,661.04	6,539.07	121.93

2.23 Revenue Gap for FY 16-17

The revenue related to Wires Business for FY 16-17 is shown in table below:

Table 34 : Revenue related to Wires Business in FY 16-17

Particulars	Rs. Crore
Revenue from Wheeling Charge from own consumers	1,277.19
Revenue from Wheeling Charge from changeover and OA consumers	304.96
Total	1,582.15

Based on the revenue related to Wires Business for FY 16-17, the revenue gap for Wires Business for FY 16-17 is shown in table below:

Table 35 : Revenue Gap of Wires Business in FY 16-17

Particulars/(Rs. Crore)	Actual	MYT Order	Difference
Wires ARR	1,506.27	1,382.45	123.82
Revenue Gap allowed in MYT Order	196.03	196.03	0
Wires ARR with Revenue Gap	1,702.30	1,578.48	123.82
Revenue from Wheeling Charges from changeover and OA consumers	304.96	337.38	(32.42)
Net Wires ARR	1,397.34	1,241.10	156.24
Revenue from Wheeling Charges from Own Consumers	1,277.19	1,241.10	36.09
Revenue Gap of Wires Business	120.15	0	120.15
Carrying Cost (%)	10.79%		
Carrying Cost	6.48		6.48
Revenue Gap with carrying cost	126.63	0	126.63

The revenue related to Supply Business for FY 16-17 is shown in table below:

Table 36 : Revenue related to Supply Business in FY 16-17

Particulars	Rs. Crore
Revenue from own consumers	4,694.84
Revenue from CSS	84.24
Revenue from transmission charges from OA consumers	4.94
Total	4,784.01

Based on the revenue related to Supply Business for FY 16-17, the revenue gap for Supply Business for FY 16-17 is shown in table below:

Table 37 : Revenue Gap of Supply Business in FY 16-17

Particulars/(Rs. Crore)	Actual	MYT Order	Difference
Supply ARR	5,154.77	5,156.62	(1.85)
Revenue Gap allowed in MYT Order	108.05	108.05	0
Supply ARR with Revenue Gap	5,262.82	5,264.67	(1.85)
Revenue from CSS from changeover and OA consumers	89.18	217.65	(128.47)
Net Supply ARR	5,173.65	5,047.02	126.63
Revenue from Sales	4,694.84	5,047.15	(352.31)
Revenue Gap of Supply Business	478.81	(0.13)	478.94

Particulars/(Rs. Crore)	Actual	MYT Order	Difference
Carrying Cost (%)	10.79%		
Carrying Cost	25.83		25.83
Revenue Gap with carrying cost	504.64	(0.13)	504.77

The revenue related to Wires and Supply Business for FY 16-17 is shown in table below:

Table 38 : Revenue related to Wires and Supply Business in FY 16-17

Particulars	Rs. Crore
Revenue from own consumers	5,972.03
Revenue from Wheeling Charges and CSS from changeover and OA consumers	389.20
Revenue from transmission charges from OA consumers	4.94
Total	6,366.17

The revenue gap of both Wires and Supply Business for FY 16-17 is shown in table below:

Table 39 : Revenue Gap of Wires and Supply Business in FY 16-17

Particulars/(Rs. Crore)	Actual	MYT Order	Difference
Wires & Supply ARR	6,661.04	6,539.07	121.97
Revenue Gap allowed in MYT Order	304.08	304.08	0
Wires & Supply ARR with Revenue Gap	6,965.12	6,843.15	121.97
Revenue from Wheeling Charges / CSS from Changeover Consumers	394.14	555.03	(160.89)
Net ARR	6,570.99	6,288.12	282.87
Revenue from Sales	5,972.03	6,288.25	(316.22)
Revenue Gap	598.96	(0.13)	599.09
Carrying Cost (%)	10.79%		
Carrying Cost	32.31		32.31
Revenue Gap with carrying cost	631.27	(0.13)	631.40

2.24 Aggregate Revenue Requirement for FY 17-18

The Wires ARR for FY 17-18 is shown in table below:

Table 40 : Wires Business ARR for FY 17-18

Particulars/(Rs. Crore)	Provisional Actuals	MYT Order	Deviation
O&M Expenses	829.48	724.05	105.43
Depreciation	214.86	204.35	10.51
Interest on Long-term Loan Capital	161.31	139.29	22.02

Particulars/(Rs. Crore)	Provisional Actuals	MYT Order	Deviation
Interest on Working Capital	29.74	31.24	(1.50)
Provisioning for Bad & Doubtful Debts	2.61	2.44	0.17
Contribution to contingency reserves	13.23	12.80	0.42
Income Tax	61.63	80.49	(18.86)
Total Revenue Expenditure	1,312.86	1,194.65	118.20
Return on Equity Capital	299.51	288.91	10.60
Aggregate Revenue Requirement	1,612.38	1,483.56	128.81
Less: Non Tariff Income	159.58	46.64	112.94
Less: Income from Other Business	25.98	14.98	11.00
Net Aggregate Revenue Requirement	1,426.82	1,421.94	4.87

The Supply ARR for FY 17-18 is shown in table below:

Table 41 : Supply Business ARR for FY 17-18

Particulars/(Rs. Crore)	Provisional Actuals	MYT Order	Deviation
Power Purchase Expenses	4,343.24	4,405.54	(62.30)
O&M Expenses	412.06	359.21	52.85
Depreciation	20.72	25.01	(4.29)
Interest on Long-term Loan Capital	9.89	11.11	(1.22)
Interest on Working Capital	1.96	5.26	(3.30)
Interest on Consumer Security Deposits	36.29	42.86	(6.57)
Provisioning for Bad & Doubtful Debts	9.13	10.86	(1.73)
Contribution to contingency reserves	1.25	1.41	(0.16)
Intra State Transmission Charges	402.00	402.02	(0.02)
MSLDC Charges	1.30	1.30	0.00
DSM Expenses	0.00	5.19	(5.19)
Income Tax	189.86	208.98	(19.12)
Total Revenue Expenditure	5,427.70	5,478.70	(51.05)
Return on Equity Capital	27.53	30.93	(3.40)
Aggregate Revenue Requirement	5,455.23	5,509.63	(54.45)
Less: Non Tariff Income	35.46	166.16	(130.70)
Net Aggregate Revenue Requirement	5,419.77	5,343.47	76.25

The Wires and Supply ARR for FY 17-18 is shown in table below:

Table 42 : Wires and Supply Business ARR for FY 17-18

Particulars/(Rs. Crore)	Provisional Actuals	MYT Order	Deviation
Power Purchase Expenses	4,343.24	4,405.54	(62.30)

Particulars/(Rs. Crore)	Provisional Actuals	MYT Order	Deviation
O&M Expenses	1,241.55	1,083.26	158.29
Depreciation	235.58	229.36	6.22
Interest on Long-term Loan Capital	171.20	150.40	20.80
Interest on Working Capital	31.70	36.50	(4.80)
Interest on Consumer Security Deposits	36.29	42.86	(6.57)
Provisioning for Bad & Doubtful Debts	11.74	13.30	(1.56)
Contribution to contingency reserves	14.48	14.21	0.27
Intra State Transmission Charges	402.00	402.02	(0.02)
MSLDC Charges	1.30	1.30	0.00
DSM Expenses	0.00	5.19	(5.19)
Income Tax	251.50	289.47	(37.97)
Total Revenue Expenditure	6,740.56	6,673.35	67.09
Return on Equity Capital	327.05	319.84	7.21
Aggregate Revenue Requirement	7,067.61	6,993.19	74.30
Less: Non Tariff Income	195.04	212.80	(17.76)
Less: Income from Other Business	25.98	14.98	11.00
Net Aggregate Revenue Requirement	6,846.59	6,765.41	81.06

2.25 Revenue Gap for FY 17-18

The revenue related to Wires Business (provisional actuals) for FY 17-18 is shown in table below:

Table 43 : Revenue related to Wires Business for FY 17-18

Particulars	Rs. Crore
Revenue from Wheeling Charge from own consumers	1,251.84
Revenue from Wheeling Charge from changeover and OA consumers	283.83
Total	1,535.66

Based on the revenue related to Wires Business for FY 17-18, the revenue gap for Wires Business for FY 17-18 is shown in table below:

Table 44 : Revenue Gap for Wires Business for FY 17-18

Particulars/(Rs. Crore)	Provisional Actuals	MYT Order	Deviation
Wires ARR	1,426.82	1,421.94	4.88
Revenue Gap allowed in MYT Order	179.36	179.36	0

Particulars/(Rs. Crore)	Provisional Actuals	MYT Order	Deviation
Wires ARR with Revenue Gap	1,606.18	1,601.30	4.88
Revenue from Wheeling Charges from changeover and OA consumers	283.83	342.64	(58.81)
Net Wires ARR	1,322.35	1,258.66	63.69
Revenue from Wheeling Charges from Own Consumers	1,251.84	1,258.66	(6.82)
Revenue Gap of Wires Business	70.51	0	70.51

The revenue related to Supply Business (provisional actuals) for FY 17-18 is shown in table below:

Table 45 : Revenue related to Supply Business for FY 17-18

Particulars	Rs. Crore
Revenue from own consumers	4,694.84
Revenue from CSS	162.17
Revenue from transmission charges from OA consumers	8.06
Total	4,865.07

Based on the revenue related to Supply Business for FY 17-18, the revenue gap for Supply Business for FY 17-18 is shown in table below:

Table 46 : Estimated Revenue Gap for Supply Business for FY 17-18

Particulars/(Rs. Crore)	Provisional Actuals	MYT Order	Difference
Supply ARR	5,419.77	5,343.47	76.30
Revenue Gap allowed in MYT Order	98.86	98.86	0
Supply ARR with Revenue Gap	5,518.63	5,442.33	76.30
Revenue from CSS from changeover and OA consumers	170.24	204.21	(33.97)
Net Supply ARR	5,348.40	5,238.12	110.28
Revenue from Sales	5,195.50	5,237.80	(42.30)
Revenue Gap of Supply Business	152.90	0.32	152.58

The revenue related to Wires and Supply Business (provisional actuals) for FY 17-18 is shown in table below:

Table 47 : Revenue related to Wires and Supply Business for FY 17-18

Particulars	Rs. Crore
Revenue from own consumers	5,946.67

Particulars	Rs. Crore
Revenue from Wheeling Charges and CSS from changeover and OA consumers	446.00
Revenue from transmission charges from OA consumers	8.06
Total	6,400.74

Based on the revenue related to Wires and Supply Business for FY 17-18, the revenue gap for Wires and Supply Business for FY 17-18 is shown in table below:

Table 48 : Estimated Revenue Gap of Wires and Supply Business for FY 17-18

Particulars/(Rs. Crore)	Provisional Actuals	MYT Order	Difference
Wires & Supply ARR	6,846.59	6,765.41	81.18
Revenue Gap allowed in MYT Order	278.22	278.22	0
Wires & Supply ARR with Revenue Gap	7,124.81	7,043.63	81.18
Revenue from Wheeling Charges / CSS from Changeover Consumers	454.06	546.85	(92.79)
Net ARR	6,670.75	6,496.78	173.97
Revenue from Sales	6,447.33	6,496.46	(49.13)
Revenue Gap	223.42	0.32	223.10

2.26 Aggregate Revenue Requirement for FY 18-19 and FY 19-20

The Aggregate Revenue Requirement for Wires Business for FY 18-19 and FY 19-20 are as under:

Table 49 : Aggregate Revenue Requirement for Wires Business for FY 18-19 and FY 19-20

Particulars / (Rs. Crore)	FY 18-19		FY 19-20	
	Projections	MYT Order	Projections	MYT Order
O&M Expenses	871.37	745.35	915.38	767.30
Depreciation	228.24	211.03	244.59	214.68
Interest on Long-term Loan Capital	153.41	128.20	157.64	113.20
Interest on Working Capital	31.26	31.97	33.02	32.46
Provisioning for Bad & Doubtful Debts	2.61	2.44	2.61	2.44
Contribution to contingency reserves	14.03	13.35	14.92	13.70
Income Tax	61.63	80.49	61.63	80.49
Total Revenue Expenditure	1,362.55	1,212.81	1,429.80	1,224.27
Return on Equity Capital	313.42	296.30	331.05	300.35
Aggregate Revenue Requirement	1,675.98	1,509.11	1,760.85	1,524.62
Less: Non Tariff Income	115.04	49.41	113.50	52.45

Particulars / (Rs. Crore)	FY 18-19		FY 19-20	
	Projections	MYT Order	Projections	MYT Order
Less: Income from Other Business	25.58	15.77	25.58	17.61
Net Aggregate Revenue Requirement	1,535.36	1,443.93	1,621.77	1,454.56

The Aggregate Revenue Requirement for Supply Business for FY 18-19 and FY 19-20 are as under:

Table 50: Aggregate Revenue Requirement for Supply Business for FY 18-19 and FY 19-20

Particulars	FY 18-19		FY 19-20	
	Projections	MYT Order	Projections	MYT Order
Power Purchase Expenses	4,552.20	4,549.00	4,655.73	4,693.74
O&M Expenses	432.87	369.87	454.73	380.84
Depreciation	21.94	25.87	23.35	26.86
Interest on Long-term Loan Capital	9.00	9.80	8.99	8.79
Interest on Working Capital	4.66	4.82	3.12	4.75
Interest on Consumer Security Deposits	40.31	44.14	42.33	45.47
Provisioning for Bad & Doubtful Debts	9.13	10.86	9.13	10.86
Contribution to contingency reserves	1.27	1.46	1.36	1.51
Intra State Transmission Charges	437.03	437.03	428.23	428.23
MSLDC Charges	1.29	1.29	1.26	1.26
DSM Expenses	2.61	2.20	4.16	0
Income Tax	189.86	208.98	189.86	208.98
Total Revenue Expenditure	5,702.17	5,665.32	5,822.26	5,811.30
Return on Equity Capital	28.34	31.96	29.98	33.16
Aggregate Revenue Requirement	5,730.52	5,697.28	5,852.24	5,844.46
Less: Non Tariff Income	37.01	166.87	38.99	167.63
Net Aggregate Revenue Requirement	5,693.50	5,530.41	5,813.25	5,676.83

The Aggregate Revenue Requirement for Wires and Supply Business for FY 18-19 and FY 19-20 are as under:

Table 51 : Aggregate Revenue Requirement for Wires and Supply Business for FY 18-19 and FY 19-20

Particulars	FY 18-19		FY 19-20	
	Projections	MYT Order	Projections	MYT Order
Power Purchase Expenses	4,552.20	4,549.00	4,655.73	4,693.74
O&M Expenses	1,304.25	1,115.22	1,370.11	1,148.14

Particulars	FY 18-19		FY 19-20	
	Projections	MYT Order	Projections	MYT Order
Depreciation	250.17	236.90	267.94	241.54
Interest on Long-term Loan Capital	162.42	138.00	166.63	121.99
Interest on Working Capital	35.92	36.79	36.15	37.21
Interest on Consumer Security Deposits	40.31	44.14	42.33	45.47
Provisioning for Bad & Doubtful Debts	11.74	13.30	11.74	13.30
Contribution to contingency reserves	15.29	14.81	16.29	15.21
Intra State Transmission Charges	437.03	437.03	428.23	428.23
MSLDC Charges	1.29	1.29	1.26	1.26
DSM Expenses	2.61	2.20	4.16	0
Income Tax	251.50	289.47	251.50	289.47
Total Revenue Expenditure	7,064.73	6,878.13	7,252.06	7,035.58
Return on Equity Capital	341.77	328.26	361.03	333.51
Aggregate Revenue Requirement	7,406.49	7,206.39	7,613.10	7,369.09
Less: Non Tariff Income	152.05	216.28	152.49	220.08
Less: Income from Other Business	25.58	15.77	25.58	17.61
Net Aggregate Revenue Requirement	7,228.86	6,974.34	7,435.02	7,131.40

2.27 Cumulative Revenue Gap

The cumulative revenue gap for Wires Business till FY 17-18 is shown in table below:

Table 52 : Cumulative Revenue Gap of Wires Business till FY 17-18

Particulars	Rs. Crore
Incremental Revenue Gap of FY 15-16	(32.33)
Revenue Gap of FY 16-17	126.63
Provisional Revenue Gap of FY 17-18	70.51
Carrying cost on Revenue Gap of FY 15-16	11.50
Carrying cost on Revenue Gap of FY 16-17	12.92
Total	189.22

The cumulative revenue gap for Supply Business till FY 17-18 is shown in table below:

Table 53 : Cumulative Revenue Gap of Supply Business till FY 17-18

Particulars	Rs. Crore
Incremental Revenue Gap of FY 15-16	112.91
Revenue Gap of FY 16-17	504.64
Provisional Revenue Gap of FY 17-18	152.90

Particulars	Rs. Crore
Carrying cost on Revenue Gap of FY 15-16	10.25
Carrying cost on Revenue Gap of FY 16-17	51.47
Total	832.18

The cumulative revenue gap for Wires and Supply Business till FY 17-18 is shown in table below:

Table 54 : Cumulative Revenue Gap of Wires and Supply Business till FY 17-18

Particulars	Rs. Crore
Incremental Revenue Gap of FY 15-16	80.58
Revenue Gap of FY 16-17	631.27
Provisional Revenue Gap of FY 17-18	223.42
Carrying cost on Revenue Gap of FY 15-16	21.75
Carrying cost on Revenue Gap of FY 16-17	64.39
Total	1,021.40

2.28 Regulatory Asset Recovery in FY 18-19

The Hon'ble Commission had determined RA principal outstanding of Rs. 2307.77 Crore as on 1st April 2016 in RInfra-D's MYT Order dated 21st October 2016. Based on this amount, the Hon'ble Commission had allowed RA recovery of Rs. 893.88 Crore each year from FY 16-17 to FY 18-19. The actual RA recovery through RAC in FY 16-17 in FY 17-18 are shown in table below:

Table 55: Actual RA Recovery in FY 16-17 and estimated RA Recovery in FY 17-18

Particulars	FY 16-17	FY 17-18
RA Recovery allowed	893.88	893.88
Actual RA Recovery	829.25	851.37
RA Under recovery	64.63	42.51

As seen from above table, there was under recovery in RA in FY 16-17 and in FY 17-18. In the MYT Order, the Hon'ble Commission had approved the following principal and interest recovery for Regulatory Assets for FY 16-17 to FY 18-19:

Table 56: RA Principal and RA Carrying cost allowed by Hon'ble Commission in RInfra-D's MYT Order

Particulars / (Rs. Crore)	FY 16-17	FY 17-18	FY 18-19
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Particulars / (Rs. Crore)	FY 16-17	FY 17-18	FY 18-19
RA Recovery allowed	893.88	893.88	893.88
RA Principal recovery allowed	769.26	769.26	769.26
Carrying cost recovery allowed	124.62	124.62	124.62

Using the same ratio of Principal and Interest as approved in the MYT Order, the actual total RA recovered as shown in the table above for FY 16-17 and FY 17-18 is divided between Principal recovered and Interest recovered as shown in the table below:

Table 57: Segregation of RA Recovery into RA Principal and RA Carrying Cost

Particulars	FY 16-17	FY 17-18
Actual RA Recovery	829.25	851.37
RA Principal recovery	713.64	732.68
Carrying cost recovery	115.61	118.69

Based on the methodology adopted by the Hon'ble Commission in the MYT Order, the RA principal outstanding as on 01.04.18 is worked out by subtracting the RA principal estimated to be recovered up to FY 17-18 from total approved RA as on 01.04.16 (Rs. 2307.77 Crore). This is shown in the table below:

Table 58: RA Principal Outstanding as on 1st April 2018

Particulars	FY 16-17	FY 17-18
RA Principal Opening	2,307.77	1,594.13
Recovery	713.64	732.68
RA Principal Closing	1,594.13	861.45

The abovementioned outstanding estimated RA principal amount as on 01.04.18 is proposed to be recovered in FY 18-19, along with associated carrying cost worked out using prevailing one year MCLR rate of SBI (8.25%), plus 150 basis points as per the proposed amendments of MYT Regulations, 2015. The total proposed recovery of RA amount, along with carrying cost for FY 18-19 is shown in the table below.

Table 59: Proposed RA Recovery in FY 18-19

Particulars	FY 18-19
Carrying cost (%)	9.65%
RA Principal	861.45
Carrying cost	41.56
RA Recovery	903.02

RInfra-D has determined the category wise RAC for FY 18-19 recoverable from all consumers (own, changeover and OA) using the same methodology as used in its MYT Petition (Case No. 34 of 2016). The category wise RAC proposed for FY 18-19 are presented in the subsequent chapter.

3 TARIFF PROPOSAL

As seen from above, the cumulative revenue gap till FY 17-18 works out to Rs. 1021.40 Crore. This cumulative revenue gap can be recovered either entirely in FY 18-19 or over a number of years. It is seen that the cumulative Revenue Gap is a significantly large amount and, if recovered, in a single year with carrying cost, say, in FY 18-19 alone, it would cause an average tariff hike of about 15% leading to a massive tariff shock to consumers and the tariffs of FY 19-20 would then drop on an average by 22%. This is shown in the table below:

Table 60: Tariff Hike/Reduction if entire past gap is recovered in FY 18-19

Particulars	FY 18-19	FY 19-20
Wires and Supply ARR	7,228.85	7,435.03
Past Gap allowed in MYT Order (restated)	242.47	
Past Gap till FY 17-18	1,071.20	
Total to be recovered	8,542.52	7,435.03
Revenue at revised Wheeling Charge & CSS from changeover consumers	591.25	450.36
Net ARR to be recovered from own consumers	7,951.27	6,984.66
RA Recovery from RAC	755.65	0
ARR recovery + RA recovery from own consumers	8,706.91	6,984.66
Revenue at existing tariff from own consumers	6,838.76	8189.28
RA Recovery from RAC	701.40	778.69
Revenue + RA Recovery from existing tariff & RAC	7,540.17	8,967.97
Short fall at existing Tariff	1,166.75	(1,983.31)
Tariff Hike required	15.47%	-22.12%

This is highly tumultuous and is also not in sync with the Hon'ble Commission's own approach in the past, which has been one of allowing smooth tariff changes over a multi-year period, instead of a topsy-turvy trajectory. Accordingly RInfra-D proposes to recover the cumulative revenue gap till FY 17-18 in the following way:

- a. In order to keep the tariff hike in FY 18-19 to a minimum, RInfra-D proposes that no part of cumulative revenue gap till FY 17-18 be recovered in FY 18-19, i.e. only the standalone ARR for FY 18-19 and the revenue gap allowed to be recovered in MYT Order (adjusted by RInfra-D as stated in the section above) are proposed to be recovered in FY 18-19.
- b. As per MYT Order, the approved tariff of FY 19-20 was lower than that of FY 18-19 by almost 13%. In order to not deviate too much from the said approach at the time of Mid-Term Review, RInfra-D proposes to recover 40% of the cumulative revenue gap till FY 17-18 in FY 19-20 and the remaining in FY 20-21. This would ensure that tariff for FY 19-20 will be less than the tariff for FY 18-19 by around 6.5%.

As the revenue gap upto FY 17-18 is deferred for recovery in FY 19-20 and FY 20-21, with no recovery in FY 18-19, the revenue gap will attract carrying cost for deferral and phasing.

The revenue gap till FY 17-18 for Wires Business and Supply Business with carrying cost as on 01.04.19 is as under:

Table 61: Wires Business Revenue Gap till FY 17-18 as on 01.04.19

Particulars	Rs. Crore
Incremental Revenue Gap of FY 15-16	(32.33)
Revenue Gap of FY 16-17	126.63
Provisional Revenue Gap of FY 17-18	70.51
Carrying cost on Revenue Gap of FY 15-16	10.45
Carrying cost on Revenue Gap of FY 16-17	25.26
Total	200.53

Table 62: Supply Business Revenue Gap till FY 17-18 as on 01.04.19

Particulars	Rs. Crore
Incremental Revenue Gap of FY 15-16	112.91
Revenue Gap of FY 16-17	504.64
Provisional Revenue Gap of FY 17-18	152.90
Carrying cost on Revenue Gap of FY 15-16	19.71
Carrying cost on Revenue Gap of FY 16-17	100.68
Total	890.84

The recovery proposed for the revenue gap till FY 17-18 for Wires Business and Supply Business are as under:

Table 63: Proposed Recovery of Cumulative Revenue Gap (Wires)

(Rs. Crore)

Particulars	FY 18-19	FY 19-20
Carrying Cost (%)	9.75%	9.75%
Opening Balance	200.53	120.32
Recovery	80.21	120.32
Closing Balance	120.32	0
Carrying Cost	15.64	5.87
Recovery with carrying cost	95.85	126.18

Table 64: Proposed Recovery of Cumulative Revenue Gap (Supply)

(Rs. Crore)

Particulars	FY 18-19	FY 19-20
Carrying Cost (%)	9.75%	9.75%
Opening Balance	890.84	534.50
Recovery	356.34	534.50
Closing Balance	534.50	0
Carrying Cost	69.49	26.06
Recovery with carrying cost	425.82	560.56

3.1 Wheeling Charges

The total wires revenue requirement is distributed between 33 kV, 11 kV and LT based on the basis of GFA at these voltage levels and thereafter the cost allocated to 33 kV level is shared between 33 kV, 11 kV and LT levels by distributing the allocated cost over the sales volume at 33 kV, 11 kV and LT level. Similarly the cost allocated to 11 kV level is shared between 11 kV and LT levels by distributing the allocated cost over the sales volume at 11 kV and LT level. The existing wheeling charges for FY 17-18 and the proposed wheeling charges for FY 18-19 and FY 19-20 are as under:

Table 65: Existing Wheeling Charges & Proposed Wheeling Charges

Voltage Level	FY 18-19 (Existing)	FY 18-19 (Proposed)	FY 19-20 (Proposed)
33 kV	0.79	0.18	0.18
11 kV		0.79	0.78

Voltage Level	FY 18-19 (Existing)	FY 18-19 (Proposed)	FY 19-20 (Proposed)
LT	1.53	1.72	1.69

3.2 Cross Subsidy Surcharge (CSS)

RInfra-D has calculated CSS based on the formula specified in the Tariff Policy notified on 28th Jan 2016, and adopted by the Hon'ble Commission in its MYT Order in Case No. 34 of 2016. The category wise CSS determined for FY 18-19 and FY 19-20 along with the prevailing CSS are shown in table below:

Table 66: Existing and Proposed CSS

(Rs./kWh)

Category	FY 18-19 (Existing)	FY 18-19 (Proposed)	FY 19-20 (Proposed)
LT:			
LT I - Below Poverty Line	0	0	0
LT -I Residential (Single Phase)			
0-100	0	0	0
101-300	0.42	0.87	1.18
301-500	1.80	2.00	2.08
500and above	2.15	2.37	2.46
LT -I Residential (Three Phase)			
0-100	0	0	0
101-300	0.42	0.12	0.39
301-500	1.80	1.90	1.98
500and above	2.15	2.24	2.33
LT II (a) - 0-20 kW	1.84	1.97	2.06
LT II (b) - 20-50 kW	1.86	1.97	2.00
LT II (c) - above 50 kW	1.97	2.09	2.11
LT III (a) - LT Industrial upto 20 kW	0.79	0.95	1.13
LT III (b) - LT Industrial above 20 kW	1.31	1.26	1.45
LT IV - Public Water Works	0.89	0.70	1.14
LT-V : LT- Advertisements and Hoardings	2.20	2.41	2.53
LT VI: LT -Street Lights	0.74	0.95	1.36
LT-VII (A): LT -Temporary	0	0.24	0.69

Category	FY 18-19 (Existing)	FY 18-19 (Proposed)	FY 19-20 (Proposed)
Supply Religious			
LT-VII (B): LT -Temporary Supply Others	1.95	2.06	2.15
LT VIII: LT - Crematorium & Burial Grounds	0	0	0
LT IX (a): PS - Govt. EI & Hospitals	0.07	0.69	1.12
LT IX (b): PS - Others	0.50	0.98	1.36
LT X (a): Agriculture - Pumpsets	0	0	0
LT X (a): Agriculture - Others	0	0	0
33 kV Category			
HT V - HT Metro & Monorail	1.32	1.41	1.50
11 kV Category			
HT I: HT-Industry	1.71	1.69	1.72
HTII : HT- Commercial	1.80	1.80	1.82
HT III: HT-Group Housing Society	1.60	1.71	1.79
HT IV : HT -Public Water Works	1.64	1.67	1.74
HT VI (a):PS - Govt. EI & Hospitals	1.62	1.62	1.69
HT VI (b):PS - Others	1.76	1.69	1.74
HT VII: Temporary Supply	1.78	1.75	1.83

3.3 Tariff Hike Required and Average Cost of Supply

Based on the proposed wheeling charges and CSS, the tariff hike required for RInfra-D's own consumers over the existing tariffs (approved tariffs for FY 17-18) is shown in table below:

Table 67: Proposed Tariff Hike for FY 18-19 and FY 19-20

Particulars	FY 18-19	FY 19-20
Wires and Supply ARR	7,228.86	7,435.02
Past Gap allowed in MYT Order (restated)	242.47	0
Past Gap till FY 17-18	0	521.67
Total to be recovered	7,471.33	7,956.69
Revenue at revised Wheeling Charge & CSS from changeover consumers	497.56	507.29
Net ARR to be recovered from own consumers	6,973.77	7,449.41

Particulars	FY 18-19	FY 19-20
RA Recovery from proposed RAC*	755.74	0
ARR recovery + RA recovery from own consumers	7,729.51	7,449.41
Revenue at existing tariff from own consumers	6,838.76	7,187.07
RA Recovery from RAC	701.40	779.18
Revenue + RA Recovery from existing tariff & RAC	7,540.17	7,966.25
Short fall at existing Tariff	189.35	(516.85)
Tariff Hike required	2.51%	-6.49%

*Proposed RA Charges for FY 18-19 are discussed subsequently in the Petition

The Average Cost of Supply for (ACoS) for FY 18-19 and FY 19-20 are shown in table below:

Table 68: Average Cost of Supply (ACoS) for FY 18-19 and FY 19-20

Particulars	FY 18-19	FY 19-20
Wires and Supply ARR	7,228.86	7,435.02
Past Gap allowed in MYT Order (restated)	242.47	0
Past Gap till FY 17-18	0.00	521.67
Total to be recovered	7,471.33	7,956.69
Revenue at revised Wheeling Charge & CSS from changeover and OA consumers	497.56	507.29
Net ARR	6,973.77	7,449.41
RA Recovery	755.74	0
Net ARR + RA Recovery	7,729.51	7,449.41
Own Sales (MU)	8,537.89	8,800.84
ACoS for tariff determination (Rs./kWh)	9.05	8.46

3.4 Tariff Design considerations

3.4.1 Fixed Charges and Demand Charges

The Hon'ble Commission in the MYT Order had decided to gradually increase the fixed charges and demand charges of consumers to increase the percentage recovery of fixed cost in the ARR through fixed charges and demand charges. The percentage recovery of fixed cost in FY 18-19 considering the fixed charges and demand charges for FY 18-19 approved in the MYT Order is around 21%. In order to increase in the percentage recovery, RInfra-D has proposed moderate increase in fixed charges of residential consumers and the demand charges for the applicable categories from the current level. The proposed fixed charges for residential consumers are shown in table below:

Table 69: Existing and Proposed Fixed Charges for Residential Consumers
(Rs./Consumer/Month)

Residential Slab	FY 18-19 (Existing)	FY 18-19 (Proposed)	FY 19-20 (Proposed)
LT -I Residential (Single Phase)			
0-100	55.00	75.00	75.00
101-300	85.00	110.00	115.00
301-500	85.00	110.00	115.00
500and above	110.00	145.00	150.00
LT -I Residential (Three Phase)			
0-100	110.00	145.00	150.00
101-300	110.00	145.00	150.00
301-500	110.00	145.00	150.00
500and above	110.00	145.00	150.00

The Fixed Charges for Three Phase residential connections is proposed to be revised to Rs. 155/consumer/month from the present Rs. 110/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. RInfra-D has not proposed revision in fixed charges for other consumer categories as fixed charges for these categories are much higher than the fixed charges of residential consumer category, i.e. RInfra-D proposes to keep the fixed charges for other categories at the same level as approved by the Hon'ble Commission in RInfra-D's MYT Order dated 21st October 2016 for FY 18-19 and FY 19-20. The proposed demand charges for applicable categories for FY 18-19 and FY 19-20 are shown in table below:

Table 70: Existing and Proposed Demand Charges for Applicable Categories
(Rs./Billing Demand/Month)

Particulars	FY 17-18 (Existing)	FY 18-19 (Proposed)	FY 19-20 (Proposed)
Demand Charges	240.00	270.00	290.00

3.4.2 Energy Charges

RInfra-D has proposed 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 either maintained or it is reduced, 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. The proposed energy charges for different category of consumers for FY 18-19 and FY 19-20, along with the existing energy charge of FY 17-18 are shown below:

Table 71: Existing and Proposed Energy Charge

Category	FY 18-19 (Existing) Plus FAC	FY 18-19 (Proposed)	FY 19-20 (Proposed)
LT:			
LT I - Below Poverty Line	1.00	0.70	0.70
LT -I Residential (Single Phase)			
0-100	2.38	2.30	2.55
101-300	5.43	5.40	5.70
301-500	7.30	7.30	7.70
500and above	9.28	9.25	9.70
LT -I Residential (Three Phase)			
0-100	2.38	2.30	2.55
101-300	5.41	5.40	5.70
301-500	7.29	7.30	7.70
500and above	9.27	9.25	9.70
LT II (a) - 0-20 kW	7.27	7.35	7.80
LT II (b) - 20-50 kW	7.37	7.10	7.15
LT II (c) - above 50 kW	8.04	7.85	7.85
LT III (a) - LT Industrial upto 20 kW	6.25	6.30	6.50
LT III (b) - LT Industrial above 20 kW	6.67	6.40	6.55
LT IV - Public Water Works	5.56	5.15	5.55
LT-V : LT- Advertisements and Hoardings	8.30	8.35	8.90
LT VI: LT -Street Lights	5.55	5.40	5.70
LT-VII (A): LT -Temporary Supply Religious	5.11	5.30	5.75
LT-VII (B): LT -Temporary Supply Others	8.39	8.10	8.60
LT VIII: LT - Crematorium & Burial Grounds	4.88	5.15	5.55
LT IX (a): PS - Govt. EI & Hospitals	5.92	6.30	6.75
LT IX (b): PS - Others	6.34	6.70	7.10
LT X (a): Agriculture - Pumpsets	3.10	3.40	3.65
LT X (a): Agriculture - Others	4.59	4.30	4.65
33 kV Category			
HT V - HT Metro & Monorail	6.73	6.75	7.10
11 kV Category			

Category	FY 18-19 (Existing) Plus FAC	FY 18-19 (Proposed)	FY 19-20 (Proposed)
HT I: HT-Industry	8.09	7.35	7.45
HTII : HT- Commercial	8.40	7.60	7.55
HT III: HT-Group Housing Society	7.16	7.20	7.60
HT IV : HT -Public Water Works	6.57	7.30	7.60
HT V - HT Metro & Monorail	6.40	6.95	7.35
HT VI (a):PS - Govt. EI & Hospitals	6.77	6.60	6.90
HT VI (b):PS - Others	7.75	7.10	7.25
HT VII: Temporary Supply	8.56	8.30	8.70

3.4.2.1 Regulatory Asset Charges for FY 18-19

As stated in the section on Cumulative Revenue Gap and Regulatory Asset Recovery, the RA recovery in FY 18-19 works out to Rs. 903.02 Crore. The per unit RA for FY 18-19 to be recovered from own, changeover and OA consumers works out to Rs. 0.86/kWh, as shown in table below:

Table 72: Per Unit RA Recovery in FY 18-19

Particulars	FY 18-19
RA Recovery (Rs. Crore)	903.02
Total Sales (MU)	10,489.21
Per Unit RA Recovery (Rs./kWh)	0.86

The category wise RAC proposed for FY 18-19 along with the existing category wise RAC for FY 17-18 are shown in table below:

Table 73: Proposed RA Charges for FY 18-19

Category	FY 18-19 (Existing)	FY 18-19 (Proposed)
LT:		
LT I - Below Poverty Line	0.27	0.27
LT -I Residential (Single Phase)		
0-100	0.42	0.45
101-300	0.68	0.77
301-500	0.87	0.98
500and above	1.04	1.21
LT -I Residential (Three Phase)		
0-100	0.42	0.45
101-300	0.68	0.77

Category	FY 18-19 (Existing)	FY 18-19 (Proposed)
301-500	0.87	0.98
500and above	1.04	1.21
LT II (a) - 0-20 kW	1.06	1.15
LT II (b) - 20-50 kW	1.04	1.12
LT II (c) - above 50 kW	1.07	1.21
LT III (a) - LT Industrial upto 20 kW	0.82	0.94
LT III (b) - LT Industrial above 20 kW	0.95	1.02
LT IV - Public Water Works	0.97	0.97
LT-V : LT- Advertisements and Hoardings	1.36	1.45
LT VI: LT -Street Lights	0.95	1.00
LT-VII (A): LT -Temporary Supply Religious	0.83	0.92
LT-VII (B): LT -Temporary Supply Others	1.20	1.24
LT VIII: LT - Crematorium & Burial Grounds	0.64	0.70
LT IX (a): PS - Govt. EI & Hospitals	0.87	0.97
LT IX (b): PS - Others	0.92	0.98
LT X (a): Agriculture - Pumpsets	0.55	0.63
LT X (a): Agriculture - Others	0.80	0.73
33 kV Category		
HT V - HT Metro & Monorail	0.89	0.86
11 kV Category		
HT I: HT-Industry	1.00	0.88
HTII : HT- Commercial	1.02	0.86
HT III: HT-Group Housing Society	0.95	1.03
HT IV : HT -Public Water Works	1.01	1.01
HT V - HT Metro & Monorail	0.89	0.86
HT VI (a):PS - Govt. EI & Hospitals	1.00	0.98
HT VI (b):PS - Others	0.99	0.91
HT VII: Temporary Supply	1.10	1.06

3.5 Proposed Tariffs for the Control Period

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

Table 74: Proposed Tariff for FY 18-19

Category	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)
LT:						
LT I - Below Poverty Line	10.00		0.70	1.72	0.27	2.69
LT -I Residential (Single Phase)						
0-100	75.00		2.30	1.72	0.45	4.47
101-300	110.00		5.40	1.72	0.77	7.89
301-500	110.00		7.30	1.72	0.98	9.99
500and above	145.00		9.25	1.72	1.21	12.18
LT -I Residential (Three Phase)						
0-100	145.00		2.30	1.72	0.45	4.47
101-300	145.00		5.40	1.72	0.77	7.89
301-500	145.00		7.30	1.72	0.98	9.99
500and above	145.00		9.25	1.72	1.21	12.18
LT II (a) - 0-20 kW	300.00		7.35	1.72	1.15	10.22
LT II (b) - 20-50 kW		270.00	7.10	1.72	1.12	9.94
LT II (c) - above 50 kW		270.00	7.85	1.72	1.21	10.78
LT III (a) - LT Industrial upto 20 kW	300.00		6.30	1.72	0.94	8.96
LT III (b) - LT Industrial above 20 kW		270.00	6.40	1.72	1.02	9.14
LT IV - Public Water Works		270.00	5.15	1.72	0.97	7.84

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Category	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)
LT-V : LT- Advertisements and Hoardings	480.00		8.35	1.72	1.45	11.52
LT VI: LT -Street Lights		270.00	5.40	1.72	1.00	8.12
LT-VII (A): LT -Temporary Supply Religious	250.00		5.30	1.72	0.92	7.93
LT-VII (B): LT -Temporary Supply Others	480.00		8.10	1.72	1.24	11.06
LT VIII: LT - Crematorium & Burial Grounds	250.00		5.15	1.72	0.70	7.57
LT IX (a): PS - Govt. EI & Hospitals	300.00		6.30	1.72	0.97	8.99
LT IX (b): PS - Others	300.00		6.70	1.72	0.98	9.40
LT X (a): Agriculture - Pumpsets	30.00		3.40	1.72	0.63	5.75
LT X (a): Agriculture - Others	75.00		4.30	1.72	0.73	6.75
LT XI: Electric Vehicle Charging Stations (New Category)			3.13	1.72	1.15	6.00
33 kV Category						
HT V - HT Metro & Monorail		270.00	6.75	0.18	0.86	7.79
11 kV Category						
HT I: HT-Industry		270.00	7.35	0.79	0.88	9.03
HTII : HT- Commercial		270.00	7.60	0.79	0.86	9.25
HT III: HT-Group Housing Society		270.00	7.20	0.79	1.03	9.03
HT IV : HT -Public Water Works		270.00	7.30	0.79	1.01	9.10
HT V - HT Metro & Monorail		270.00	6.95	0.79	0.86	8.60
HT VI (a):PS - Govt. EI & Hospitals		270.00	6.60	0.79	0.98	8.37

Category	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)
HT VI (b):PS - Others		270.00	7.10	0.79	0.91	8.80
HT VII: Temporary Supply	480.00		8.30	0.79	1.06	10.15

The summary of proposed tariff for FY 19-20 is shown in table below:

Table 75: Proposed Tariff for FY 19-20

Category	Fixed Charge (Rs./Consumer/Month)	Demand Charge (Rs./kVA/ Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	Total Variable Charge (Rs./ kWh)
LT:					
LT I - Below Poverty Line	10.00		0.70	1.69	2.39
LT -I Residential (Single Phase)					
0-100	80.00		2.55	1.69	4.24
101-300	115.00		5.70	1.69	7.39
301-500	115.00		7.70	1.69	9.39
500and above	150.00		9.70	1.69	11.39
LT -I Residential (Three Phase)					
0-100	150.00		2.55	1.69	4.24
101-300	150.00		5.70	1.69	7.39
301-500	150.00		7.70	1.69	9.39
500and above	150.00		9.70	1.69	11.39
LT II (a) - 0-20 kW	310.00		7.80	1.69	9.49
LT II (b) - 20-50 kW		290.00	7.15	1.69	8.84
LT II (c) - above 50 kW		290.00	7.85	1.69	9.54

RInfra-D Mid Term Review Petition FY 2016-17 to FY 2019-20 (Executive Summary)

Category	Fixed Charge (Rs./Consumer/Month)	Demand Charge (Rs./kVA/ Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	Total Variable Charge (Rs./ kWh)
LT III (a) - LT Industrial upto 20 kW	310.00		6.50	1.69	8.19
LT III (b) - LT Industrial above 20 kW		290.00	6.55	1.69	8.24
LT IV - Public Water Works		290.00	5.55	1.69	7.24
LT-V : LT- Advertisements and Hoardings	490.00		8.90	1.69	10.59
LT VI: LT -Street Lights		290.00	5.70	1.69	7.39
LT-VII (A): LT -Temporary Supply Religious	260.00		5.75	1.69	7.44
LT-VII (B): LT -Temporary Supply Others	490.00		8.60	1.69	10.29
LT VIII: LT - Crematorium & Burial Grounds	260.00		5.55	1.69	7.24
LT IX (a): PS - Govt. EI & Hospitals	310.00		6.75	1.69	8.44
LT IX (b): PS - Others	310.00		7.10	1.69	8.79
LT X (a): Agriculture - Pumpsets	30.00		3.65	1.69	5.34
LT X (a): Agriculture - Others	75.00		4.65	1.69	6.34
LT XI: Electric Vehicle Charging Stations (New Category)			4.31	1.69	6.00
33 kV Category					
HT V - HT Metro & Monorail		290.00	7.10	0.18	7.28
11 kV Category					
HT I: HT-Industry		290.00	7.45	0.78	8.23
HTII : HT- Commercial		290.00	7.55	0.78	8.33

Category	Fixed Charge (Rs./Consumer/Month)	Demand Charge (Rs./kVA/Month)	Energy Charge (Rs./kWh)	Wheeling Charge (Rs./kWh)	Total Variable Charge (Rs./ kWh)
HT III: HT-Group Housing Society		290.00	7.60	0.78	8.38
HT IV : HT -Public Water Works		290.00	7.60	0.78	8.38
HT V - HT Metro & Monorail		290.00	7.35	0.78	8.13
HT VI (a):PS - Govt. EI & Hospitals		290.00	6.90	0.78	7.68
HT VI (b):PS - Others		290.00	7.25	0.78	8.03
HT VII: Temporary Supply	490.00		8.70	0.78	9.48

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

Table 76: Category wise % hike in ABR

Category	Existing ABR	FY 18-19 ABR	% Hike	FY 19-20 ABR	% Hike
LT:					
LT I - Below Poverty Line	4.61	4.49	-2%	4.15	-8%
LT -I Residential (Single Phase)					
0-100	4.58	4.80	5%	4.59	-4%
101-300	8.48	8.99	6%	8.53	-5%
301-500	10.46	10.99	5%	10.41	-5%
500and above	12.50	13.05	4%	12.31	-6%
LT -I Residential (Three Phase)					
0-100	4.54	4.75	5%	4.54	-4%
101-300	7.88	8.24	5%	7.75	-6%
301-500	10.06	10.49	4%	9.88	-6%
500and above	12.01	12.42	3%	11.65	-6%

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Category	Existing ABR	FY 18-19 ABR	% Hike	FY 19-20 ABR	% Hike
LT II (a) - 0-20 kW	10.66	11.03	3%	10.31	-6%
LT II (b) - 20-50 kW	10.89	10.98	1%	9.99	-9%
LT II (c) - above 50 kW	11.44	11.66	2%	10.57	-9%
LT III (a) - LT Industrial upto 20 kW	8.88	9.24	4%	8.48	-8%
LT III (b) - LT Industrial above 20 kW	9.58	9.63	1%	8.80	-9%
LT IV - Public Water Works	9.15	9.02	-1%	8.50	-6%
LT-V : LT- Advertisements and Hoardings	13.16	13.48	2%	12.63	-6%
LT VI: LT -Street Lights	9.12	9.30	2%	8.71	-6%
LT-VII (A): LT -Temporary Supply Religious	8.04	8.50	6%	8.04	-5%
LT-VII (B): LT -Temporary Supply Others	11.59	11.53	-1%	10.77	-7%
LT VIII: LT - Crematorium & Burial Grounds	7.17	7.69	7%	7.36	-4%
LT IX (a): PS - Govt. EI & Hospitals	8.34	9.01	8%	8.47	-6%
LT IX (b): PS - Others	8.70	9.31	7%	8.72	-6%
LT X (a): Agriculture - Pumpsets	5.27	5.83	11%	5.43	-7%
LT X (a): Agriculture - Others	6.95	6.78	-2%	6.38	-6%
33 kV Category					
HT V - HT Metro & Monorail	8.49	7.93	-7%	7.52	-5%
11 kV Category					
HT I: HT-Industry	10.10	9.32	-8%	8.62	-8%
HTII : HT- Commercial	10.74	9.88	-8%	9.09	-8%

Category	Existing ABR	FY 18-19 ABR	% Hike	FY 19-20 ABR	% Hike
HT III: HT-Group Housing Society	9.40	9.57	2%	8.97	-6%
HT IV : HT -Public Water Works	8.57	9.36	9%	8.71	-7%
HT VI (a):PS - Govt. EI & Hospitals	9.20	9.08	-1%	8.47	-7%
HT VI (b):PS - Others	10.02	9.38	-6%	8.71	-7%
HT VII: Temporary Supply	10.09	9.80	-3%	9.14	-7%

The cross subsidy trajectory for FY 18-19 and FY 19-20 based on the proposed tariffs is shown in table below:

Table 77: Cross Subsidy Trajectory

Category	FY 18-19 (Existing)	FY 18-19 (Proposed)	FY 19-20 (Proposed)
LT:			
LT I - Below Poverty Line	59%	50%	49%
LT -I Residential	81%	84%	85%
LT II (a) - 0-20 kW	122%	122%	122%
LT II (b) - 20-50 kW	123%	121%	118%
LT II (c) - above 50 kW	130%	129%	125%
LT III (a) - LT Industrial upto 20 kW	102%	102%	100%
LT III (b) - LT Industrial above 20 kW	109%	106%	104%
LT IV - Public Water Works	105%	100%	100%
LT-V : LT- Advertisements and Hoardings	147%	149%	149%
LT VI: LT -Street Lights	103%	103%	103%
LT-VII (A): LT -Temporary Supply Religious	90%	94%	95%

Category	FY 18-19 (Existing)	FY 18-19 (Proposed)	FY 19-20 (Proposed)
LT-VII (B): LT -Temporary Supply Others	130%	127%	127%
LT VIII: LT - Crematorium & Burial Grounds	82%	85%	87%
LT IX (a): PS - Govt. EI & Hospitals	94%	100%	100%
LT IX (b): PS - Others	99%	103%	103%
LT X (a): Agriculture - Pumpsets	64%	64%	64%
LT X (a): Agriculture - Others	-	75%	75%
33 kV Category			
HT V - HT Metro & Monorail	96%	88%	89%
11 kV Category			
HT I: HT-Industry	114%	103%	102%
HTII : HT- Commercial	119%	109%	107%
HT III: HT-Group Housing Society	107%	106%	106%
HT IV : HT -Public Water Works	109%	103%	103%
HT VI (a):PS - Govt. EI & Hospitals	108%	100%	100%
HT VI (b):PS - Others	116%	104%	103%
HT VII: Temporary Supply	119%	108%	108%

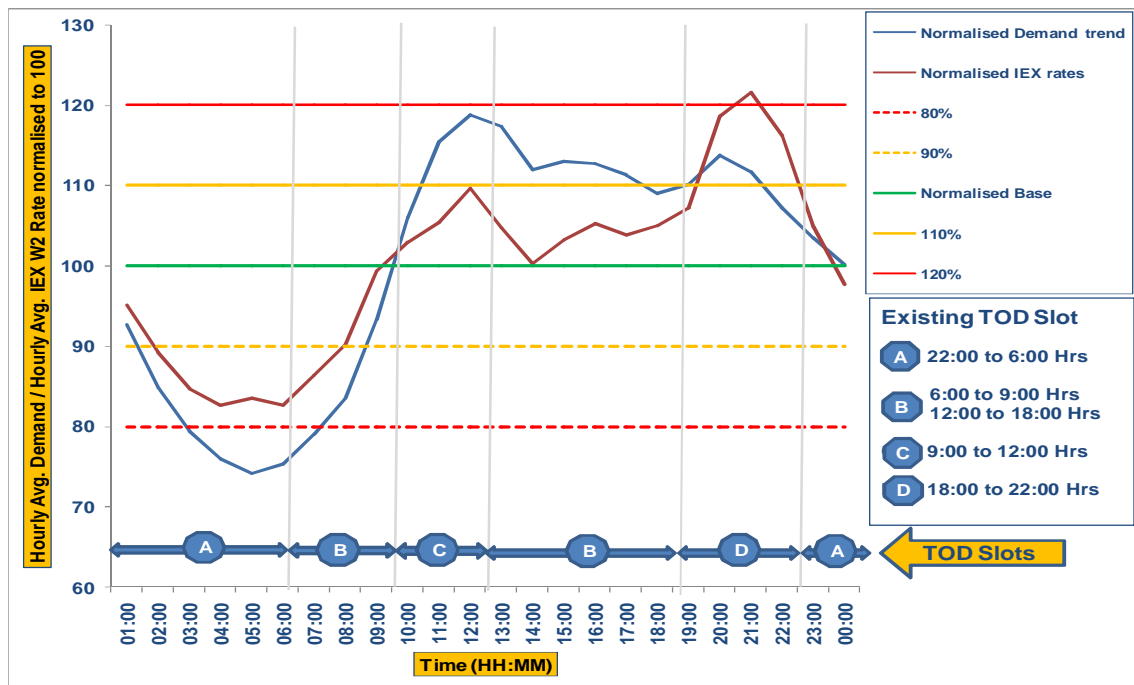
3.6 Time of Day Tariffs

The Commission, in its Order in Case No. 47 of 2016, had observed and directed as follows:

“Hence, for the time being, the Commission has not changed the existing ToD tariff structure. However, TPC-D and other Distribution Licensees should submit their detailed analysis indicating the benefits due to shift in peak load and other considerations at the time of the next MTR. They should also present in detail the implications in terms of cost as well as time required for installation of ToD meters and smart meters for other consumer categories considering the Tariff Policy provisions, and an analysis of their comparative benefits. The Commission may revisit the issue after public consultation on this aspect of the MTR Petitions.”

In view of the above, RInfra-D has carried out an analysis of its load pattern and analysis of short-term power purchase rates in IEX to assess whether there is a need or case to modify the existing ToD slots. The results are discussed below:

Figure 1 : Demand Pattern and Short Term Price of Power (IEX Price)



The above figure shows the typical demand pattern of RInfra-D and the price variation pattern of IEX rates, with existing ToD slots superimposed to see whether the time slots are in line with the demand pattern and whether the changes in short-term power rates are in line with the time slots. As both parameters are different, demand is normalized to average demand as 100% and ST rates are normalized to average rate as 100%.

Observations:

- Considering RInfra System demand trend, it appears that the Time Block C (9:00 to 12:00) could be extended up to 13:00 Hrs, and ToD Block D (18:00 to 22:00) could be extended up to 24:00 Hrs.
- However if we consider simultaneous incidence of demand pattern and price trends with 10% variation as normal, then there is no clear case for shift in ToD slot timings. The impact of higher peak demand experienced by RInfra during 12:00 to 13:00 Hrs and from 22:00 Hrs to 24:00 Hrs is compensated by lower prices in Short-term market during these hours.
- The peak demand is remaining high between 1400 hrs to about 1800 hrs and the short-term power rates also show increasing trend in that period.

Based on the above, we conclude and propose the following changes to the existing ToD structure:

- The existing slot of 1200 hrs to 1800 hrs, in which there is no ToD Surcharge at present may be divided into two slots – 1200 hrs to 1500 hrs and 1500 hrs to 1800 hrs. The former will continue to not have any ToD surcharge, while, for the latter, a ToD surcharge of Rs. 0.50 per unit may be introduced.
- In order to incentivise consumers to shift load from afternoon/evening peak hours to night hours, the discount in the night ToD slot of 2200 hrs to 0600 hrs may be increased to Rs. 1.00 per unit from the existing Rs. 0.75 per unit.
- There is no need to alter any other time slots, as even though the ToD slot of 0900 hrs to 1200 hrs can be extended up to 1300 hrs, and the evening slot of 1800 hrs to 2200 hrs can be extended up to 2400 hrs, the declining trend of Short-Term prices in these time slots, does not support the above.

RInfra-D submits that change in ToD slots in all the meters of relevant category of consumers will take considerable amount of time since the number of consumers belonging to such categories is fairly large. Therefore RInfra-D requests the Hon'ble Commission to approve the proposed changes to the ToD slots and tariffs with effect from 1st April 2020, i.e. from the beginning of next Control Period. This will ensure that sufficient time will be available to the Licensees to change the ToD slots in the meters of relevant category of consumers.

3.7 Proposal for Revision in Schedule of Charges (SoC)

In its last petition for revision of SoC, RInfra-D had submitted its material and labor cost for various types of activities covered under SoC. However in its Order on the said petition (Case No. 73 of 2012), the Hon'ble Commission, for Service Connection charges, considered point to point increase over WPI Index numbers over the period since previous revision in SoC and, for other activities, the Hon'ble Commission considered point to point increase in CPI-Industrial Workers over the period since previous revision in SoC. The relevant section of the said Order is quoted below:

“While arriving at the reasonable Schedule of Charges, the Commission has considered the point to point inflation over Consumer Price Index (CPI) numbers for Industrial Workers (as per Labour Bureau, Government of India) for a period of 6 years, to escalate the previously approved charges. As regards the Service Connection Charges, the Commission has considered the point to point inflation over MERC Order [Case No.73 of 2012] Page 20 of 67 Wholesale Price Index (WPI) numbers (as per Office of Economic Advisor of Govt. of India) for a period of 6 years, to escalate the previously approved charges. This treatment shall help the Licensees to recover their costs, after factoring the increase in the costs over the past six years.”

In accordance with the same principle, RInfra-D has worked out the increase in WPI and CPI-IW since Dec. 2012 (last revision in SoC) up to Sept. 2017 (latest available) i.e. almost a period of five years. The same is as below:

Table 78: Increase in CPI-IW and WPI Between Dec. 2012 and Sept. 2017

Index Number	Dec. 2012	Sept. 2017	% Increase
CPI-IW	219	285	30.14%
WPI	107.1	114.3	6.72%

As can be seen from the above, the increase in WPI over five years works out to less than 7%. Further, as highlighted above, it is important to make the SoC uniform in order to avoid entry barriers for customers. Therefore, RInfra-D proposes to retain the existing Schedule of Charges for Service Connection at their present levels, with a request to the Hon'ble Commission that final approved SoC for both RInfra-D and TPC-D may kindly be made uniform and the present anomalies such as the one pointed out above in case of service connection charges for Three-Phase LT Supply with loads up to 20kW/27HP, may kindly be removed.

Further, as shown above, the increase in CPI-IW over the same period has been over 30%, which clearly warrants an increase in SoC for all other activities, other than Service Connection.

Therefore, in accordance with the principle approved by the Hon'ble Commission during the previous revision in SoC and the workings as shown above, RInfra-D hereby proposes the following revision in the Schedule of Charges (approximated to suitable whole number), which will be effective from the date of approval / issue of Order by the Hon'ble Commission on this proposal:

A. Application Registration and Processing Charges:

Table 79: Proposed Charges for Registration and Processing

Sr.	Particulars	Existing Charges (Rs.)	Proposed Charges (Rs.)
1	New connections/ Reduction or addition of Load/ Shifting of service/ Extension of service/Change of Tariff Category/Temporary Connection		
	a) Single phase	50	65
	b) Three phase	75	100
	c) HT. supply	200	250
2	Change of name		
	a) Single phase	50	65
	b) Three phase	50	65
	c) HT. supply	150	200

Note: All charges are excluding taxes, if any.

B. Service Connection Charges:

Considering the Order in Case No. 18 of 2015, the following change is proposed in order to achieve uniformity and avoid deterrence to customer migration. Service Connection Charges for all other types of load are proposed to be retained at the existing level:

Table 80: Service Connection Charges for Three Phase Connection with Load up to 20 kW

Sr.	Particulars	Existing Charges (Rs.)	Proposed Charges (Rs.)
	L.T. Supply		
	Three Phase		
1	Motive power up to 27 HP or other loads up to 20 kW	4500	3000

C. Miscellaneous and General Charges:

Table 81: Proposed Miscellaneous and General Charges

Sr.	Particulars	Existing Charges (Rs.)	Proposed Charges (Rs.)
1	Reconnection Charges		
	a) Re-installation of fuse cutout	100	130
	b) Re-installation of meter	300	400
	c) HT Supply	500	650
	d) Re-connection of Service Cable	750	1000
2	Shifting of Meter, if carried out only on consumer's request		
	Single Phase	100	130
	Three Phase	200	260
3	Shifting of services along with meters, if carried out only on consumer's request		
	Single Phase	At actual	At actual
	Three Phase	At actual	At actual
4	Meter Testing on site on Consumer's request		
	Single Phase	100	130
	Three Phase	350	450
5	Meter Testing at RInfra-D's Laboratory		
	Single Phase	200	260
	Three Phase	500	650
	HT Tri-vector/TOD meter	1000	1300
6	Meter testing at Government approved laboratory	At actual	At actual

7	Cost of Meter (applicable when consumer opts to purchase the meter from RInfra-D & in case of Lost or Burnt meter)		
	Single Phase meter	1000	1300
	Three Phase whole current meter	3000	3900
	Three Phase CT operated meter	4000	5200
	HT TOD meter	4500	5850
	ABT complaint meter	At actual	At actual
8	Visit Charges (Only for new connection or additional supply request) (only in case of first subsequent visit for Inspection and test of Installation and not for any further visits thereafter for the purpose)	100	130
9	Photocopying of Regulatory Orders etc. (Rs./Page)	1	1
10	Duplicate copy of each monthly bill (Rs./Bill)	2	2
11	Statement of Accounts (Rs./Page)	2	2
12	Charges for Dishonored Cheques (irrespective of cheque amounts)	250	250

Note: All charges are excluding taxes, if any.

D. Schedule of Charges related to Open Access:

Table 82: Proposed Charges for OA Consumers

Sr.	Particulars	Existing Charges (Rs.)	Proposed Charges (Rs.)
	For Open Access 1MW and above		
1	Open Access Processing fee per Application	2500	3250
2	Open Access Operating Charges per month	2500	3250

Note: All charges are excluding applicable taxes, if any.