



TARIFF ORDER

True-up of the FY 2018-19, Annual Performance Review of the FY 2019-20, Aggregate Revenue Requirement (ARR) and Determination of Retail Tariff for the FY 2020-21

Petition No. 17/2019

For

Electricity Wing of Engineering Department, Chandigarh (EWEDC)

19th May 2020

JOINT ELECTRICITY REGULATORY COMMISSION

For the State of Goa and Union Territories,

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Table of Contents

1. Chapter 1: Introduction	14
1.1. About Joint Electricity Regulatory Commission for the State of Goa and UT's (JERC)	14
1.2. About Union Territory of Chandigarh	14
1.3. About Electricity Wing of Engineering Department, Chandigarh (EWEDC)	14
1.4. Multi Year Distribution Tariff Regulations, 2014	15
1.5. Multi Year Tariff Regulations, 2018	15
1.6. Filing and Admission of the Present Petition	15
1.7. Interaction with the Petitioner	15
1.8. Notice for Public Hearing	15
1.9. Public Hearing	16
2. Chapter 2: Summary of Suggestions/Objections received, Response from the Petitioner and the Commission's Views	17
2.1. Regulatory Process	17
2.2. Suggestions/ Objections, Response of the Petitioner and Commission's Views	17
3. Chapter 3: True-up for the FY 2018-19	25
3.1. Applicable Provisions and Background	25
3.2. Approach for True-up for FY 2018-19	25
3.3. Energy Sales	26
3.4. Inter-State Transmission Loss	26
3.5. Intra-State Distribution Loss	27
3.6. Power Purchase Quantum & Cost	28
3.7. Renewable Purchase Obligation (RPO)	30
3.8. Energy Balance	32
3.9. Operation & Maintenance Expenses	33
3.10. Capitalisation	35
3.11. Capital Structure	35
3.12. Depreciation	37
3.13. Interest on Loan	38
3.14. Return on Equity (RoE)	40
3.15. Interest on Consumer Security Deposits	41
3.16. Interest on Working Capital	42
3.17. Income Tax	43
3.18. Provision for Bad & Doubtful Debts	44
3.19. Non-Tariff Income (NTI)	44
3.20. Incentive/Disincentive towards over/under achievement of norms of distribution losses	44

3.21. Aggregate Revenue Requirement (ARR)	45
3.22. Revenue at existing Retail Tariff	46
3.23. Standalone Revenue Gap/ (Surplus)	47
4. Chapter 4: Annual Performance Review for the FY 2019-20	48
4.1. Applicable Provisions and Background	48
4.2. Approach for the Review for the FY 2019-20	48
4.3. Energy Sales	49
4.4. Inter-State Transmission Loss	49
4.5. Intra-State Distribution Loss	50
4.6. Power Purchase Quantum & Cost	50
4.7. Renewable Purchase Obligation (RPO)	55
4.8. Energy Balance	57
4.9. Operation & Maintenance Expenses	58
4.10. Capital Expenditure and Capitalisation	62
4.11. Capital Structure	63
4.12. Depreciation	65
4.13. Interest on Loan	67
4.14. Return on Equity (RoE)	69
4.15. Interest on Consumer Security Deposits	70
4.16. Interest on Working Capital	71
4.17. Income Tax	72
4.18. Provision for Bad & Doubtful Debts	73
4.19. Non-Tariff Income	73
4.20. Aggregate Revenue Requirement (ARR)	74
4.21. Revenue at existing Retail Tariff	74
4.22. Standalone Revenue Gap/ (Surplus)	76
5. Chapter 5: Determination of Aggregate Revenue Requirement for the FY 2020-21	77
5.1. Background	77
5.2. Approach for determination of ARR for the FY 2020-21	77
5.3. Projection of Number of consumers, Connected Load and Energy Sales	77
5.4. Inter-State transmission loss	80
5.5. Intra-State Distribution Loss	80
5.6. Power Purchase Quantum & Cost	81
5.7. Renewable Purchase Obligation (RPO)	88
5.8. Energy Balance	90
5.9. Operation & Maintenance Expenses	91
5.10. Capital Expenditure and Capitalisation	95
5.11. Capital Structure	96

5.12. Depreciation	97
5.13. Interest on Loan	99
5.14. Return on Equity (RoE)	102
5.15. Interest on Consumer Security Deposits	103
5.16. Interest on Working Capital	104
5.17. Income Tax	106
5.18. Provision for Bad & Doubtful Debts	107
5.19. Non-Tariff Income (NTI)	107
5.20. Aggregate Revenue Requirement (ARR)	108
5.21. Revenue at existing Retail Tariff	109
5.22. Standalone Revenue Gap/ (Surplus)	111
6. Chapter 6: Tariff Principles and Design	112
6.1. Overall Approach	112
6.2. Applicable Regulations	112
6.3. Cumulative Revenue Gap/ (Surplus) at Existing Tariff	113
6.4. Treatment of the cumulative Gap/ (Surplus) and Tariff Design	115
7. Chapter 7. Open Access Charges for the FY 2020-21	124
7.1. Wheeling Charges	124
7.2. Additional Surcharge	126
7.3. Cross-Subsidy Surcharge	127
8. Chapter 8. Fuel and Power Purchase Adjustment Mechanism	130
8.1. Legal Provisions	130
8.2. Formula	131
9. Chapter 9: Tariff Schedule	135
9.1. Tariff Schedule	135
9.2. Applicability	136
9.3. General Conditions of HT and LT Supply	141
9.4. Schedule of Other Charges	143
9.5. Schedule for service connection charges and service rentals	147
10. Chapter 10: Directives	151
10.1. Directives continued in this Order	151
11. Annexures	158
11.1. Annexure 1: List of Stakeholders who attended the Public hearing held at Chandigarh on 25 th February 2020	158
11.2. Annexure 2: Sample calculation for advance and prompt payment rebate	159

List of Tables

Table 1: Standalone Revenue Gap/ (Surplus) approved for FY 2018-19 (In INR Cr)	12
Table 2: Standalone Revenue Gap/ (Surplus) approved for FY 2019-20 (In INR Cr)	12
Table 3: Standalone Revenue Gap/ (Surplus) approved for FY 2020-21 (In INR Cr)	12
Table 4: Cumulative Revenue Gap/ (Surplus) approved by Commission (In INR Cr)	13
Table 5: List of interactions with the Petitioner	15
Table 6: Details of Public Notices published by the Petitioner	16
Table 7: Details of Public Notices published by the Commission	16
Table 8: Energy Sales (MU) Trued-up by the Commission	26
Table 9: Inter-State Transmission Loss Trued-up by Commission (%)	27
Table 10: Intra-State Distribution Loss calculation	27
Table 11: Intra-State Distribution Loss Trued-up by Commission (%)	28
Table 12: Power Purchase quantum and cost submitted by the Petitioner	28
Table 13: Quantum and Revenue from sale of surplus power submitted by the Petitioner	28
Table 14: Power Purchase quantum and cost Trued-up by Commission	29
Table 15: RPO compliance submitted by the Petitioner	30
Table 16: Effective energy sales (except hydro) for calculation of RPO	30
Table 17: Summary of Renewable Purchase Obligation (RPO) (MU)	31
Table 18: Cost towards compliance of Renewable Purchase Obligation (In INR Cr)	31
Table 19: Energy requirement submitted by the Petitioner (in MU)	32
Table 20: Energy balance Trued-up by Commission (in MU)	32
Table 21: Employee Expenses Trued-up by Commission (In INR Cr)	33
Table 22: A&G Expenses Trued-up by Commission (In INR Cr)	34
Table 23: R&M Expenses Trued-up by Commission (In INR Cr)	34
Table 24: O&M Expenses Trued-up by Commission (In INR Cr)	35
Table 25: Capitalisation Trued-up by Commission (In INR Cr)	35
Table 26: Funding Plan Trued-up by Commission (In INR Cr)	36
Table 27: GFA addition Trued-up by Commission (In INR Cr)	36
Table 28: Normative Loan addition Trued-up by Commission (In INR Cr)	36
Table 29: Normative Equity addition Trued-up by Commission (In INR Cr)	37
Table 30: Asset wise and overall effective Depreciation Rate (%)	37
Table 31: Depreciation Trued-up by Commission (In INR Cr.)	38
Table 32: Interest on Loan Trued-up by Commission (In INR Cr)	40
Table 33: RoE Trued-up by Commission (In INR Cr)	41
Table 34: Interest on Consumer Security Deposits Trued-up by Commission (In INR Cr)	41
Table 35: Interest on Working Capital submitted by Petitioner (In INR Cr)	42
Table 36: Interest on Working Capital Trued-up by Commission (In INR Cr)	43
Table 37: Income Tax Trued-up by Commission (In INR Cr)	44
Table 38: Non- Tariff Income Trued-up by Commission (In INR Cr)	44
Table 39: Dis-incentive due to under-achievement of Intra-State Distribution Loss target (In INR Cr)	45

Table 40: Aggregate Revenue Requirement Trued-up by Commission for the FY 2018-19 (In INR Cr).....	46
Table 41: Revenue at existing tariff Trued-up by Commission for the FY 2018-19 (In INR Cr).....	46
Table 42: Standalone Revenue Gap/ (Surplus) for the FY 2018-19 (In INR Cr).....	47
Table 43: Energy Sales (MU) approved by the Commission for the FY 2019-20	49
Table 44: Inter-State Transmission Loss (%)	50
Table 45: Intra-State Distribution Loss (%).....	50
Table 46: Power Purchase quantum (MU) and cost (In INR Cr) submitted by the Petitioner.....	51
Table 47: Power Purchase Quantum (MU) and cost (INR Cr) approved by the Commission	53
Table 48: Effective Energy Sales (Excluding Hydro) as submitted by Petitioner.....	55
Table 49: RPO Requirement (Solar and Non-Solar) as submitted by Petitioner	55
Table 50: Effective energy sales (adjusted for hydro) (in MU).....	56
Table 51: Summary of Renewable Purchase Obligation (RPO) (MU)	56
Table 52: Cost towards compliance of Renewable Purchase Obligation (In INR Cr)	57
Table 53: Energy Requirement of the System (MU)	57
Table 54: Energy Balance approved (MU)	58
Table 55: Computation of CPI Inflation (%)	60
Table 56: Employee Expenses approved by Commission (In INR Cr)	60
Table 57: A&G Expenses approved by Commission (In INR Cr).....	61
Table 58: Computation of WPI Inflation (%).....	61
Table 59: R&M Expenses approved by Commission (In INR Cr).....	61
Table 60: O&M Expenses approved by Commission (In INR Cr)	62
Table 61: Revised submission for capitalisation (In INR Cr).....	62
Table 62: Capitalisation approved by the Commission (In INR Cr)	63
Table 63: Funding Plan approved by the Commission (In INR Cr)	64
Table 64: GFA addition approved by Commission (In INR Cr)	64
Table 65: Normative Loan addition approved by Commission (In INR Cr).....	64
Table 66: Normative Equity addition approved by Commission (In INR Cr)	65
Table 67: Depreciation Rate (%).....	66
Table 68: Depreciation approved by Commission (In INR Cr)	66
Table 69: Interest on Loan approved by Commission (In INR Cr)	69
Table 70: RoE approved by Commission (In INR Cr).....	70
Table 71: Interest on Security Deposits approved by Commission (In INR Cr)	71
Table 72: Interest on Working Capital approved by Commission (In INR Cr)	72
Table 73: Income tax approved by Commission (In INR Cr).....	72
Table 74: Provision of Bad & Doubtful Debts approved by Commission (In INR Cr)	73
Table 75: Non-Tariff Income approved by Commission (In INR Cr).....	74
Table 76: Aggregate Revenue Requirement approved by the Commission for the FY 2019-20 (In INR Cr)	74
Table 77: Revenue at existing tariff computed by Commission (In INR Cr).....	75
Table 78: Standalone Revenue Gap/ (Surplus) at existing tariff (In INR Cr).....	76
Table 79: Projected No. of consumers, Connected Load and Energy Sales	77
Table 80: Growth in No. of consumers	78

Table 81: Growth in Connected Load	78
Table 82: Growth in Energy Sales	78
Table 83: No. of consumers approved by Commission	79
Table 84: Connected Load (kW) approved by Commission.....	79
Table 85: Energy Sales (MU) approved by Commission.....	79
Table 86: Inter-State transmission loss (%)	80
Table 87: Intra-State Distribution Loss (%).....	81
Table 88: Power Purchase quantum (MU) and Cost (In INR Cr) submitted by Petitioner	82
Table 89: Transmission charges submitted by Petitioner (In INR Cr)	84
Table 90: Power Purchase Quantum (MU) and cost (INR Cr) approved for FY 2020-21	86
Table 91: Average Power Purchase Cost (APPC) for FY 2020-21	88
Table 92: Effective Energy Sales (Excluding Hydro) as submitted by Petitioner	88
Table 93: RPO Requirement (Solar and Non-Solar) as submitted by Petitioner	89
Table 94: Effective energy sales (adjusted for hydro) (in MU).....	89
Table 95: Summary of Renewable Purchase Obligation (RPO) (MU).....	89
Table 96: Cost towards compliance of Renewable Purchase Obligation for FY 2020-21 (In INR Cr)	90
Table 97: Energy Balance submitted by Petitioner (MU)	90
Table 98: Energy Balance approved by Commission (MU)	91
Table 99: Computation of CPI Inflation (%).....	93
Table 100: Employee Expenses approved by Commission (In INR Cr).....	93
Table 101: A&G submitted by Petitioner (In INR Cr).....	93
Table 102: A&G Expenses approved by Commission (In INR Cr).....	94
Table 103: R&M expenses submitted by Petitioner (In INR Cr)	94
Table 104: Computation of WPI Inflation (%).....	94
Table 105: R&M Expenses approved by Commission (In INR Cr).....	95
Table 106: O&M Expenses approved by Commission (In INR Cr)	95
Table 107: Capital Expenditure and Capitalisation approved by the Commission (In INR Cr)	95
Table 108: Funding Plan approved by the Commission (In INR Cr)	97
Table 109: GFA addition approved by the Commission (In INR Cr)	97
Table 110: Normative Loan addition approved by the Commission (In INR Cr)	97
Table 111: Normative Equity addition approved by the Commission (In INR Cr)	97
Table 112: Depreciation submitted by the Petitioner (In INR Cr)	98
Table 113: Depreciation Rate (%)	99
Table 114: Depreciation approved by Commission (In INR Cr)	99
Table 115: Interest on Loan submitted by the Petitioner (In INR Cr)	100
Table 116: Interest on loan approved by Commission (In INR Cr)	102
Table 117: RoE submitted by Petitioner (In INR Cr)	102
Table 118: RoE approved by Commission (In INR Cr).....	103
Table 119: Interest on Consumer Security Deposit submitted by the Petitioner (In INR Cr).....	103
Table 120: Interest on Security Deposits approved by Commission (In INR Cr).....	104
Table 121: Interest on Working Capital submitted by the Petitioner (In INR Cr).....	105

Table 122: Interest on Working Capital approved by Commission (In INR Cr).....	105
Table 123: Income Tax approved by Commission (In INR Cr).....	106
Table 124: Non-Tariff Income submitted by the Petitioner (In INR Cr).....	107
Table 125: Non -Tariff Income approved by Commission (In INR Cr)	108
Table 126: Aggregate Revenue Requirement (ARR) submitted by the Petitioner (In INR Cr)	109
Table 127: Aggregate Revenue Requirement approved by Commission (In INR Cr).....	109
Table 128: Revenue at existing tariff computed by Commission (In INR Cr)	110
Table 129: Standalone Revenue Gap/ (Surplus) determined at existing tariff for FY 2019-20 (INR Cr)	111
Table 130: Standalone Revenue Gap/ (Surplus) submitted by Petitioner (In INR Cr).....	113
Table 131: Cumulative Revenue Gap/ (Surplus) submitted by Petitioner (In INR Cr)	113
Table 132: Standalone Revenue Gap/ (Surplus) determined by Commission at existing tariff (In INR Cr)	114
Table 133: Cumulative Revenue Gap/ (Surplus) determined by Commission at existing tariff (In INR Cr).....	114
Table 134: Retail tariff proposed by the Petitioner (In INR Cr)	115
Table 135: Existing and approved tariff	120
Table 136: Revenue from approved retail tariff determined by Commission (In INR Cr).....	122
Table 137: Cumulative Revenue Gap/ (Surplus) approved by Commission (In INR Cr)	123
Table 138: Allocation matrix approved by Commission	125
Table 139: Parameters assumed for voltage wise allocation of costs for Wires Business	126
Table 140: Allocation of costs based on voltage level	126
Table 141: Wheeling Charges approved by Commission	126
Table 142: Additional Surcharge approved by Commission	127
Table 143: Voltage Wise Losses considered by the Commission	128
Table 144: Energy Input at each voltage level (MU)	128
Table 145: Parameters used for allocation of fixed costs	128
Table 146: Voltage Wise Cost of Supply (VCoS)	128
Table 147: Cross-Subsidy Surcharge approved by Commission	129
Table 148: Tariff Schedule	135
Table 149: Applicability of Tariff Schedule	136
Table 150: PF Range for LT consumer	142
Table 151: Applicability of ToD Charges.....	143
Table 152: Schedule of Other Charges	143
Table 153: Service Connection Charges.....	147
Table 154: Service Connection Charges for Industrial and Bulk Load Supply.....	148
Table 155: Charges applicable for contract demand higher than 60% of connected load.....	149
Table 156: List of Stakeholders	158
Table 157: Sample calculation of rebate	159

List of abbreviations

Abbreviation	Full Form
A&G	Administrative and General
ACoS	Average Cost of Supply
Act	The Electricity Act, 2003
APCPL	Aravali Power Company Pvt Ltd.
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal of Electricity
BBMB	Bhakra Beas Management Board
BPL	Below Poverty Line
CAGR	Compound Annualized Growth rate
Capex	Capital Expenditure
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGRF	Consumer Grievance Redressal Forum
CGS	Central Generating Stations
COD	Commercial Operation Date
Cr	Crores
Discom	Distribution Company
DT	Distribution Transformer
EWEDC	Electricity Wing of Engineering Department, Chandigarh
DSM	Deviation Settlement Mechanism
EA 2003	The Electricity Act, 2003
ED	Electricity Department
EHT	Extra High Tension
ERP	Enterprise Resource Planning
FPPCA	Fuel and Power Purchase Cost Adjustment
FY	Financial Year
GFA	Gross Fixed Assets
HT	High Tension
IEX	Indian Energy Exchange Limited
INR	Indian Rupee
IPDS	Integrated Power Development Scheme
IPP	Independent Power Producer
ISTS	Inter State Transmission System
JERC	Joint Electricity Regulatory Commission for the State of Goa and Union Territories
JKPDD	Power Development Department , Jammu and Kashmir
LC	Letter of Credit
LT	Low Tension

Abbreviation	Full Form
MU	Million Units
MYT	Multi Year Tariff
NAPS	Narora Atomic Power Station
NFA	Net Fixed Assets
NHPC	National Hydroelectric Power Corporation
NPCIL	Nuclear Power Corporation of India Limited
NRS	Non- Residential Supply
NTPC	National Thermal Power Corporation
O&M	Operation and Maintenance
PGCIL	Power Grid Corporation of India Limited
PLF	Plant Load Factor
PLR	Prime Lending Rate
POSOCO	Power System Operation Corporation Limited
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
RAPP	Rajasthan Atomic Power Project
REC	Renewable Energy Certificate
RLDC	Regional Load Despatch Centre
RoE	Return on Equity
RPO	Renewable Purchase Obligation
SBI PLR	SBI Prime Lending Rate
SERC	State Electricity Regulatory Commission
SJVNL	Satluj Jal Vidyut Nigam Limited
SLDC	State Load Despatch Center
SOP	Standard of Performance
T&D	Transmission & Distribution Loss
THDC	Tehri Hydro Development Corporation Limited
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory
WART	Weighted Average Retail Tariff

Before the
Joint Electricity Regulatory Commission
For the State of Goa and Union Territories, Gurugram

QUORUM

Sh. M. K. Goel, Chairperson

Petition No. 17/2019

In the matter of

Approval for the True-up of the FY 2018-19, Annual Performance Review for the FY 2019-20, Aggregate Revenue Requirement (ARR) and retail tariff for the FY 2020-21.

And in the matter of

Electricity Wing of Engineering Department, Chandigarh (EWEDC).....Petitioner

ORDER

Dated: 19th May 2020

- 1) This Order is passed in respect of a Petition filed by the Electricity Wing of Engineering Department, Chandigarh (EWEDC) (herein after referred to as “The Petitioner” or “EWEDC” or “The Licensee”) for approval of True-up of the FY 2018-19, Annual Performance Review for the FY 2019-20, Aggregate Revenue Requirement (ARR) and retail tariff for the FY 2020-21 before the Joint Electricity Regulatory Commission (herein after referred to as “The Commission” or “JERC”).
- 2) The Commission scrutinised the said Petition and generally found it in order. The Commission admitted the Petition on 4th December 2019. The Commission thereafter requisitioned further information/ clarifications on the data gaps observed to take a prudent view of the said Petition. The Commission also held a Technical Validation Session to determine sufficiency of data and the veracity of the information submitted. Further, suggestions/ comments/ views and objections were invited from the Stakeholders and Electricity Consumers. A Public Hearing was also held on 02nd and 25th February 2020, and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard.
- 3) Ministry of Home Affairs (MHA), Govt. of India has imposed nationwide lockdown with certain exceptions in the entire country from 24th March 2020 onwards to contain Covid-19. The Commission acknowledges that the prevailing situation due to outbreak of Covid-19 has led to complete shutdown of a number of commercial, industrial and Institutional establishments. COVID-19 (Corona Virus) outbreak has posed an unprecedented and unconceivable situation which is causing wide spread concern and economic hardship for communities, businesses and consumers across the country. The delay in issuance of this Order is due to the above uncontrollable factor i.e. nationwide lockdown with effect from March 24, 2020 due to the pandemic COVID 19.
- 4) The Commission also recognises the fact that the lockdown announced in the country will certainly have impact on sales of Industrial and Commercial consumers, thereby impacting the computation of ARR. Even after the lockdown restrictions are lifted in entirety, it is going to take some time before the economic situation stabilises. Therefore, at this point of time it will not be possible to factor the impact of lockdown on sales and components of ARR for FY 2020-21 with desired accuracy and efficacy.

- 5) The Commission, vide its Order dated April 10, 2020 in SUO MOTU PETITION NO. JERC/LEGAL/SMP/27/2020 issued certain Directions to mitigate the hardship of Electricity consumers and DISCOMS/EDs in view of nationwide lockdown due to COVID-19. The Commission, in the said Order, ruled that the additional expenses that are likely to be incurred by the Distribution Licensees on compliance with the directions issued in the said Order, will be taken into account while evaluating the APR of FY 2020-21.
- 6) The Commission is issuing this Order considering the “Business as Usual” scenario on the basis of the Petition submitted by the Electricity Wing of Engineering Department, Chandigarh after detailed analysis of submissions made by the Petitioner for FY 2020-21 and without factoring the impact of lockdown. The Commission will duly consider the impact of lockdown on sales and ARR of the Petitioner for FY 2020-21 at the time of evaluating APR of FY 2020-21 and thereafter True-up of FY 2020-21.
- 7) The Commission based on the Petitioner’s submission, relevant MYT Regulations, facts of the matter and after proper due diligence and prudence check has approved the True Up for FY 2018-19, APR for FY 2019-20 and ARR along with Retail Tariff for FY 2020-21.
- 8) A Summary has been provided as follows:

- (a) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission for FY 2018-19

Table 1: Standalone Revenue Gap/ (Surplus) approved for FY 2018-19 (In INR Cr)

S. No	Particulars	Petitioners submission	Approved by Commission
1	Annual Revenue Requirement	804.68	792.07
2	Revenue from sale of power	908.67	908.67
	Revenue Gap/(Surplus)	(103.99)	(116.60)

- (b) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission for FY 2019-20

Table 2: Standalone Revenue Gap/ (Surplus) approved for FY 2019-20 (In INR Cr)

S. No	Particulars	Petitioners submission	Approved by Commission
1	Annual Revenue Requirement	836.93	749.56
2	Revenue from sale of power at Approved Tariff	927.86	904.98
	Revenue Gap/(Surplus)	(90.93)	(155.42)

- (c) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission for FY 2020-21

Table 3: Standalone Revenue Gap/ (Surplus) approved for FY 2020-21 (In INR Cr)

S. No	Particulars	Petitioners submission	Approved by Commission
1	Annual Revenue Requirement	890.64	789.18
2	Revenue from sale of power at Approved Tariff	897.87	873.29
	Revenue Gap/(Surplus)	(7.23)	(84.12)

- (d) Accordingly, the following table provides the cumulative revenue gap/ surplus at approved tariff by the end of FY 2020-21:

Table 4: Cumulative Revenue Gap/ (Surplus) approved by Commission (In INR Cr)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21
Opening Gap /(Surplus) (a)	(165.84)	(83.87)	(254.73)
Add: Gap/(Surplus) (b)	(116.60)	(155.42)	(84.12)
Cumulative Gap/(Surplus) for the FY 2010-11 to FY 2013-14 (c)	208.17	0.00	0.00
Closing Gap /(Surplus) (d=a+b+c)	(74.27)	(239.29)	(338.84)
Average Gap/ (Surplus) (e=(a+d)/2)	(120.05)	(161.58)	(296.78)
Interest Rate on carrying cost (% ,f)	8.00%	9.55%	8.85%
Carrying Cost (g=e*f)	(9.60)	(15.43)	(26.27)
Final Closing Gap/ (Surplus) (d+g)	(83.87)	(254.73)	(365.11)

- (e) On account of projected standalone surplus at existing tariff during 2020-21, no tariff hike has been made in the retail tariff for existing categories.
- (f) The Commission has approved the Average Billing Rate (ABR) of INR 5.53/kWh against the approved Average Cost of Supply (ACoS) of INR 5.00/kWh.
- (g) On account of revenue surplus in FY 2020-21, the Petitioner is hereby directed to stop recovery of FPPCA from all consumer categories starting from 1st June 2020 onwards till further orders of the Commission. The Petitioner is, however, directed to submit the quarterly FPPCA calculation to the Commission for review.
- (h) In order to promote the use of Electric Vehicles (E.V.), the Commission has introduced a single-part tariff for Electric Vehicle Charging Stations where the Demand/Fixed Charges have been removed and the Energy Charges have been rationalised on the basis of Average Power Purchase Cost.
- (i) This Order shall come into force with effect from 1st June, 2020 and shall, unless amended or revoked, continue to be in force till further orders of the Commission. As the tariff is being implemented with effect from 1st June, 2020 instead of 1st April, 2020, the Commission will duly consider the impact of under recovery of ARR for FY 2020-21 at the time of evaluating APR of FY 2020-21 and thereafter True-up of FY 2020-21.
- 9) The licensee shall publish the Tariff Schedule and salient features of Tariff as determined by the Commission in this Order within one week of receipt of the Order in three daily newspapers in the respective local languages of the region, besides English, having wide circulation in their respective areas of supply and also upload the Tariff Order on its website.
- 10) Ordered accordingly, the attached documents giving detailed reasons, grounds and conditions are the Integral part of this Order.

-sd-

(M.K. Goel)

Chairperson

Place: Gurugram

Date: 19th May 2020

(Certified Copy)


(Rakesh Kumar)

Secretary

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission for the State of Goa and UT's (JERC)

In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted a Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as the "Joint Electricity Regulatory Commission for the Union Territories" vide notification no. 23/52/2003-R&R dated 2nd May 2005. Later with the joining of the State of Goa, the Commission came to be known as "Joint Electricity Regulatory Commission for the State of Goa and Union Territories" (hereinafter referred to as "the JERC" or "the Commission") vide notification no. 23/52/2003-R&R (Vol. II) dated 30th May 2008.

JERC is a statutory body responsible for regulation of the Power Sector in the State of Goa and the Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry, consisting of generation, transmission, distribution, trading and use of electricity. Its primary objective includes taking measures conducive to the development of the electricity industry, promoting competition therein, protecting interest of consumers and ensuring supply of electricity to all areas.

1.2. About Union Territory of Chandigarh

Chandigarh is a city, district and union territory in India that serves as the capital of the two neighboring States of Punjab and Haryana. It is bordered by the State of Punjab to the north, the west and the south, and by the State of Haryana to the east. The city is unique as it is not a part of either of the two States but is governed directly by the Union Government, which administers all such territories in the country. Chandigarh is located near the foothills of the Shivalik range of the Himalayas in northwest India. It covers an area of approximately 114 km². The metropolitan area of Chandigarh–Mohali–Panchkula collectively forms a Tricity, with a combined population of over 1,611,770.

Chandigarh has been rated as one of the "Wealthiest Towns" of India. The city has one of the highest per capita incomes in the country. The city was reported to be one of the cleanest in India based on a national government study. The union territory also heads the list of Indian States and territories according to Human Development Index. In 2015, a survey ranked it as the happiest city in India over the happiness index.



1.3. About Electricity Wing of Engineering Department, Chandigarh (EWEDC)

The Electricity Wing of Engineering Department of UT Administration of Chandigarh, hereinafter referred to as 'EWEDC' or as the 'Petitioner', a deemed licensee under Section 14 of the Electricity Act 2003, is carrying out the business of transmission, distribution and retail supply of electricity in Chandigarh (UT). EWEDC is functioning as an integrated distribution licensee of the Union Territory of Chandigarh. EWEDC procures most of its power through its allocation from Central Generating Stations (CGS) such as NTPC, NHPC, NPCIL BBMB, SJVNL and THDC. The EWEDC also buys short-term power for meeting the demand-supply shortfall during peak hours.

Chandigarh has been divided into various sectors and all the sectors of Chandigarh are electrified and any desiring consumer can avail power supply by submitting a requisition in the prescribed form to the appropriate office of

the Department subject to fulfillment of the requisite conditions and payment of charges. The EWEDC is under the control of the Administration of the Union Territory of Chandigarh.

1.4. Multi Year Distribution Tariff Regulations, 2014

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) Regulations, 2014 (hereinafter referred to as ‘MYT Regulations, 2014’) on 30th June 2014 applicable for a three year Control period starting from FY 2015-16 till FY 2017-18. The Commission subsequently notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) (First Amendment) Regulations, 2015 on 10th August 2015 shifting the MYT Control Period to FY 2016-17 to FY 2018-19. These Regulations are applicable to all the distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.5. Multi Year Tariff Regulations, 2018

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018 (hereinafter referred to as ‘MYT Regulations, 2018’) on 10th August 2018. These Regulations are applicable in the 2nd MYT Control Period comprising of three financial years from FY 2019- 20 to FY 2021-22. These Regulations are applicable to all the generation companies, transmission and distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.6. Filing and Admission of the Present Petition

The present Petition was admitted on 4th December 2019 and was marked as Petition no. 17/2019. The Commission and the Petitioner subsequently uploaded the Petition on their respective websites.

1.7. Interaction with the Petitioner

A preliminary scrutiny/analysis of the Petition was conducted and certain deficiencies were observed. Accordingly, discrepancy notes were issued to the Petitioner. Further, additional information/clarifications were solicited from the Petitioner as and when required. The Commission and the Petitioner also discussed various concerns of the Petitioner and key data gaps, which included retail sales, revenue from retail tariff, capitalisation, tariff proposal etc. The Petitioner submitted its response on the issues through various letters/emails.

The Commission conducted the Technical Validation session (TVS) with the Petitioner at the Commission’s office in Gurugram, during which the discrepancies in the Petition were conveyed and additional information required by the Commission was sought. Subsequently, the Petitioner submitted replies to the issues raised in this session and provided documentary evidence to substantiate its claims regarding various submissions. The following table provides the list of interactions with the Petitioner along with the dates:

Table 5: List of interactions with the Petitioner

S. No	Subject	Date
1	Issue of First Discrepancy Note	9 th December 2019
2	Reply received from Petitioner	18 th December 2019
3	Technical Validation Session	15 th January 2020
4	Issue of 2 nd Discrepancy Note	16 th January 2020
5	Public hearing	25 th February 2020
6	Reply received from Petitioner	5 th March 2020

1.8. Notice for Public Hearing

Public notices were published by the Petitioner for inviting objections/ suggestions from stakeholders on the Tariff Petition with details as shown in the table as follows:

Table 6: Details of Public Notices published by the Petitioner

S.No.	Date	Name of Newspaper	Language	Place of Circulation
1	7 th February 2020	Ajit	Punjabi	Chandigarh
2	7 th February 2020	Dainik Jagran	Hindi	Chandigarh
3	7 th February 2020	The Tribune	English	Chandigarh
4	7 th February 2020	Hindustan Times	English	Chandigarh

The Commission also published Public Notices in the leading newspapers for inviting objections/ suggestions on the tariff petition filed by EWEDC as tabled below, giving due intimation to the stakeholders, consumers and the public at large about the Public Hearing conducted by the Commission on 25th February 2020 from 10 AM onwards at Auditorium Hall, Government Museum and Art Gallery, Chandigarh. These notices and Petition were also uploaded on the Commission's website.

Table 7: Details of Public Notices published by the Commission

S.No.	Date	Name of Newspaper	Language	Place of Circulation
1	7 th January 2020	Ajit	Punjabi	Chandigarh
2	7 th January 2020	Dainik Jagran	Hindi	Chandigarh
3	7 th January 2020	The Tribune	English	Chandigarh
4	7 th January 2020	Amar Ujala	Hindi	Chandigarh
5	22 nd February 2020	Ajit	Punjabi	Chandigarh
6	22 nd February 2020	Dainik Jagran	Hindi	Chandigarh
7	22 nd February 2020	The Tribune	English	Chandigarh
8	22 nd February 2020	Amar Ujala	Hindi	Chandigarh

1.9. Public Hearing

The Public Hearing was held on 25th February 2020 at the Auditorium Hall, Government Museum and Art Gallery to discuss the issues related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The major issues discussed, the responses of the Petitioner thereon and the views of the Commission, have been summarized in Chapter 2.

2. Chapter 2: Summary of Suggestions/Objections received, Response from the Petitioner and the Commission's Views

2.1. Regulatory Process

On admitting the Petition, the Commission directed the Petitioner to make copies of the Petition available to the public, upload the Petition on the website and also publish the same in the newspapers in an abridged form in the given format duly inviting comments/objections from the public as per the provisions of the MYT Regulations, 2014 and MYT Regulations, 2018.

The Public Hearing was held at Auditorium Hall, Government Museum and Art Gallery, Chandigarh on 25th February 2020 on the Petition for the True-up of the FY 2018-19, APR of the FY 2019-20, ARR and retail tariff for the FY 2020-21. During the Public Hearing, a few of the stakeholders who had submitted their comments in writing also presented their views in person before the Commission. Other participants from the general public, who had not submitted written comments/objections earlier, were also given an equal opportunity to present their views/suggestions in respect to the Petition.

The list of the Stakeholders is attached as Annexure 1 to this Order.

2.2. Suggestions/ Objections, Response of the Petitioner and Commission's Views

The Commission is appreciative of the efforts of various stakeholders in providing their suggestions/comments/observations to make the Electricity Distribution Sector responsive and efficient. The Commission has noted the concerns of all the stakeholders and has tried to address them to the extent possible in the Chapters on tariff design and directives. Relevant observations have been suitably considered by the Commission while finalising the Tariff Order. The submissions of the stakeholders, response of the Petitioner and views of the Commission are summarized as follows:

2.2.1. Monthly Billing for all consumers except Agriculture consumers

Stakeholder's Comment:

The Electricity Department has still not implemented monthly billing for all consumers except agriculture as directed by the Commission in the previous year order.

Petitioner's Response:

At present, more than 85% consumers (Domestic & Commercial) are being billed Bi-Monthly. The conversion of meter reading from Bi-Monthly to Monthly basis will require additional manpower, whereas, there is an acute shortage of manpower as on date. Further, the software is also required to be amended for Monthly billing. The work for replacement of existing meters with smart meters is in progress, which would facilitate in monthly billing if required.

Commission's View:

The Petitioner is directed to ensure that monthly billing for all the categories except Agriculture Pumping Supply are implemented in the territory. The Commission suggests that the implementation of monthly billing may be done in a phased manner so that billing of certain number of consumers be shifted to monthly billing cycle every month/quarter. The Petitioner is directed to submit the cost benefit analysis of implementing monthly billing in its area of service.

2.2.2. Pre-paid Electric Meters & Smart Meters**Stakeholder's Comment:**

- 1) The pilot work for installation of 30,000 smart meters (with provision for pre-paid metering) was allotted to Sub-Division No.-5 in Industrial Area. Work was to be completed within 18 months after award of contract. Latest position with target date of completion is requested. Also, DPR for installation of smart meters worth 350 crores was submitted to Ministry of Power under NSGM, an update is requested on the same
- 2) Security Deposit should not be taken from consumers opting for Pre-paid metering

Petitioner's Response:

Smart Meters are having additional feature of prepaid meters. The work for installation of 26,000 Smart meters under Electricity, OP Sub Division No. 5 having facility of pre-paid features is under execution. 50 Nos. smart meters, 01 No. DCU have already been installed at Sector – 47, Chandigarh. The hardware and software for SCADA and AMI have also been installed at SCADA Centre, Sector – 18, Chandigarh. However, the project for the installation of Smart Meters in PAN City Chandigarh is under investment approval with the MHA, GOI.

Commission's View:

The reply of the Petitioner is noted. With regard to the security deposit for pre-paid metering, the Petitioner is directed to submit a proposal regarding the adequate requirement of security deposit from pre-paid consumers.

2.2.3. Manpower Requirement**Stakeholder's Comment:**

The petitioner has repeatedly failed to comply with the Commission directive and was advised by JERC to take up the matter at level of Chief Engineer and the Secretary (Power) to convince the competent authority in the interest of consumers. It is understood that the manpower requirement is linked with Privatization of electric supply or corporatization of the department. For transparency, the latest position on the issues is requested

Petitioner's Response:

Tender for Corporatization of Electricity Wing of Engineering Department has already been opened on 18th February 2020 and is under scrutiny. The scope of work includes the manpower study.

Commission's View:

The Petitioner is directed to expedite the process and submit a status report by next tariff filing.

2.2.4. Status of capitalisation approved by Commission**Stakeholder's Comment:**

- 1) Confirmation about Commissioning of 66 KV transformer and associated panels at Sector-34, Sub-Station is requested.
- 2) Latest position for commissioning of 220 / 66 KV Sub-Station at Hallo Majra under construction is requested.

Petitioner's Response:

The work of commissioning of 66 KV T/F and associated panels at Sector-34 Sub Stations has already been completed and assets are under operation. Further, commissioning of 220 / 66 KV S/Stn. at Hallomajra by M/s PGCIL is pending due to court case on the feeding 220 KV lines.

Commission's View:

The response of the Petitioner is noted and directs the Petitioner to expedite the commissioning of 220 / 66 KV Sub-station at Hallo Majra.

2.2.5. Kundi Connections

Stakeholder's Comment:

EWEDC should strengthen the enforcement activities and grant connections as per tariff schedule approved and the defaulters to be prosecuted under provision of section 135 of EA 2003. Para 4.38 of Supply Code 2018 states that the licensee shall not release Single Point Supply Connection or individual connections to residents without taking requisite Bank Guarantee. Para 5.24 to 5.55 of the new supply code specify the procedure for providing new electric service connections. It is doubtful whether the latest provisions will solve this problem for giving supply to JJ Clusters which has been pending unresolved for past few years. An appeal is being made to JERC to solve the problem once for all. Creation of a separate Police Station for investigating electrical thefts in Chandigarh (as done in few districts of Punjab) is suggested to minimize theft of Electricity.

Petitioner's Response:

The enforcement work is fully operational with 1 AEE, 1 JE and 2 ALM deployed to undertake vigilance. Further, a vehicle with driver is also provided to the Enforcement Wing. The defaulting consumers are booked under various provisions of Electricity Act.

Further, the Electricity Wing of Engineering Department, UT, Chandigarh (EWEDC) has already taken up the matter for Single Point Supply (SPS) tariff category but the same has not been considered by Hon'ble Commission. However, as per the various provisions of Supply Code, the policy to release individual electricity connection to residents of JJ Cluster/ Slum Dwellers / outside Lal Dora etc. is under consideration with the Chandigarh Administration. Further, the creation of Separate Police Station is considered and being processed.

Commission's View:

The stakeholders are informed that the Commission has already fixed the target T&D Losses for the Petitioner and the impact of any additional losses is being borne by the Petitioner as per the provisions of the MYT Regulations, 2018. The Commission had not allowed to grant SPS connections to these consumers and directed the Petitioner to strengthen the enforcement activities and grant connections as per the tariff schedule approved. Further, theft prone areas should be checked regularly. The defaulters should be prosecuted under the provisions of Section 135 of the EA, 2003. The Commission further directs the Petitioner that the new connections to the residents of Slums/ Juggies may be granted in accordance with the provisions of the Supply Code Regulations, 2018 notified by JERC.

2.2.6. Energy Audit

Stakeholder's Comment:

EWEDC has not been able to undertake the Energy Audit in the territory.

Petitioner's Response:

The smart meters are being provided on the feeder, the same would facilitate in energy audit.

Commission's View:

Although DNIT for the work of providing DLMS Energy audit had been approved in Jan 2019, no tender for the same has been initiated till now. The Commission further directs the Petitioner to submit the status report on the same within one month from issuance of this order

2.2.7. Smart City

Stakeholder's Comment:

Till last year, no funds were allocated to Electricity Wing for any work under Smart City. EWEDC was advised by the Commission to follow up with appropriate Govt. bodies to extract maximum benefits for consumers through implementation of the Smart City project the latest status of the same is requested.

Petitioner's Response:

It is submitted that no separate project for electricity wing has been undertaken in Smart City composite project. However, progress of works for various project of smart meter have already been elaborated in reply to pre-paid and smart metering section.

Commission's View:

The Commission had approved capital expenditure ~INR 50 Cr in the Business Plan Order against the Smart City schemes. The Petitioner is directed to implement those schemes after taking proper approval from Chandigarh Administration. The Petitioner is further directed to submit quarterly progress report of the same to the Commission.

2.2.8. Demand Side Management & Energy Conservation

Stakeholder's Comment:

Update is requested on the action plan for rolling out TOD metering for the billing consumers was to be submitted to the Commission.

Petitioner's Response:

The TOD Metering is an additional feature of the smart meters and progress of works for various project of smart meter have already been elaborated in reply to pre-paid and smart metering section.

Commission's View:

The Commission directs the Petitioner to further strengthen the DSM Cell and widely publicize the various schemes and initiatives undertaken by the Petitioner.

2.2.9. Management Information System

Stakeholder's Comment:

EWEDC had forwarded a proposal to NIC for online generation of MIS and the commission had directed for completion of Rollout of MIS. An update is requested on the same.

Petitioner's Response:

The M/s NIELIT is already been designated for computerized billing of all types of consumers of Electricity Wing of Engineering Department UT, Chandigarh (EWEDC), who fully support to EWEDC and supplies all types of MIS in required format time to time. EWEDC is regularly forwarding the MIS data like monthly SOP details, progress of enforcement under directive-9, metering & billing information, RPO information etc. to Hon'ble Commission in prescribed format time to time.

Commission's View:

The Petitioner has been submitting the requisite data. The Petitioner is directed to timely submit the reports in prescribed formats as per orders/directions of the Commission.

2.2.10. Refund of excess Electricity Duty charged from consumers

Stakeholder's Comment:

EWEDC has been charging ED from date of commissioning on total energy imported from the Grid. As per para 6.6.3 of the Solar Agreement, ED is payable on Net energy imported from the Grid and not on Exported units. JERC vide its order dated 12-11-2018 on review petition 262/2018 had mentioned "ED shall be payable on the net energy imported / net power consumed from the Grid". Accordingly, SE Electricity had given directions vide Cl. No. 174/2019 dated 15-01-2019 for meticulous compliance. This anomaly has been solved only for bills being issued from 30th July 2019 onwards. Duly Audited refund entry details from date of release of Solar Net Metering Connections were to be forwarded by various SDO's OP's Sub-Divisions to the billing agency within a month from 15-01-2019. Refund from the date of installation with interest if possible may be given to affected consumers at the earliest.

Petitioner's Response:

After due deliberation, the necessary direction to the billing agency are being issued for taking remedial measure.

Commission's View:

The Petitioner is directed to ensure that corrective measures are taken and any excess billing of electricity duty may be refunded.

2.2.11. Overcharging of Demand Charges

Stakeholder's Comment:

EWEDC has been over charging the fixed charges on Sanctioned Load w.e.f. 04.04.2015.

Petitioner's Response:

All field officers have been directed to follow the Supply Code strictly.

Commission's View:

The Petitioner is directed to ensure that billing is being done in accordance with the Tariff Order and Supply Code Regulations. The stakeholder is advised to contact the nearest field office for rectification of its issue. In case still the issue persists the stakeholder is advised to approach the CGRF.

2.2.12. Replacement of faulty single- phase meters

Stakeholder's Comment:

There is continuous delay in replacement of Non-functional or defective single phase meters.

Petitioner's Response:

The defective or non-functional meters are replaced on the priority basis as per availability of the meters. However, the case for procurement of single-phase meters was placed on the GeM portal but no bidder has qualified the eligibility criteria. The case for procurement of single-phase meter has again been placed on GeM. Further, more than 20,000 single-phase meters shall be received from the Smart Grid Project after installation of Smart Meters and these may be installed to various consumers. The consumer may purchase the meters from open market as per the purchase instructions No. 3 dated 16.03.2004 issued by this office wherein, various makes of meters have already been specified. The EWEDC is following the various provisions of Supply Code and tariff order issued from time to time by the Hon'ble commission. The action has been taken against the consumers involved in pilferage of power and tempering of meter as per Electricity Act and relevant provisions of Supply Code.

Commission's View:

The Petitioner is directed to ensure that faulty meters are replaced in a timely manner in accordance with the Supply Code Regulations. Further, strict measures should be undertaken to curb theft and pilferage in the area.

2.2.13. Specifications for meter and other equipments

Stakeholder's Comment:

Specification for meter and other equipments should be hosted on the Licensee's website.

Petitioner's Response:

The Electricity Wing of Engineering Department, UT, Chandigarh (EWEDC) purchases electricity meters from GeM Portal confirming to IS standard as per availability and procurement order is issued to the firm with lowest rate (L-1 firm). The consumer may purchase the meters from open market as per the purchase instructions No. 3 dated 16.03.2004 issued by this office wherein, various makes have already been specified.

Commission's View:

The Petitioner is directed to publish a notice of all the approved brands of meters along with its specifications which the consumers can purchase from the market, on its website. The Petitioner is directed to ensure that sufficient meters for replacement of defective meters and issue of new connections are available at all times. The Petitioner is further directed to ensure that the timelines for issue of new connection or replacement of defective meters are strictly adhered as per the provisions of the JERC Supply Code Regulations, 2018.

2.2.14. Waiver of Demand Charges

Stakeholder's Comment:

Fixed/Demand charges are being levied and revised time to time in the electricity bills. The fixed charges are being charged separately, over and above the consumption charges. These charges are ranging from INR 30/kW/month to INR 200/kW/month. The levy of fixed charges increases per unit rate of electricity unethically. Specifically, where there is a less consumption of electricity by a medium category consumer i.e. from 20 kW to 100kW. The fixed charges/minimum charges may be imposed on existing rates only on the connections which are not being used or the consumption is below the aggregate of fixed charges. Charging of fixed charges over and above the consumption is irrational and unjustified and ethically wrong. Hence should be withdrawn.

Petitioner's Response:

In this connection it is submitted that fixed charge is a universal phenomenon and all generating stations are also charging the same to Electricity Wing of Engineering Department, UT, Chandigarh (EWEDC), whether we draw the power or not. Similarly, the infrastructure has been laid to supply electricity and accordingly, all consumers, even a consumer not consuming electricity, is required to pay the fixed charges to recover the expenditure incurred to create the infrastructure. Further, Electricity Wing of Engineering Department is charging the Fixed Charges as per Tariff Order issued by Hon'ble Joint Electricity Regulatory Commission (JERC) for FY 2019-20.

Commission's View:

It is pertinent to note that the Petitioner has to incur expenditure towards the capacity charges of Power Purchase and O&M Expenses which are fixed in nature in contrast to the energy charges which are payable for purchase of energy per unit. These expenses have to be recovered from the consumers and this is done by having a two-part tariff. Thus, the recovery of these expenses from the tariff is also levied on two-part tariff basis.

2.2.15. Transmission & Distribution Losses

Stakeholder's Comment:

The T&D Losses submitted by the Petitioner are on a higher side and should be reduced.

Petitioner's Response:

The T&D losses are reduced from 20.20% to 13.50% as per the trajectory mentioned in the Tariff petition, however, the work for installation of DLMS meters is under process to carry out the energy audit of Electricity Wing of Engineering Department, UT, Chandigarh (EWEDC). The audit meters are already installed on Distribution Transformers for energy audit purpose in industrial area Phase I and II. The defective meters are replaced on priority basis and concerned field offices have been directed to follow the SOP in true spirit. The consumers are being checked regularly for theft/misuse of electricity by the Enforcement Wing and concerned field staff. The defaulting consumer got booked under various provisions of Electricity Act and charged accordingly.

Commission's View:

The Commission has already fixed the target of T&D Losses for the Petitioner and the impact of any additional losses is to be borne by the Petitioner as per the provisions of the MYT Regulations, 2014. The Commission has accordingly imposed a penalty in the form of a disincentive of Rs 9.93 Cr in the True-up of the FY 2018-19.

2.2.16. Recovery of Arrears from Defaulters

Stakeholder's Comment:

The EWEDC should recover arrears from defaulters before proposing tariff hikes.

Petitioner's Response:

The EWEDC regularly makes rigorous efforts to recover arrears from the defaulters. However, the data of arrears of defaulters every financial year is a part of the financial statement of Electricity Wing of Engineering Department which gets audited by AG UT and is accordingly submitted to the Commission in the respective years of Tariff Petition.

Commission's View:

The Commission recognises the concerns of the stakeholder and the Commission has accordingly not allowed the provision for bad and doubtful debts to the Petitioner in the True-up of the FY 2018-19 and projections for the FY 2019-20 and FY 2020-21. Thus, the inefficiency of the Petitioner is not passed on to the consumer tariffs. Further, the Commission observes that the defaulters of arrears are liable to pay late payment surcharge. The Petitioner is directed to take action against the defaulters by disconnecting the supply of defaulting consumers as per Section 56 of the Electricity Act, 2003.

3. Chapter 3: True-up for the FY 2018-19

3.1. Applicable Provisions and Background

Under the first MYT regime of the JERC, the Tariff Order approving the True-up for the FY 2016-17, Annual Performance review (APR) of the FY 2017-18 and Aggregate Revenue Requirement (ARR) and tariff for the FY 2018-19 was issued on 28th March 2018. Subsequently, the MYT Order for the 2nd Control Period approving the True-up for the FY 2017-18, Annual Performance review (APR) of the FY 2018-19 and ARR's for 2nd Control Period (FY 2019-20 to FY 2021-22) and retail tariff for FY 2019-20 was issued on 20th May 2019 (hereinafter referred to as the "MYT Order").

The True up for the FY 2018-19 has to be carried out in accordance to Regulation 8(2) of the MYT Regulations, 2014, which states as following:

"(2) After audited accounts of a year are made available, the Commission shall undertake similar exercise as above with reference to the final actual figures or the provisional actual accounts as available as per the audited accounts. This exercise with reference to audited accounts shall be called 'Truing Up'.

The Truing Up for any year will ordinarily not be considered after more than one year of 'Review'.

(3) The revenue gap/surplus, if any, of the ensuing year shall be adjusted as a result of review and truing up exercises.

(4) While approving such expenses/revenue to be adjusted in the future years as arising out of the Review and/or Truing up exercises, the Commission may allow the carrying costs as determined by the Commission of such expenses/revenue. Carrying costs shall be limited to the interest rate approved for working capital borrowings.

(5) For any revision in approvals, the licensee would be required to satisfy the Commission that the revision is due to conditions beyond its control.

(6) In case additional supply is required to be made to any particular category, the licensee may, any time during the year make an application to the Commission for its approval. The application will demonstrate the need for such additional supply of power and also indicate the manner in which the licensee proposes to meet the cost for such additional supply of power."

3.2. Approach for True-up for FY 2018-19

The Petitioner has requested for True-up of FY 2018-19 on the basis of audit of accounts done by Comptroller and Auditor General (CAG) of India. The Petitioner has submitted details of the expenditure and the revenue for the year based on its audited accounts along with a comparison of the actual revenue and expenditure against the corresponding figures previously approved by the Commission in the APR of FY 2018-19.

The Commission has analysed various elements of the actual revenue and expenses for the FY 2018-19 based on the audited accounts submitted by the Petitioner and has carried out the True-up exercise in accordance with the principles laid down in the MYT Regulations, 2014 after due prudence check. The Commission has allowed necessary adjustments in cases where variations are for reasonable and justifiable reasons.

3.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for the FY 2018-19 as 1,535.77 MU as against approved energy sales quantum of 1,598.27 MU in the MYT Order.

Commission's Analysis

Regulation 9.1 of the MYT Regulations, 2014 provides:

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

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

The Commission had approved the energy sales of 1,598.27 MU in the MYT Order, against which actual energy sales of 1535.77 MU have been submitted by the Petitioner now. The quantum of energy sales was verified from the audited accounts submitted by the Petitioner and the same were found to be in order.

The table below provides the energy sales approved by the Commission in the MYT Order, the Petitioner's submission and quantum of energy sales now trued-up by the Commission.

Table 8: Energy Sales (MU) Trued-up by the Commission

S. No	Category	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	750.69	704.67	704.67
2	Commercial	516.80	472.98	472.98
3	Large Industrial supply	119.85	125.15	125.15
4	Medium Industrial supply	119.33	116.40	116.40
5	Small Industrial supply	18.65	18.87	18.87
6	Agriculture	1.31	1.36	1.36
7	Public lighting	11.86	15.09	15.09
8	Bulk supply	54.47	77.31	77.31
9	Temp. Supply	5.32	3.93	3.93
	Total	1,598.27	1,535.77	1,535.77

The Commission approves 1,535.77 MU as energy sales in the True-Up of FY 2018-19.

3.4. Inter-State Transmission Loss

Petitioner's submission

The Petitioner has submitted the Inter-State Transmission Loss of 3.69%, as against the approved value of 3.60% in the APR of the FY 2018-19.

Commission's analysis

Based on the power purchased by the Petitioner and the power available to the Petitioner at the State periphery, the Commission finds the Inter-State Transmission Loss as submitted by the Petitioner to be in order.

The following table provides the Inter-State Transmission Loss as approved in the MYT Order, the Petitioner's submission and now trued-up by the Commission.

Table 9: Inter-State Transmission Loss Trued-up by Commission (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Inter-State Transmission Loss	3.60%	3.69%	3.69%

The Commission approves the Inter-State Transmission Loss at 3.69% in the True-Up of FY 2018-19.

3.5. Intra-State Distribution Loss

Petitioner's submission

Intra-State Distribution Loss for the FY 2018-19 has been arrived at 13.50% as compared to 12.25% approved by the Commission in the APR Order.

The Petitioner submitted that it has been constantly endeavoring to reduce the T&D losses. It has been able to reduce the T&D losses from 20.20% in FY 2011-12 to 13.65% in the FY 2016-17. In this regard, the Petitioner has submitted that the system improvement and augmentation work executed each year under the planned schemes have resulted in the reduction of T&D losses significantly in its distribution area.

Commission's analysis

The Commission has considered the net energy available for sales to retail consumers by the Petitioner consisting of energy available from firm sources, energy under the Deviation Settlement Account (DSA), energy purchased from Open market and energy procured from Solar sources within the UT. The Commission has further considered actual sales of 1,535.77 MU as approved in the previous section. Considering the difference in energy available at the periphery of the Petitioner and the sales approved, actual Intra-State Distribution Loss of the FY 2018-19 stands at 13.50%, as shown in the table below:

Table 10: Intra-State Distribution Loss calculation

S. No	Particulars	Trued-up by Commission
1	Energy Sales within the UT (MU)	1,535.77
2	Energy Required at State Periphery (MU)	1,775.43
3	T&D Losses (MU)	239.66
4	T&D Loss (%)	13.50%

Since, the Petitioner has under-achieved the Intra-State Distribution Loss target of 12.25% for the year, the Petitioner has been dis-incentivised in accordance with the MYT Regulations, 2014. The calculation of the same has been discussed in detail in "Section 3.20: Incentive/Disincentive towards over/under-achievement of norms of distribution losses section" of this Order.

The following table provides the Intra-State T&D loss approved in the APR of FY 2018-19, the Petitioner's submission and now trued-up by the Commission.

Table 11: Intra-State Distribution Loss Trued-up by Commission (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Intra-State Distribution Loss	12.25%	13.50%	13.50%

The Commission, while Truing-up for the FY 2018-19 has considered the actual intra-state T&D loss of 13.50% and hence considered a dis-incentive in Section 3.20 in accordance with the MYT Regulations, 2014 for under-achievement of Intra-State Distribution Loss target approved by the Commission in the APR.

3.6. Power Purchase Quantum & Cost

Petitioner's submission:

The Petitioner meets its power requirement from the allocations from Central Generating Stations (CGS) such as NTPC, NHPC, NPCIL BBMB, SJVNL, THDC along with bilateral agreement and banking arrangements. The allocation from CGS consists of a fixed share of allocation for a year, and the Govt. of India changes the variable share of allocation from the unallocated quota, time to time. Since, during the peak summer seasons the allocation of power from various sources is inadequate, therefore the Petitioner procures power from short-term sources i.e. power exchange, UI, banking etc.

The following table shows the summary of actual Power Purchase from various sources for the FY 2018-19 including Transmission Charges and purchase from short-term sources i.e. power exchange, UI, cost towards RPO etc. Further, Power Purchase Cost is inclusive of Letter of Credit (LC) Charges payable to BBMB for the FY 2018-19.

Table 12: Power Purchase quantum and cost submitted by the Petitioner

S. No.	Source	Energy Units (MU)	Fixed Charges (Cr)	Energy Charges (Cr)	Other Charges (Cr)	Total Cost (Cr)
1	NTPC	325.41	57.84	67.26	7.34	132.44
2	NHPC	311.95	47.32	47.90	8.24	103.46
3	NPCIL	179.04	0.00	62.26	2.33	64.59
4	SJVNL	120.28	16.77	15.30	0.05	32.12
5	BBMB	649.39	0.00	160.87	15.55	176.43
6	APCPL	45.39	11.79	15.38	0.17	27.34
7	THDC	191.13	47.84	46.28	7.87	101.99
8	PTC	43.99	0.00	11.59	0.00	11.59
9	PTC REC	0.00	0.00	0.00	5.15	5.15
10	UI Over-drawal	175.33	0.00	54.70	0.00	54.70
11	Crest	9.75	0.00	8.52	0.00	8.52
12	Pvt. solar (Gross + Net Metering)	1.30	0.00	1.01	(0.02)	0.99
13	Others (PGCIL, Reactive Power etc)	-	-	-	38.73	38.73
14	LC Charges	-	-	-	-	1.13
	GRAND TOTAL	2052.96	181.56	491.06	85.41	759.17

In addition to the Power Purchase cost the Petitioner has also submitted revenue from sale of surplus power/ UI Under-drawal and adjusted the same in the overall ARR submitted for FY 2018-19.

Table 13: Quantum and Revenue from sale of surplus power submitted by the Petitioner

S. No.	Source	Energy Units (MU)	Fixed Charges (Cr)	Energy Charges (Cr)	Other Charges (Cr)	Total Cost (Cr)
1	Sale of Surplus Power/ UI Under-drawal	210.00	-	71.75	-	71.75

Commission's analysis

The MYT Regulations, 2014 stipulate that any variation in the cost of power generation and/or power purchase shall be treated as an uncontrollable factor. Regulation 9.1 of the MYT Regulations stipulates the following:

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

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

The Petitioner procures power mainly from NTPC Stations, Hydro Stations, NPCIL stations, and IPPs. The Petitioner has submitted the overall power purchase cost as INR 759.17 Cr against a procurement of 2052.96 MU, inclusive of transmission cost but exclusive of revenue due to sale of surplus power.

The revenue on account of surplus power sale/UI Under-drawl has been considered as a revenue item by the Petitioner and considered separately in the ARR. The Commission for the purpose of finalising the Power Purchase quantum and cost for FY 2018-19 has adjusted the revenue of INR 71.75 Cr on account of surplus power sale/UI Under-drawl (verified as per the audited accounts) in the Total Power Purchase cost to arrive at the Net Power Purchase cost.

The Petitioner submitted that the total power purchase cost is inclusive of the cost incurred towards compliance of Renewable Purchase Obligation (RPO) target for the FY 2018-19. The compliance status of RPO has been discussed in detail in the subsequent section.

The following table provides the summary of the power purchase quantum and the cost approved by the Commission during FY 2018-19.

Table 14: Power Purchase quantum and cost Trued-up by Commission

S. No.	Source	Energy Units (MU)	Fixed Charges (Cr)	Energy Charges (Cr)	Other Charges (Cr)	Total Cost (Cr)
1	NTPC	325.41	57.84	67.26	7.34	132.44
2	NHPC	311.95	47.32	47.90	8.24	103.46
3	NPCIL	179.04	0.00	62.26	2.33	64.59
4	SJVNL	120.28	16.77	15.30	0.05	32.12
5	BBMB	649.39	0.00	160.87	15.55	176.43
6	APCPL	45.39	11.79	15.38	0.17	27.34
7	THDC	191.13	47.84	46.28	7.87	101.99
8	PTC	43.99	0.00	11.59	0.00	11.59
9	PTC REC	0.00	0.00	0.00	5.15	5.15
10	UI Over-drawal	175.33	0.00	54.70	0.00	54.70
11	Total Availability from firm sources outside UT - @Ex-bus	2041.91	181.56	481.54	46.7	709.81
12	Less: Revenue from Sale of Surplus Power	210.00	-	71.75	-	71.75
13	Crest	9.75	0.00	8.52	0.00	8.52
14	Pvt. solar (Gross + Net Metering)	1.30	0.00	1.01	(0.02)	0.99
15	Others (PGCIL, Reactive Power etc)	-	-	-	38.73	38.73
16	LC Charges	-	-	-	-	1.13
	GRAND TOTAL	1842.96	181.56	419.32	85.41	687.42

The Commission approves power purchase cost of INR 687.42 Cr (adjusted for sale of surplus power/UI Under-drawal) in the True-up of FY 2018-19.

3.7. Renewable Purchase Obligation (RPO)

Petitioner's submission

The Petitioner submitted that it has been able to meet its RPO for the FY 2018-19 (solar and non-solar). Besides the REC purchase, it has also purchased energy from conventional solar plants such as CREST and through gross and net metering, details of which are as follows:

Table 15: RPO compliance submitted by the Petitioner

Particulars	RPO %	Target		Actual
		Conventional Power consumed (MU)	Units (MU)	Units (MU)
Solar	3.60%	437.14	15.74	39.16
Solar Rooftop (Gross Generation)				29.41
CREST				9.75
Non-Solar (REC)	5.40%	437.14	23.61	40.53
Total	9.00%		39.34	79.69

Commission's analysis

As per Regulation 1, Sub-regulation (1) of the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010

“Each distribution licensee shall purchase electricity (in kWh) from renewable energy sources, at a defined minimum percentage of the total consumption of all the consumers in its area during a year.”

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and revised the RPO targets. In accordance with the Regulations, the Petitioner had to purchase 9.00% of its total consumption (excluding hydro) from renewable sources for the FY 2018-19.

The effective energy sales used for calculation of the RPO have been arrived at as follows:

Table 16: Effective energy sales (except hydro) for calculation of RPO

S.No.	Particular	Formula	FY 2018-19
1	Energy Sales within UT	a	1,535.77
2	Hydro Power Purchase FY 2017-18	b	1,318.69
3	Inter-State Loss (%)	c	3.69%
4	Inter-State Loss (MU)	d= c*b	48.66
5	Intra-State Loss (%)	e	13.50%
6	Intra-State Loss (MU)	f=e*(b-d)	171.45
7	Hydro Power Sale (MU)	g=b-d-f	1,098.58
8	Conventional Power Sale	h= a-g	437.20

The Petitioner has complied with the RPO target till FY 2017-18.

The standalone RPO target for FY 2018-19 has been provided in the following table:

Table 17: Summary of Renewable Purchase Obligation (RPO) (MU)

Description	FY 2018-19
Sales within State from conventional sources (MU)	437.20
RPO obligation (in %)	9.00%
Solar	3.60%
Non-solar	5.40%
RPO obligation for the year (in MU)	39.35
Solar	15.74
Non-solar	23.61
Backlog upto FY 2017-18	0.00
Solar	0.00
Non Solar	0.00
Total RPO to be fulfilled for the year	39.35
Solar	15.74
Non Solar	23.61
RPO compliance- Physical Purchase	
- Solar	39.16
<i>CREST</i>	9.75
<i>Pvt. Solar (Gross Generated)</i>	29.41
-Non-solar	0.00
RPO compliance (REC certificate purchase)	
- Solar	0.00
-Non-solar	40.53
Total RPO compliance (Physical Purchase+ REC certificate purchase)	39.35
- Solar	15.74
-Non-solar	23.61

The RPO compliance status in the FY 2018-19 has been done based on the renewable energy/ REC purchased by the Petitioner. The Petitioner has been able to meet the standalone RPO target for the FY 2018-19. However, it has been observed that no expenditure has been incurred towards procurement of solar power via Gross Metering. In case the Petitioner incurs any cost in the subsequent years under this head, the same shall be considered as per actuals.

The cost towards compliance of RPO incurred in FY 2018-19 has been shown in the following table:

Table 18: Cost towards compliance of Renewable Purchase Obligation (In INR Cr)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	Solar	39.16	9.51	2.43
a)	<i>CREST</i>	9.75	8.52	8.74
b)	<i>Pvt. Solar</i>	29.41	-	-
(i)	<i>Pvt. Solar (Net + Gross metering)</i>	1.30	0.99	7.62
2	Non-solar	40.53	5.15	1.27
	Total	79.69	14.66	1.84

The Commission approves INR 14.66 Cr towards compliance of RPO in the True-up of the FY 2018-19 and the same has been considered in the Power Purchase cost approved for FY 2018-19.

3.8. Energy Balance

Petitioner's submission

The Petitioner has submitted the energy requirement as shown in the following table.

Table 19: Energy requirement submitted by the Petitioner (in MU)

Particulars	Petitioners submission
Units Procured	2,041.91
Less: Outside Sale - Trading	210.00
Energy Available	1,831.92
Inter-State Transmission Loss	3.69%
Transmission Loss (MU)	67.54
Net Energy Available at UT Periphery	1,764.38
Power Available within UT	
Power procured from Gross & NET Metering Mode (In MUs)	11.05
Total Energy Available	1,775.43
Actual Energy Sales (Mus)	1,535.77
T&D Loss (%)	13.50%
T&D Loss (in MUs)	239.66
Total Energy Required at UT Periphery (MUs)	1,775.43

Commission's analysis:

The information submitted by the Petitioner on power purchase quantum, UI over/ under drawl, IEX/ Bilateral purchase has been studied and accordingly the energy balance has been derived for FY 2018-19.

The following table provides the energy balance approved in the MYT Order, submitted by the Petitioner and now trued-up by the Commission.

Table 20: Energy balance Trued-up by Commission (in MU)

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Energy Requirement			
Energy sales within the State/UT (a)	1,598.27	1,535.77	1,535.77
Distribution losses (b)			
%	12.25%	13.50%	13.50%
MU	223.12	239.66	239.66
Total Energy requirement (c=a/(1-b))	1,821.39	1,775.43	1,775.43
Energy Availability			
Availability from firm sources outside UT - @Ex-bus	1,836.56	2,041.91	2,041.91
Availability from UI Over-drawal/ Under-drawal	91.49	-	-
Less: Sale in Open Market	65.32	210.00	210.00
Less: Bilateral transfer to J&K	0.77	0.00	0.00
Total Availability from outside UT (d)	1,861.96	1,831.92	1,831.92
PGCIL losses (e)			
%	3.60%	3.69%	3.69%

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
MU	67.10	67.54	67.54
Total Availability from outside UT at UT Periphery (f=d*(1-e))	1,794.86	1,764.38	1,764.38
Availability from within UT (g)	8.80	11.05	11.05
Deficit/(Surplus) (h=c-f-g)	17.73	0.00	0.00

3.9. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). The MYT Regulations, 2014 consider the variation of O&M Expenses to be controllable. Regulation 9.2 of the MYT Regulation, 2014 states the following:

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

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

(b) Variations in Transmission and Distribution Losses (T&D) losses in case of bundled utilities and Distribution losses in case of unbundled utilities which shall be measured as the difference between the units input into the distribution system and the units supplied and billed;

(c) Depreciation and working capital requirements;

(d) Failure to meet the standards specified in the Joint Electricity Regulatory Commission (Standards of Performance) Regulations, 2009 except where exempted;

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

(f) Variation in Wires Availability and Supply Availability;

(g) Variation on account of inflation;”

Therefore, any variation in O&M Expenses is attributable to the Petitioner and is not passed on in the ARR, other than any cost which is beyond the control of the Petitioner.

3.9.1. Employee Expenses

Petitioner's submission

Employee expenses of INR 70.39 Cr have been incurred against approved expenses of INR 74.38 Cr in the APR. The employee expenses comprise of Salaries, Dearness allowance, Bonus, Terminal benefits in the form of Pension and Gratuity, Leave encashment and staff welfare expenses.

Commission's analysis

As per the audited accounts submitted by the Petitioner, the employee expenses during the FY 2018-19 are reflected as INR 70.39 Cr.

However, in accordance with the MYT Regulations, the Employee expenses are controllable, therefore, the Commission has considered the same Employee Expenses as approved in the APR of FY 2018-19.

Table 21: Employee Expenses Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Total Employee Expenses	74.38	70.39	74.38

The Commission approves Employee Expenses of INR 74.38 Cr in the True-up of FY 2018-19.

3.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted the actual A&G expenses of INR 6.44 Cr as reflected in audited accounts against the approved expenses of INR 7.10 Cr in the APR.

Commission's analysis

A&G expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances, etc. As per the audited accounts submitted by the Petitioner the A&G expenses for FY 2018-19 are reflected as INR 6.44 Cr.

However, as variation in the O&M expenses is controllable, the Commission approves the same A&G expenses as approved in the APR.

Table 22: A&G Expenses Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Administration & General Expenses (A&G)	7.10	6.44	7.10

The Commission approves the Administrative & General (A&G) expenses of INR 7.10 Cr in the True-up of FY 2018-19.

3.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

Actual R&M expenses of INR 13.06 Cr have been incurred against approved expenses of INR 10.51 Cr in the APR of FY 2018-19. R&M expenses are incurred towards day to day maintenance of the transmission and distribution network of the Petitioner and form an integral part of the Licensee's efforts towards providing reliable and quality power supply and also in the reduction of losses in the system.

Commission's analysis

Similar to the approach followed while approving the Employee expenses and A&G expenses above, the Commission approves the same R&M Expenses as approved in the APR of FY 2018-19.

Table 23: R&M Expenses Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Repair & Maintenance Expenses (R&M)	10.51	13.06	10.51

The Commission approves the Repair & Maintenance (R&M) expenses of INR 10.51 Cr in the True-up of FY 2018-19.

3.9.4. Total Operation and Maintenance Expenses (O&M)

The following table provides the O&M expenses, approved by the Commission in the MYT Order, Petitioner's submission and O&M expenses now trued-up by the Commission.

Table 24: O&M Expenses Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	74.38	70.39	74.38
2	Administrative & General Expenses (A&G)	7.10	6.44	7.10
3	Repair & Maintenance Expenses	10.51	13.06	10.51
	Total Operation & Maintenance Expenses	91.99	89.90	91.99

The Commission approves the Operation & Maintenance (O&M) expenses of INR 91.99 Cr in the True-up of FY 2018-19.

3.10. Capitalisation

Petitioner's submission

The Petitioner has managed to achieve capitalisation of INR 14.93 Cr during the year against approved capitalisation of INR 15.95 Cr in the APR of FY 2018-19.

Commission's analysis:

The Commission observes that the capitalisation achieved is lower as compared to the capitalisation approved in APR and much lower than that approved in the MYT Order. Lower capitalisation signifies that not enough efforts are being taken in enhancing the reliability and quality of supply to the consumers. Accordingly, the Commission directs the Petitioner to increase its efforts towards undertaking capital expenditure activities necessary to improve the service quality and target 24x7 supply to all consumers.

The Commission examined the Fixed Asset Register (FAR) as submitted by the Petitioner and accordingly approves the capitalisation as shown in the table as follows:

Table 25: Capitalisation Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Capitalisation	15.95	14.93	14.93

The Commission approves capitalisation of INR 14.93 Cr in the True-up of the FY 2018-19.

3.11. Capital Structure

Petitioner's Submission

The entire capital deployment at the EWEDC is through equity for the FY 2018-19.

Commission's analysis

In the Technical Validation Session held at the Commission's office, the Petitioner was directed to submit the relevant documents specifying the nature of capital deployed for creation of assets. The Petitioner submitted that the entire capital is infused as equity by the Government. Further, the Petitioner also submitted that no assets have been created through consumer contribution.

The MYT Regulations 2014, specify that if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would be considered as normative loan. Regulation 24 of the MYT Regulations, states the following:

- “
- (a) *The Distribution Licensee shall provide detailed loan-wise, project-wise and utilization-wise details of all of the pending loans*
- (b) *If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.*
- Provided that where equity actually deployed is less than 30% of the capital cost, the actual loan shall be considered for determination of interest on loans.”*

In accordance with the MYT Regulations, 2014 the Commission has determined the Capital Structure for FY 2018-19 as shown in the following tables.

Table 26: Funding Plan Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Capitalisation	15.95	14.93	14.93
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	Normative Loan	11.17	10.45	10.45
5	Equity	4.79	4.48	4.48

Table 27: GFA addition Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	437.38	437.38	437.38
2	Addition During the FY	15.95	14.93	14.93
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	453.33	452.31	452.31

Table 28: Normative Loan addition Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	13.47	44.13	13.47
2	Add: Normative Loan During the year	11.17	10.45	10.45
3	Less: Normative Repayment equivalent to Depreciation	16.91	16.13	16.62
4	Closing Normative Loan	7.72	38.45	7.30

Table 29: Normative Equity addition Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	125.26	131.21	125.26
2	Additions on account of new capitalisation	4.79	4.48	4.48
3	Closing Equity	130.04	135.69	129.74

3.12. Depreciation

Petitioner's submission

The Petitioner has submitted that for computation of depreciation, the opening GFA approved by the Commission in the Tariff Order dated 28th March 2018 has been considered and actual addition during FY 2018-19 as per the annual accounts has been considered. Further, depreciation for the year has been considered based on the Fixed Asset Register prepared for FY 2018-19.

Commission's analysis

Regulation 23 of the MYT Regulations 2014, states the following:

- “
- Depreciation shall be calculated for each year of the control period on the original cost of the fixed assets of the corresponding year.*
 - Depreciation shall not be allowed on assets funded by capital subsidies, consumer contributions or grants.*
 - Depreciation shall be calculated annually as per straight-line method over the useful life of the asset at the rate of depreciation. The same shall be as specified in the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014. (The same may vary as notified by CERC from time to time.)*
 - The residual value of assets shall be considered as 10% and depreciation shall be allowed to a maximum of 90% of the original cost of the asset. Provided that Land shall not be treated as a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset.*
 - Depreciation shall be charged from the first year of operation of the asset. Provided that in case the operation of the asset is for a part of the year, depreciation shall be charged on proportionate basis.*
 - A provision of replacement of assets shall be made in the capital investment plan.”*

As per the norms specified in the MYT Regulations, 2014 the Commission has verified the asset wise capitalisation of the Petitioner and has accordingly derived the weighted average rate of depreciation based on the asset wise depreciation rate prescribed in the CERC Tariff Regulations, 2014, provided in the table below:

Table 30: Asset wise and overall effective Depreciation Rate (%)

Description	Rate	Opening Depreciable GFA (Less: Assets achieved 90% depreciation)	Asset Addition	Closing Depreciable GFA	Average Depreciable GFA	Effective Rate
Plant & Machinery	5.28%	288.16	14.82	302.98	295.57	
Buildings	3.34%	26.20	0.10	26.31	26.25	
Vehicles	9.50%	0.63	-	0.63	0.63	

Description	Rate	Opening Depreciable GFA (Less: Assets achieved 90% depreciation)	Asset Addition	Closing Depreciable GFA	Average Depreciable GFA	Effective Rate
Furniture & Fixtures	6.33%	0.09	-	0.09	0.09	
Computers & Others	15.00%	0.47	-	0.48	0.47	
Land	0.00%	-	-	-	-	
Total	-	315.55	14.93	330.48	323.01	5.15%

The Petitioner along with the Petition has been able to submit the Fixed Asset Register (FAR) for FY 2018-19 which specifies the value of assets that have achieved 90% depreciation as of FY 2018-19. As the MYT Regulations, 2014 stipulates that the depreciation shall be allowed to a maximum of 90% of the original cost of the asset, therefore the entire value of assets depreciated upto 90% as reflected in the FAR of FY 2018-19 has been deducted from the opening GFA of FY 2018-19 as approved in the APR of FY 2018-19.

The revised GFA has then been considered and the depreciation on average Gross Fixed Assets (GFA) has been determined. The following table provides the calculation of depreciation during the year FY 2018-19

Table 31: Depreciation Trued-up by Commission (In INR Cr.)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Closing GFA approved in the True-up of FY 2017-18 (a)	437.38	-	437.38
2	Less: Assets depreciated upto 90% (b)	114.20	-	121.83
3	Opening Gross Fixed Assets (a-b)	323.18	437.38	315.55
4	Addition During the FY	15.95	14.93	14.93
5	Adjustment/Retirement During the FY	0.00	0.00	0.00
6	Closing Gross Fixed Assets	339.13	452.31	330.48
7	Average Gross Fixed Assets	331.16	444.84	323.01
8	Effective Rate of Depreciation (%)	5.11%	3.63%	5.15%
	Depreciation	16.91	16.13	16.62

The Commission approves depreciation of INR 16.62 Cr in the True-up of FY 2018-19

3.13. Interest on Loan

Petitioner's submission

The Petitioner has submitted the Interest on Loan on normative basis. The normative loan addition in FY 2018-19 has been computed as 70% of the capitalisation for the FY 2018-19. The repayment of loans has been considered equal to the depreciation during the FY 2018-19.

Further the rate of interest has been considered as the State Bank of India Prime Lending Rate (SBI PLR) of 13.80% (rate as on 1st April 2019).

Commission's analysis:

Regulation 24 of the MYT Regulations provides:

“

- (a) *The Distribution Licensee shall provide detailed loan-wise, project-wise and utilization-wise details of all of the pending loans*
- (b) *If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.*
- Provided that where equity actually deployed is less than 30% of the capital cost, the actual loan shall be considered for determination of interest on loans.*
- (c) *Actual loan or normative loan, if any, shall be referred as gross normative loan in this Regulation.*
- (d) *The normative loan outstanding as of 1st April of control period shall be computed by deducting the cumulative repayment as approved by the Commission (basis as mentioned below) up to 31st March of current period (a year before control period) from the gross normative loan.*
- (e) *The repayment for the control period shall be deemed to be equal to the depreciation allowed for the year.*
- (f) *Notwithstanding any moratorium period availed by the Distribution Licensee, the repayment of the loan shall be considered from the first year of the control period as per annual depreciation allowed.*
- (g) *The rate of interest shall be the weighted average rate of interest calculated on the basis of actual loan portfolio at the beginning of each year of the control period, in accordance with terms and conditions of relevant loan agreements, or bonds or non-convertible debentures.*
- Provided that if no actual loan is outstanding but normative loan is still outstanding, the last available weighted average rate of interest shall be applicable.*
- Provided further that the interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*
- Provided also that exception shall be made for the existing loans which may have different terms as per the agreements already executed if the Commission is satisfied that the loan has been contracted for and applied to identifiable and approved projects.*
- (h) *The Distribution Licensee shall make every effort to refinance the loan as long as it results in net benefit to the consumers.*
- Provided that the cost associated with such refinancing shall be eligible to be passed through in tariffs and the benefit on account of refinancing of loan and interest on loan shall be shared in the ratio of 50:50 between the Distribution Licensee and the consumers.*
- Provided further that the Distribution Licensee shall submit the calculation of such benefit to the Commission for its approval. •*
- (i) *(The Distribution Licensee shall enable tracking of the loans converted into grants under schemes, like APDRP by providing information and data regularly to the Commission and for ensuring that the interest on these loans which has been passed on to the consumers inappropriately in the earlier years shall be recovered from the Distribution Licensee.)*

Hence, the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. However, the Petitioner has submitted that the complete capitalisation during the year has been funded by the Petitioner's equity and no loan has been taken against any of the capitalised assets.

As per the MYT Regulations 2014, if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% shall be considered as normative loan. Further, the Commission has considered the actual capitalisation of assets as approved in the foregoing paragraphs. The Commission for the purpose of funding of the capitalisation has considered the normative debt equity ratio of 70:30.

The Commission for the purpose of calculation of Interest on Loan has considered the interest rate equivalent to SBI PLR as on 1st April 2018. Further, in accordance with the MYT Regulations, 2014, the interest has been calculated on the average normative loan during the year with the opening loan considered equivalent to the

opening loan approved in the APR of the FY 2018-19. The addition in loan has been considered as explained above and the repayment is considered the same as depreciation during the year.

The following table provides the Interest on Loan, approved by the Commission in the APR, Petitioners submission and now trued-up by the Commission.

Table 32: Interest on Loan Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	13.47	44.13	13.47
2	Add: Normative Loan During the year	11.17	10.45	10.45
3	Less: Normative Repayment= Depreciation	16.91	16.13	16.62
4	Closing Normative Loan	7.72	38.45	7.30
5	Average Normative Loan	10.59	41.29	10.39
6	Rate of Interest (%)	13.45%	13.80%	13.45%
	Interest on Loan	1.42	5.70	1.40

The Commission approves the Interest of Loan of INR 1.40 Cr in the True-up of the FY 2018-19.

3.14. Return on Equity (RoE)

Petitioner's submission

The RoE is calculated in accordance with the MYT Regulations 2014, and is computed on 30% of the capital base. The equity addition has been considered to the tune of 30% of assets capitalized during the year. Accordingly, the Petitioner has computed the Return on Equity at 16% on post tax basis.

Commission's analysis:

Regulation 27 of the MYT Regulations, 2014 provides:

- “
- (a) *the Return on equity shall be computed on 30% of the capital base or actual equity, whichever is lower:*
- Provided that assets funded by consumer contribution, capital subsidies/grants and corresponding depreciation shall not form part of the capital base. Actual equity infused in the Distribution Licensee as per book value shall be considered as perpetual and shall be used for computation in this Regulation.*
- (b) *The return on the equity invested in working capital shall be allowed from the date of start of commercial operation.*
- (c) *16% post-tax return on equity shall be considered irrespective of whether the Distribution Licensee has claimed return on equity in the ARR Petition”*

As the complete asset capitalisation during the year has been funded through equity, the Commission, for the purpose of equity addition during the year, has limited it to 30% of the total capitalisation in line with the MYT Regulations, 2014. The RoE has been calculated on the average of the opening and the closing of equity during the year @ 16% post-tax basis with opening equity considered the same as approved in the APR of FY 2018-19.

The following table provides the return on equity Trued-up for the FY 2018-19.

Table 33: RoE Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	125.26	131.21	125.26
2	Additions on account of new capitalisation	4.79	4.48	4.48
4	Closing Equity	130.04	135.69	129.74
5	Average Equity	127.65	133.45	127.50
6	Return on Equity (%)	16.00%	16.00%	16.00%
	Return on Equity	20.42	21.35	20.40

The Commission approves a Return on Equity of INR 20.40 Cr in the True-up of the FY 2018-19.

3.15. Interest on Consumer Security Deposits

Petitioner's submission

Payments of INR 9.58 Cr were released to the consumers towards interest on security deposits during the FY 2018-19 against INR 12.19 Cr approved by the Commission in the APR.

Commission's analysis:

As per Regulation 6.10 (8) of the JERC Electricity Supply Code Regulations, 2010:

"The distribution licensee shall pay interest, at the bank rate notified by the Reserve Bank of India from time to time on such security deposits taken from the consumer. In this regard it shall be the responsibility of the licensee to keep a watch on the bank rate from time to time. The interest amount of previous financial year shall be adjusted in the energy bill issued in May / June of each financial year depending on billing cycle."

The Commission has considered the actual interest on security deposit disbursed to the consumers in their bills, as reflected in the audited accounts of the FY 2018-19 for Truing-up.

The following table provides the interest on security deposit as approved in the APR, the Petitioner's submission and the interest now trued-up by the Commission:

Table 34: Interest on Consumer Security Deposits Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Opening Security Deposit	190.96	190.96	190.96
2	Add: Deposits During the year	8.00	12.83	12.83
3	Less: Deposits refunded	0.00	5.94	5.94
4	Closing Security Deposit	198.96	197.85	197.85
5	Average Security Deposit	194.96	194.41	194.41
	Interest paid to consumers	12.19	9.58	9.58

The Commission approves interest on security deposit as INR 9.58 Cr in the True-up of the FY 2018-19.

3.16. Interest on Working Capital

Petitioner's submission

The interest on working capital has been calculated based on the normative principles outlined in the JERC (Multi Year Distribution Tariff) Regulations, 2014.

The working capital requirement for the Control Period has been computed considering the following parameters:

- (a) Receivables of two months of billing
- (b) Less power purchase cost of one month
- (c) Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit
- (d) Inventory for two months based on annual requirement for previous year

The interest on working capital is computed at 9.05% (SBI base rate as on 1st April 2018) as has been shown in the table below:

Table 35: Interest on Working Capital submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Receivables of two months of billing	134.26
2	Less: Power Purchase Cost for one month	63.26
3	Inventory Based on Annual Requirement for Previous FY for 2 months	2.84
4	Less: Security Deposit excluding BG/FDR	197.85
5	Net Working Capital	(117.12)
6	Rate of Interest (%)	9.05%
	Interest on Working Capital	0.00

Commission's analysis:

The computation of working capital requirements and the rate of interest to be considered are stipulated in the MYT Regulations, 2014. Regulation 25 of the MYT Regulations states the following:

“Working capital for retail supply activity of the licensee shall consist of:

- (i) *Receivables of two months of billing*
- (ii) *Less power purchase cost of one month*
- (iii) *Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt*
- (iv) *Inventory for two months based on annual requirement for previous year.*

The rate of interest on working capital shall be equal to the base rate for the State Bank of India on the 1st April of the relevant financial year. The interest on working capital shall be payable on normative basis notwithstanding that the licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan worked out on the normative figures.”

The Commission, for determination of working capital requirement of the Petitioner during the year, has considered the receivables as ARR on pro rata basis for 2 months, the net power purchase cost after adjusting the rebate in power purchase bills, the consumer security deposit as above and the inventory for two months as per the audited accounts of FY 2018-19.

The Commission has considered the SBI Base rate as on 1st April 2018 in line with the MYT Regulations, 2014.

The Working Capital requirement after deduction of the amount of security deposit is coming to be negative. Hence, the Interest on Working Capital is approved as Nil, as shown in the table below:

Table 36: Interest on Working Capital Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Receivables of two months of billing	137.85	134.26	133.67
2	Less: Power Purchase Cost for one month	59.09	63.26	57.29
3	Inventory Based on Annual Requirement for Previous FY for 2 months	2.57	2.84	2.84
4	Total Working Capital Requirement	81.32	73.84	79.22
5	Less: Security Deposit excluding BG/FDR	194.96	190.96	194.41
6	Net Working Capital	(113.64)	(117.12)	(115.19)
7	Rate of Interest (%)	8.70%	9.05%	8.70%
	Interest on Working Capital	0.00	0.00	0.00

The Commission approves the Interest on Working Capital as nil in the True-up of the FY 2018-19.

3.17. Income Tax

Petitioner's submission

No submission has been made in this regard.

Commission's analysis:

Regulation 28 of the MYT Regulations, 2014, states the following:

- “
- (a) *Income Tax, if any, on the Licensed business of the Distribution Licensee shall be treated as expense and shall be recoverable from consumers through tariff. However, tax on any income other than that through its Licensed business shall not be a pass through, and it shall be payable by the Distribution Licensee itself.*
 - (b) *The income tax actually payable or paid shall be included in the ARR. The actual assessment of income tax should take into account benefits of tax holiday, and the credit for carry forward losses applicable as per the provisions of the Income Tax Act 1961 shall be passed on to the consumers.*
 - (c) *Tax on income, if any, liable to be paid shall be limited to tax on return on the equity component of capital employed. However any tax liability on incentives due to improved performance shall not be considered.”*

As the Regulation above stipulates that the income tax shall be approved as per actuals, the Commission considers the income tax payable for the year as nil as no Income Tax has been paid by the Petitioner for FY 2018-19.

Table 37: Income Tax Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Income Tax	0.00	0.00	0.00

The Commission approves Income Tax liability as nil for the FY 2018-19.

3.18. Provision for Bad & Doubtful Debts

Petitioner's submission

No submission has been made in this regard.

Commission's analysis:

As per Regulation 29 of the MYT Regulations, 2014:

"Bad and Doubtful Debts shall be limited to 1% of receivables in the True-up, subject to the condition that amount of bad and doubtful debts have actually been written off in the licensee books of accounts."

It is observed that as per the audited accounts, the licensee has not actually written off any bad and doubtful debts for the FY 2018-19.

The Commission therefore has not considered any bad and doubtful debts in the True-up of FY 2018-19.

3.19. Non-Tariff Income (NTI)

Petitioner's submission

The Petitioner has submitted the actual Non-Tariff Income of INR 25.40 Cr for the FY 2018-19.

Commission's analysis:

The Commission has authenticated the submission of the Petitioner from the audited accounts and found the same to be correct. The NTI approved in the APR, Petitioner's submission and now trued-up by the Commission is shown in the following table:

Table 38: Non- Tariff Income Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Non-tariff income	24.97	25.40	25.40

The Commission approves Non-Tariff Income of INR 25.40 Cr in the True-up of the FY 2018-19.

3.20. Incentive/Disincentive towards over/under achievement of norms of distribution losses

Petitioner's submission:

No submission has been made in this regard.

Commission’s analysis:

In the APR for FY 2018-19, the Commission had approved the T&D loss level of 12.25%. The Petitioner has achieved T&D loss of 13.50% against the approved loss level of 12.25%. The Commission, in accordance with Regulation 10 of the JERC MYT Regulations, 2014 (reproduced below) has determined the dis-incentive towards the under-achievement of the target of Intra-State distribution loss for the FY 2018-19 as follows:

As per Regulation 10 of the MYT Regulations 2014:

“10.1 The licensee shall pass on to the consumers, the 70% of the gain arising from over achievement of the norms laid down by the Commission in these Regulations or targets set by the Commission from time to time and retaining balance 30% with themselves.

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

The dis-incentive has been considered at INR 3.93/kWh, which is the Average Power Purchase cost (APPC) of the Petitioner. The APPC has been derived at State/UT Periphery based on the Power Purchase cost approved in the True-up and the Energy at the State/UT Periphery has been computed after grossing up the retail energy sales (1,535.77 MU) with the actual Intra-State T&D Loss (13.50%).

The assessment of incentive for lower T&D losses is shown in the following table:

Table 39: Dis-incentive due to under-achievement of Intra-State Distribution Loss target (In INR Cr)

S. No	Particulars	As per Approved Intra-State T&D Loss	Trued-up by Commission
1	Retail Sales	1,535.77	1,535.77
2	T&D Loss (%)	12.25%	13.50%
3	Power Purchase at State/UT Periphery	1,750.17	1,775.46
4	Gain/(Loss) (MU)		(25.29)
5	Average Power Purchase Cost (APPC)		3.93
6	Gain/ (Loss) (INR Cr)		(9.93)
7	Sharing of 100% of Loss with the Petitioner		(9.93)

The Commission determines and approves INR 9.93 Cr as dis-incentive for under- achieving the Intra-State Distribution Loss target for the FY 2018-19.

3.21. Aggregate Revenue Requirement (ARR)

Petitioner’s submission

Based on the expenses as detailed above, the Petitioner has submitted the net aggregate revenue requirement of INR 804.68 Cr for approval in the True-up of the FY 2018-19.

Commission’s analysis

The Commission on the basis of the detailed analysis of the cost parameters of the ARR approves the net revenue requirement in the True-up of the FY 2018-19 as given in the following table:

Table 40: Aggregate Revenue Requirement Trued-up by Commission for the FY 2018-19 (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Power Purchase Cost	709.12	687.42*	687.42*
2	Operation & Maintenance Expenses	91.99	89.90	91.99
3	Depreciation	16.91	16.13	16.62
4	Interest on Loan	1.42	5.70	1.40
5	Return on Equity	20.42	21.35	20.40
6	Interest on Security Deposit	12.19	9.58	9.58
7	Interest on Working Capital	0.00	0.00	0.00
8	Income Tax	0.00	0.00	0.00
9	Provision for Bad & Doubtful Debt	0.00	0.00	0.00
10	Incentive/ (Disincentive) on achievement of norms	-	-	(9.93)
11	Total Revenue Requirement	852.06	830.07	817.47
12	Less: Non-Tariff Income	24.97	25.40	25.40
13	Net Revenue Requirement	827.09	804.68	792.07

*Adjusted with revenue from sale of surplus power

The Commission approves net Aggregate Revenue Requirement of INR 792.07 Cr in the True-up of the FY 2018-19.

3.22. Revenue at existing Retail Tariff

Petitioner's submission

The actual revenue from retail sale for the FY 2018-19 is INR 805.56 Cr as against INR 878.50 Cr approved by the Commission in the APR of FY 2018-19. The Petitioner has also considered revenue recovered through FPPCA of INR. 59.62 Cr. The detailed reconciled statement of revenue from the sale of power at existing tariff and FPPCA with reference to the final actual figures of income & expenditure as per the audited accounts of the FY 2018-19 has also been submitted.

Further, an amount of INR 43.49 Cr on account of Regulatory Surcharge imposed by the Commission from 1st April 2018 onwards has also been considered.

Commission's analysis

The Commission has analysed the sales and revenue figures for each consumer category and checked the revenue from audited accounts. The consumer category-wise revenue as submitted by the Petitioner and approved by the Commission is shown in the following table:

Table 41: Revenue at existing tariff Trued-up by Commission for the FY 2018-19 (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	343.27	299.33	299.33
2	Commercial	331.63	298.76	298.76
3	Large Industrial supply	74.09	74.13	74.13
4	Medium Industrial supply	71.13	69.28	69.28
5	Small Industrial Supply	9.67	9.47	9.47
6	Agriculture	0.38	0.43	0.43
7	Public lighting	7.17	8.08	8.08
8	Bulk supply	36.85	43.11	43.11

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
9	Temp. Supply	4.31	2.97	2.97
10	Sub-total	878.50	805.56	805.56
11	FPPCA	21.80	59.62	59.62
12	Regulatory Surcharge	43.93	43.49	43.49
13	Grand total	944.23	908.67	908.67

The Commission approves the revenue from sale of power as INR 908.67 Cr (including FPPCA charges and Regulatory Surcharge) in the True-up of the FY 2018-19.

3.23. Standalone Revenue Gap/ (Surplus)

Petitioner's submission

Based on the ARR and the revenue from retail tariff, the standalone revenue surplus of INR 103.99 Cr is arrived at in the True-up of the FY 2018-19.

Commission analysis

The Commission based on the approved ARR and retail tariff has arrived at the Revenue Gap/Surplus as follows:

Table 42: Standalone Revenue Gap/ (Surplus) for the FY 2018-19 (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	827.09	804.68	792.07
2	Revenue from Retail Sales at Existing Tariff	878.50	805.56	805.56
3	FPPCA Charges	21.80	59.62	59.62
4	Regulatory Surcharge	43.93	43.49	43.49
5	Total Revenue	944.23	908.67	908.67
	Net Gap /(Surplus)	(117.14)	(103.99)	(116.60)

The Commission, in the True-up of the FY 2018-19 approves a standalone surplus of INR 116.60 Cr. This standalone surplus has been carried over to the subsequent years and has been dealt with while determining the tariff for the FY 2020-21.

4. Chapter 4: Annual Performance Review for the FY 2019-20

4.1. Applicable Provisions and Background

The MYT Order for 2nd Control Period was issued by the Commission on 20th May 2019 approving the Aggregate Revenue Requirement (ARR) and retail tariff for the FY 2019-20 (hereinafter referred to as ‘MYT Order’). This Chapter covers the Annual Performance Review (APR) for the FY 2019-20 vis-à-vis the cost parameters approved by the Commission in the MYT Order. The Annual Performance Review for the FY 2019-20 is to be carried out in accordance with the Regulation 11 of the MYT Regulations 2018:

“11. Annual Performance Review, Truing-up and tariff determination during the Control Period

11.1 The Generating Company, Transmission Licensee and Distribution Licensee shall be subject to annual performance review and truing up of expenses and revenue during the Control Period in accordance with these Regulations.

11.2 The Generating Company, Transmission Licensee and Distribution Licensee shall file an application for the annual performance review of the current year, truing up of the previous Year or the Year for which the audited accounts are available and determination of tariff for the ensuing Year on or before 30th November of each Year, in formats specified by the Commission from time to time:

Provided that the Generating Company, Transmission Licensee or Distribution Licensee, as the case may be, shall submit to the Commission information in such form as may be specified by the Commission, together with the audited accounts, extracts of books of account and such other details as the Commission may require to assess the reasons for and extent of any variation in financial performance from the approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges.

11.3 The scope of the annual performance review, truing up and tariff determination shall be a comparison of the performance of the Generating Company, Transmission Licensee or Distribution Licensee with the approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges and shall comprise of the following:

a) True-up: *a comparison of the audited performance of the Applicant for the Financial Year for which the true up is being carried out with the approved forecast for such previous Financial Year, subject to the prudence check;*

b) Annual Performance Review: *a comparison of the revised performance targets of the Applicant for the current Financial Year with the approved forecast in the Tariff Order corresponding to the Control Period for the current Financial Year subject to prudence check;*

.....”

4.2. Approach for the Review for the FY 2019-20

The review of the Aggregate Revenue Requirement requires assessment of the quantum of energy sales, energy loss as well as the various cost elements like Power Purchase Cost, O&M expenses, interest on long term loans, interest on working capital loans, depreciation etc. The Annual Performance Review for the FY 2019-20 has been done based on actual Power Purchase Quantum and Cost of the first 6 months of the FY 2019-20, actual Energy Sales for the first 6 months, etc. depending on which the estimates for the remaining months of the financial year have been made. The various cost elements constituting the Aggregate Revenue Requirement have been approved

based on the information submitted by the Petitioner, the MYT Regulations 2018 on the basis of the norms approved in the MYT Order dated 20th May 2019.

4.3. Energy Sales

Petitioner's Submission

The sales for the FY 2019-20 have been estimated based on the CAGR of the actual sales approved by the Commission for the FY 2011-12 to FY 2017-18. The CAGR for the past five/three/two/one-year growth has been applied appropriately on the actual sales for the FY 2017-18 to arrive at the estimated sales for the FY 2018-19. Total sales of 1,549.03 MU have been estimated against the 1,685.30 MU as approved by the Commission in the MYT Order for FY 2019-20.

Commission's Analysis

The Commission has noted the audited figures for FY 2018-19 and provisional information provided by the Petitioner for the first 6 months of the FY 2019-20. For all the categories, the Commission has estimated the proportion of actual energy sales till the month of September over total energy sales during the financial year, for the last two. Using this average proportion of sales, the Commission has extrapolated the actual energy sales provided till the month of September to determine the energy sales for the remaining period of FY 2019-20.

The table below provides the energy sales approved by the Commission in the MYT Order, the Petitioner's submission and now approved by the Commission.

Table 43: Energy Sales (MU) approved by the Commission for the FY 2019-20

S. No.	Category	Approved in MYT Order	Petitioner's Submission		Now Approved by Commission
			Apr-Sep (Actual)	Oct-Mar (RE)	
1	Domestic	787.86	351.99	362.68	628.56
2	Commercial	521.46	261.41	211.57	469.12
3	Large Industrial supply	119.85	63.35	61.80	121.59
4	Medium Industrial supply	128.35	101.39	18.27	208.59
5	Small Industrial Supply	20.00	17.48	1.39	32.93
6	Agriculture	1.49	0.86	0.50	1.51
7	Public lighting	17.73	6.71	8.38	14.30
8	Bulk supply	84.15	48.12	29.19	81.57
9	Temp. Supply	4.40	1.96	1.97	4.16
	Gross Total	1,685.30	853.27	695.75	1,562.32

The Commission approves energy sales of 1,562.32 MU in the APR of the FY 2019-20.

4.4. Inter-State Transmission Loss

Petitioner's submission

The Petitioner has considered the Inter-State Transmission Loss of 3.60%, same as approved in the MYT Order.

Commission's analysis

The Commission in the APR of FY 2019-20 considers the Inter-State transmission losses in line with those approved in the True-up of FY 2018-19. The same shall be revised based on actuals during the True-up exercise.

The following table provides the Inter-State Transmission Loss approved by the Commission in the MYT Order, the Petitioner's submission and Loss level now approved by the Commission.

Table 44: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Inter-State Transmission Losses	3.60%	3.60%	3.69%

The Commission approves Inter-State Transmission Loss of 3.69% for the APR of the FY 2019-20.

4.5. Intra-State Distribution Loss

Petitioner's submission

The Petitioner submitted that as per the Tariff Order dated 20th May, 2019, the T&D loss approved for the FY 2019-20 was 9.40% as against EWEDC's submission of 13.05%. While the Petitioner is dedicated for reducing the intra-state T&D losses in the UT of Chandigarh, there are constraints in reducing the T&D loss. Further, the T&D losses have remained stagnant due to significant increase in the sales in the LT category.

In addition to the issue of higher LT sales, another important factor is the absence of interconnection point within the UT boundary which has also been submitted to the Hon'ble Commission in its past submissions. The energy input at the Petitioner's periphery is currently being metered at 400kV Nalagarh, 220kV Mohali and 220kV Dhoolkot (BBMB) which has resulted in higher T&D losses for the Petitioner. The Petitioner has to bear around 3% additional losses of interstate circuit due to not having any interstate point in its boundary. In this regard, the Petitioner has submitted that construction of a 220/66 kV substation at Hallo Majra is under progress by M/s PGCIL. This substation shall cater to the future load growth of Chandigarh resulting in lower losses due to commissioning of an interconnection point within the UT periphery.

In view of the above, the Petitioner has submitted that the Hon'ble Commission may kindly consider & revise the loss target to a level which is achievable under the circumstances detailed above. The trend of T&D losses over the period of last 5 years upto FY 2016-17, shows that EWEDC has been able to reduce the T&D loss substantially year over year. However, further reduction within the present infrastructural conditions & constraints explained as above would be difficult. Accordingly, EWEDC has proposed a T&D loss target of 13.40% for the FY 2019-20.

Commission's analysis

The Commission in the MYT Order had discussed in detail the approach and the basis of setting the Intra-State Distribution Loss trajectory for the MYT Period from FY 2019-20 to FY 2021-22. The Commission decides to retain the same T&D loss as approved in the MYT Order.

The following table provides the Intra-State Distribution Loss approved in the MYT Order, the Petitioner's submission and now approved by the Commission.

Table 45: Intra-State Distribution Loss (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Intra-State Distribution Loss	9.40%	13.40%	9.40%

The Commission approves Intra-State Distribution Loss of 9.40% in the APR of the FY 2019-20

4.6. Power Purchase Quantum & Cost

Petitioner's submission:

The Petitioner procures power from various sources such as:

- Central Generating Stations (CGS) such as NTPC, NHPC and NPCIL
- Other Generating Stations such as SJVNL, BBMB, THDC and APCPL
- Other Sources such as bilateral agreement, banking arrangement, power exchange, UI etc.

The Petitioner has allocation from Northern as well as Western regions from coal, gas, nuclear and hydro power stations. However, for meeting the supply-demand gap during the peak hours, the Petitioner relies on energy exchange and Over-draw from the grid.

For projecting the energy availability for the FY 2019-20, the Petitioner has considered 6 months actual power purchase. For projecting the remaining six months of power purchase for the FY 2019-20, firm and infirm allocation from various generating stations has been considered as per the allocation specified in the notification number NRPC/OPR/103/02/2019/13456-83 dated 2nd November 2019 of the Northern Regional Power Committee.

The revised estimated power purchase cost for FY 2019-20 is presented in the following table:

Table 46: Power Purchase quantum (MU) and cost (In INR Cr) submitted by the Petitioner

Particulars	Approved in T.O. dated 20th May, 2019		Estimated	
	Units (in MUs)	Cost (in Rs. Cr.)	Units (in MUs)	Cost (in Rs. Cr.)
NTPC	311.43	125.58	342.89	145.52
NHPC	286.83	103.58	346.84	110.89
APCPL	52.86	28.78	32.35	26.98
NPCIL	194.62	74.82	194.44	71.91
SJVNL	110.42	29.55	136.65	43.26
BBMB	622.31	180.38	711.48	160.22
THDC	174.78	94.49	181.83	98.12
MUNPL	-	-	11.96	10.05
Bilateral/UI/Exchange	98.10	42.65	153.75	51.20
CREST	7.70	7.38	9.67	7.70
Pvt. Solar	1.10	0.92	1.38	1.05
PGCIL Charges	-	58.11	-	47.41
NRLDC Charges	-	-	-	0.31
Reactive Energy	-	-	-	0.30
REC Cost	-	3.40	-	0.21
Grand Total	1,860.16	749.64	2,123.25	775.13

Commission's Analysis:

The Commission while estimating the power purchase quantum and cost for FY 2019-20 has considered the actual quantum and cost of power till September 2019 (H1), as submitted by the Petitioner. The Commission has projected the quantum of energy and cost for the remaining 6 months of the FY 2019-20 (H2). The methodology followed for projecting the quantum and cost for the remaining months of FY 2019-20 has been discussed as follows:

4.6.1. Availability of power

Availability of energy from APCPL and NTPC Stations:

- The energy availability from APCPL and the NTPC stations except Singrauli Hydro station has been estimated based on the average energy available during the months of October – March in the last intermittent scheduling in the past two/three financial years FY 2016-17 to FY 2018-19 based on the scheduling of stations.
- For Singrauli Hydro, quantum of energy available has been considered same as the average energy available during H1 of FY 2019-20 due to intermittent scheduling.

Availability of energy from NHPC, THDC, BBMB and SJVNL stations:

- The energy availability from all stations of NHPC, THDC, BBMB and SJVNL has been estimated based on the average energy available during the months of October – March in the last two/three financial years FY 2016-17 to FY 2018-19 based on the scheduling of stations.

Availability from NPCIL stations:

- The energy availability from all the stations of NPCIL has been estimated based on the average energy available during the months of October – March in the last two financial years from FY 2017-18 and FY 2018-19

Availability from MUNPL Meja Thermal station:

- The Petitioner has started to receive power from this station from April 2019 onwards hence the quantum of energy available has been considered same as the average energy available during H1 of FY 2019-20

Availability of power from CREST and other Renewable Energy Sources

- The energy availability from CREST and other Renewable Energy Sources has been considered same as per availability in FY 2018-19.

Availability of power from the Open Market, Unscheduled Interchange and Banking

- The Open market purchase and sale for H1 has been considered as per actuals. For the remaining months the quantum of purchase/sale has been considered as estimated in the energy balance, discussed in the subsequent section
- No quantum of energy under banking has been considered for the remaining 6 months of FY 2019-20.
- Quantum under UI Over-drawal/ Under-drawal in H1 of FY 2019-20 has been considered as per actuals. No quantum under UI has been considered for the remaining 6 months of FY 2019-20.

4.6.2. Power Purchase Cost

Variable Charges:

- The per unit variable costs for various power stations have been computed by taking the average of the actual per unit variable cost during the first 6 months from April 2019 to September 2019 for all the stations.

- For purchase/sale of power from the Open Market, the Average Round the Clock (RTC) rate for the Northern Region during the calendar year 2019 has been considered.

Fixed Charges:

- Actual Fixed Costs have been considered for the first six months for all stations
- The fixed costs for the remaining months have been considered based on the Tariff Orders issued by the CERC for respective Central Generating Stations and the actual costs for H1 of FY 2019-20

Other Charges:

- Actual charges have been considered for the first 6 months of the FY 2019-20. No other charges have been considered for the remaining months of the FY 2019-20.

4.6.3. Transmission Charges

The Commission has estimated the transmission charges payable to PGCIL based on the total capacity allocation of the transmission network of the Petitioner.

The transmission charges are determined based on the latest quarterly Point of Connection (PoC) rates approved by the Central Electricity Regulatory Commission (CERC) in accordance with Regulation 17(2) of the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 and the latest Regional Power Committee reports specifying the station-wise cumulative weighted average share of the various CG Stations allocated to the Petitioner.

4.6.4. Total power purchase quantum and cost

The following table provides the quantum of energy availability and the power purchase cost approved by the Commission for the FY 2019-20:

Table 47: Power Purchase Quantum (MU) and cost (INR Cr) approved by the Commission

Details of the stations	Units Purchased (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Other Charges (INR. Cr.)	Total Charges (INR. Cr.)
NTPC					
Singrauli	5.51	0.62	1.24	0.06	1.92
Rihand I	64.07	8.85	6.70	(0.21)	15.34
Rihand II	53.19	7.36	4.47	(0.16)	11.67
Rihand III	43.34	5.77	7.24	(0.07)	12.95
Unchahar I	15.55	5.40	1.58	0.37	7.35
Unchahar II	20.25	7.10	2.21	0.33	9.65
Unchahar III	9.75	3.39	1.19	0.34	4.91
Unchahar IV	20.34	6.66	2.67	0.40	9.73
Anta	7.25	3.70	4.79	0.44	8.93
Auriya	5.83	2.20	5.75	0.22	8.17
Dadri	24.92	9.00	5.89	1.36	16.25
Kahalgaon II	21.23	4.26	2.53	(0.09)	6.69
Dadri II	4.88	1.92	1.36	0.38	3.66
Koldam Hydro	49.69	12.85	11.85	0.36	25.05
Singrauli Hydro	0.20	0.13	0.00	0.00	0.13
Subtotal - NTPC	345.99	79.21	59.46	3.74	142.41
NHPC					

Details of the stations	Units Purchased (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Other Charges (INR. Cr.)	Total Charges (INR. Cr.)
Salal	9.26	0.59	0.77	0.32	1.68
Tanakpur	5.01	0.86	1.50	0.07	2.42
Chamera I	95.72	11.34	8.02	1.15	20.51
Chamera II	31.27	3.26	3.63	0.33	7.22
Uri	15.63	1.33	2.03	0.55	3.91
Dhauliganga	28.57	3.60	4.52	1.09	9.22
Dulhasti	38.38	10.96	10.16	2.42	23.53
Sewa II	12.70	2.86	3.69	0.39	6.94
URI II	24.89	6.13	9.08	0.71	15.92
Chamara III	22.50	4.96	6.16	0.35	11.47
Parbati-III	14.77	2.36	7.14	0.20	9.70
Kishanganga	13.42	2.35	2.97	0.03	5.35
Subtotal- NHPC	312.11	50.61	59.66	7.61	117.87
NPCIL					
NAPS	82.57	25.47	0.00	1.24	26.71
RAPP (Unit 3 & 4)	18.60	6.48	0.00	0.23	6.71
RAPP (Unit 5 & 6)	89.29	36.40	0.00	0.65	37.04
Subtotal- NPCIL	190.46	68.35	0.00	2.12	70.47
SJVNL					
Nathpa Jhakri	110.19	13.65	16.00	0.00	29.65
Rampur	18.88	3.76	4.86	0.00	8.62
Subtotal- SJVNL	129.08	17.41	20.86	0.00	38.27
BBMB					
BBMB 3.5%	571.50	51.44	0.00	0.00	51.44
BBMB 1 LU- Dehar	88.95	11.22	0.00	0.00	11.22
BBMB 10 LU- Pong	22.93	68.59	0.00	0.00	68.59
Subtotal- BBMB	683.38	131.24	0.00	6.86	138.11
APCPL					
APCPL Jhajjar	30.37	12.05	15.26	(0.54)	26.76
Subtotal- APCPL	30.37	12.05	15.26	(0.54)	26.76
THDC					
Koteshwar	14.95	3.59	5.10	0.00	8.69
Tehri	156.69	34.62	29.49	0.00	64.11
Subtotal- THDC	171.63	38.21	34.59	(0.50)	72.30
MUNPL					
Meja Thermal	18.45	5.80	6.24	(0.08)	11.95
Subtotal- MUNPL	18.45	5.80	6.24	(0.08)	11.95
RPO					
Crest	9.67	7.47	0.00	0.27	7.47
Pvt. Solar (Gross)	1.09	0.95	0.00		0.95
Subtotal- Others	10.76	8.43	0.00	0.27	8.70
Total – Firm Sources	1,892.23	411.31	196.06	19.47	626.83

Details of the stations	Units Purchased (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Other Charges (INR. Cr.)	Total Charges (INR. Cr.)
Unscheduled Interchange (UI) Over-drawal/Under-drawal	15.85	7.59	0.00	0.00	7.59
Open Market Purchase	33.57	10.67	0.00	0.00	10.67
Less: Open Market Sale	217.23	71.80	0.00	0.00	71.80
Sub Total- Power Purchase Cost	1724.42	357.77	196.06	19.47	573.29
Transmission Charges					
PGCIL Charges					62.02
Subtotal – Transmission Charges					62.02
Total Power Purchase Cost	1724.42	357.77	196.06	19.47	635.31

The Commission approves the revised quantum of power purchase as 1,724.42 MU at the UT Periphery with total cost of INR 635.31 Cr in the APR of the FY 2019-20.

4.7. Renewable Purchase Obligation (RPO)

Petitioner's submission:

The Petitioner is required to procure power from renewable sources for meeting the RPO. The Petitioner has complied with the RPO, both solar & non-solar, till the FY 2018-19. The RPO requirement for FY 2019-20 and the compliance status as submitted by the Petitioner has been provided in the following table:

Table 48: Effective Energy Sales (Excluding Hydro) as submitted by Petitioner

S. No.	Particular	Formula	FY 2019-20
1	Energy Sales within UT (In MUs)	a	1,549.03
2	Hydro Power Purchase (In MUs)	b	1,430.10
3	Inter-State Loss	c	3.60%
4	Inter-State Loss (In MUs)	d=b*c	51.48
5	Intra-State Loss	e	13.40%
6	Intra-State Loss (In MUs)	f=e*(b-d)	184.73
7	Hydro Power Consumed (In MUs)	g=b-d-f	1,193.88
8	Conventional Power Consumed (In MUs)	h=a-g	355.15

Table 49: RPO Requirement (Solar and Non-Solar) as submitted by Petitioner

Particulars	RPO (%)	Target		Estimated 2019-20	Excess RPO Procured 2019-20 (MU)	RPO to be Procured after adjusting excess solar RPO 2019-20 H2 (MU)
		Conventional Power Consumed (MU)	Units (MU)	Units (MU)		
Solar	4.70%	355.15	16.69	39.17	22.48	-
Non-Solar	6.80%	355.15	24.15	-	-	1.67
Total	11.50%		40.84	39.17	22.48	1.67

The Petitioner has proposed to fulfill the remaining RPO by way of purchase of Renewable Energy Certificates (REC's). The Cost of the same has been considered in the Overall Power Purchase cost of the Petitioner for FY 2019-20.

Commission's analysis:

As per Regulation 1, Sub-regulation (1) of the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010:

“Each distribution licensee shall purchase electricity (in kWh) from renewable energy sources, at a defined minimum percentage of the total consumption of all the consumers in its area during a year.”

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and approved the revised RPO targets, as per which the Petitioner has to purchase 11.50% of its total consumption through conventional sources (including 4.70% from Solar) from renewable sources for the FY 2019-20.

The effective energy sales used for calculation of the RPO has been arrived at as follows:

Table 50: Effective energy sales (adjusted for hydro) (in MU)

S.No.	Particular	Formula	FY 2019-20
1	Energy Sales within UT	a	1,562.32
2	Hydro Power Purchase	b	1,397.67
3	Inter-State Loss (%)	c	3.69%
4	Inter-State Loss (MU)	d= c*b	51.57
5	Intra-State Loss (%)	e	9.40%
6	Intra-State Loss (MU)	f=e*(b-d)	126.53
7	Hydro Power Consumed (MU)	g=b-d-f	1,219.56
8	Conventional Power consumed	h= a-g	342.76

The Petitioner has also submitted that it plans to fulfill the RPO target for FY 2019-20 by 31st March 2020. Hence, in accordance with the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010 and the Petitioner's submission, the Commission has determined the following Renewable Purchase Obligation for the Petitioner for the FY 2019-20. The Petitioner has no backlog until FY 2018-19.

Table 51: Summary of Renewable Purchase Obligation (RPO) (MU)

Description	FY 2019-20
Sales within State from conventional sources (MU)	342.76
RPO obligation (in %)	11.50%
Solar	4.70%
Non-solar	6.80%
RPO obligation for the year (in MU)	39.42
Solar	16.11
Non-solar	23.31
Backlog upto FY 2018-19	0.00
Solar	0.00
Non Solar	0.00
Total RPO to be fulfilled for the year	39.42
Solar	16.11
Non Solar	23.31
RPO compliance (proposed actual purchase)	43.95
- Solar	43.95
<i>Crest power</i>	9.67

Description	FY 2019-20
<i>Pvt. Solar (Gross Generated)</i>	34.28
-Non-solar	0.00
RPO compliance (REC certificate purchase)	0.00
- Solar	0.00
-Non-solar	0.00
Total RPO compliance (Physical Purchase+ REC certificate purchase)	39.42
- Solar	16.11
-Non-solar	23.31

As per the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 dated 22nd August 2016, the Commission has notified the total RPO in terms of percentage of total energy mix of consumption excluding hydropower and has also specified the minimum quantum of Solar RPO to be met out of the total RPO. The Commission has observed that the Licensee has projected over-achievement of Solar RPO. Accordingly, the Commission has considered the cost of entire Solar RPO and adjusted the cost of Non-Solar RPO with the overachievement of Solar RPO. The actual compliance in respect of the pending RPO would be reviewed at the time of true-up and the supporting details such as purchase of RECs, bills from Solar/Non-Solar plants for the year must be submitted.

The compliance and cost status towards RPO for FY 2019-20 as approved by the Commission is provided in the table below.

Table 52: Cost towards compliance of Renewable Purchase Obligation (In INR Cr)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	Solar	43.95	8.70	1.98
(a)	CREST	9.67	7.69	7.95
(b)	<i>Pvt. Solar (Gross/Net Generation)</i>	34.28		
(i)	<i>Pvt. Solar (Gross/Net Generation)</i>	1.09	0.95	8.75
2	Non-solar	-	-	-
	Total	43.95	8.70	1.98

The Commission approves INR 8.70 Cr towards compliance of RPO in the APR of FY 2019-20 and the same has been considered in the Power Purchase cost approved for FY 2019-20.

4.8. Energy Balance

Petitioner's submission

The energy requirement as submitted by the Petitioner has been shown in the following table:

Table 53: Energy Requirement of the System (MU)

Energy Available	Petitioner's Submission
Units Procured	2,112.19
Less: Outside Sale - Trading	268.14
Energy Available	1,844.05

Energy Available	Petitioner's Submission
Inter-State Transmission Loss	3.60%
Transmission Loss (Mus)	66.39
Net Energy Available at UT Periphery	1,777.66
Power procured from Gross & NET Metering Mode (In MUs)	11.05
Total Energy Available	1,788.72
Actual Energy Sales (Mus)	1,549.03
T&D Loss (%)	13.40%
T&D Loss (in MUs)	239.69
Total Energy Required at UT Periphery (MUs)	1,788.72
Demand Supply (Gap) / Surplus	0.00

Commission's analysis

Based on the revised estimates of energy sales and power purchase quantum, the Commission approves the following energy balance:

Table 54: Energy Balance approved (MU)

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Energy Requirement			
Energy sales within the State/UT (a)	1,685.30	1549.03	1,562.32
Distribution losses (b)			
%	9.40%	13.40%	9.40%
MU	174.85	239.69	162.10
Total Energy requirement (c=a/(1-b))	1,860.16	1,788.72	1,724.42
Energy Availability			
Availability from various sources (d)	1,762.06	1,788.72	1892.23
Availability from UI Over-drawal/ Under-drawal (e)	0.00	0.00	15.85
Add: Net Purchase in Open Market in H1 FY 2019-20 (f)	0.00	0.00	33.57
Less: Net sale in Open Market in H1 FY 2019-20 (g)	0.00	0.00	100.56
Total Energy Availability (h=d+e+f-g)	1,762.06	1,788.72	1841.09
Deficit/(Surplus) (i=c-h)	98.10	0.00	(116.68)

The Commission has estimated a surplus of 116.68 MU and has assumed that the surplus power shall be sold in Open Market in H2 of FY 2019-20. The revenue from sale of surplus power has been adjusted by the Commission in power procurement cost approved in the earlier section.

4.9. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative & General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). Regulation 51 of the MYT Regulation, 2018 states the following:

51.1 The Operation and Maintenance expenses for the Distribution Wires Business shall be computed in accordance with this Regulation.

51.2 Operation and Maintenance (O&M) expenses shall comprise of the following:

- a) Employee expenses - salaries, wages, pension contribution and other employee costs;
- b) Administrative and General expenses including insurance charges if any; and
- c) Repairs and Maintenance expenses.

51.3 The Distribution Licensee shall submit the required O&M expenses for the Control Period as a part of Multi Year Tariff Petition. O&M expenses for the base Year shall be approved by the Commission taking into account the latest available audited accounts, business plan filed by the transmission Licensee, estimates of the actuals for the Base Year, prudence check and any other factors considered appropriate by the Commission.

51.4 O&M expenses for the nth Year of the Control Period shall be approved based on the formula given below:

$$O\&M_n = (R\&M_n + EMP_n + A\&G_n) \times (1 - X_n) + \text{Terminal Liabilities}$$

Where,

$$R\&M_n = K \times GF_{An-1} \times (WPI_{inflation})$$

$$EMP_n = (EMP_{n-1}) \times (1+G_n) \times (CPI_{inflation})$$

$$A\&G_n = (A\&G_{n-1}) \times (CPI_{inflation})$$

'K' is a constant (expressed in %). Value of K for each Year of the Control Period shall be determined by the Commission in the Multi Year Tariff Order based on Licensee's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;

CPI_{inflation} – is the average increase in Consumer Price Index (CPI) for immediately preceding three (3) Years before the base Year;

WPI_{inflation} – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three (3) Years before the base Year;

EMP_n – Employee expenses of the Distribution Licensee for the nth Year;

A&G_n – Administrative and General expenses of the Distribution Licensee for the nth Year;

R&M_n – Repair and Maintenance expenses of the Distribution Licensee for the nth Year;

GF_{An-1} – Gross Fixed Asset of the transmission Licensee for the n-1th Year;

X_n is an efficiency factor for nth Year. Value of X_n shall be determined by the Commission in the Multi Year Tariff Order based on Licensee's filing, benchmarking, approved cost by the Commission in past and any other factor the Commission feels appropriate;

G_n is a growth factor for the nth Year. Value of G_n shall be determined by the Commission for each Year in the Multi Year Tariff Order for meeting the additional manpower requirement based on Licensee's filings, benchmarking, approved cost by the Commission in past and any other factor that the Commission feels appropriate;

Provided that in case the Distribution Licensee has been in operation for less than three (3) Years as on the date of effectiveness of these Regulations, O&M Expenses shall be determined on case to case basis.

51.5 Terminal liabilities of employees of Licensee including pension expenses etc. shall be approved as per actuals submitted by the Licensee, subject to prudence check or be established through actuarial studies. Additionally, any variation due to changes recommended by the pay commission shall be allowed separately by the Commission, subject to prudence check.

51.6 For the purpose of estimation, the same value of factors – CPI_{inflation} and WPI_{inflation} shall be used for all Years of the Control Period. However, the Commission shall consider the actual values of the factors –

CPI inflation and WPI inflation during the true up exercise for the Year for which true up is being carried out and true up the O&M Expenses for that Year, only to the extent of inflation.

4.9.1. Employee Expenses

Petitioner's submission

The Petitioner has considered the same employee expenses as approved by the Commission in the MYT Order of FY 2019-20 dated 20th May 2019.

Commission's analysis

In accordance with the MYT Regulations, 2018, the Commission has determined the Employee expenses for each year of the MYT Control Period. The Regulation 6 of the MYT Regulations, 2018 stipulates the following:

6. Values for Base Year

6.1 The values for the Base Year of the Control Period shall be determined on the basis of the audited accounts or provisional accounts of last three (3) Years, and other factors considered relevant by the Commission:

Provided that, in absence of availability of audited accounts or provisional accounts of last three (3) Years, the Commission may benchmark the parameters with other similar utilities to establish the values for Base Year:

Provided further that the Commission may change the values for Base Year and consequently the trajectory of parameters for Control Period, considering the actual figures from audited accounts.

The Commission has considered the employee expenses for Base Year same as approved in the MYT Order. The base year employee expenses have been escalated by Growth Rate determined based on the manpower plan approved in the Business Plan Order and CPI Inflation to arrive upon the employee expenses for FY 2019-20.

The CPI Inflation has been computed as follows:

Table 55: Computation of CPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in CPI Index	Average increase in CPI indices over 3 years
2016-17	275.92	4.12%	
2017-18	284.42	3.08%	
2018-19	299.92	5.45%	
		CPI Inflation	4.22%

Accordingly, the employee expenses approved by the Commission for FY 2019-20 have been provided in the following table:

Table 56: Employee Expenses approved by Commission (In INR Cr)

S. No	Particulars	FY 2018-19-Base Year (Approved in MYT Order)	FY 2019-20
1	Employee Expenses base year		70.55
2	Growth in number of employees (Gn)		-0.08%
3	CPI Inflation for preceding three years (CPI)		4.22%
4	Employee Expenses	70.55	73.47

The Commission approves Employee Expenses of INR 73.47 Cr for FY 2019-20.

4.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has considered the same A&G expenses as approved by the Commission in the MYT Order of FY 2019-20 dated 20th May 2019.

Commission's analysis

Similar to the methodology followed while estimating the employee expenses, the Commission has determined the A&G expenses for the FY 2019-20 using the CPI Inflation for preceding three years to determine the A&G expenses for FY 2019-20.

The A&G expenses approved by the Commission in FY 2019-20 have been provided in the following table:

Table 57: A&G Expenses approved by Commission (In INR Cr)

S. No	Particulars	FY 2018-19-Base Year (Approved in MYT Order)	FY 2019-20
1	A&G Expenses		
2	CPI Inflation		4.22%
3	A&G Expenses	4.59	4.78

The Commission approves the Administrative & General (A&G) expenses of INR 4.78 Cr for FY 2019-20.

4.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has considered the twice the actual R&M Expenses incurred in the H1 of FY 2019-20

Commission's analysis

In accordance with the MYT Regulations, 2018, the 'K' factor has been considered same as approved in the MYT Order. The 'K' factor is then multiplied with the opening GFA approved for (n-1)th year. The resultant amount is then escalated by latest WPI Inflation to arrive upon the R&M Expenses for FY 2019-20.

The WPI Inflation has been computed as follows:

Table 58: Computation of WPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in WPI Index	Average increase in WPI indices over 3 years
2016-17	111.62	1.73%	
2017-18	114.88	2.92%	
2018-19	119.84	4.32%	
		WPI Inflation	2.99%

The R&M expenses approved by the Commission in FY 2019-20 have been provided in the following table:

Table 59: R&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	FY 2019-20
1	GFA (GFA _{n-1}) of previous year	437.38
2	K factor approved (K)	2.32%
3	WPI Inflation	2.99%
4	R&M Expenses = (K x (GFA_{n-1}) x (1+WPI_{inflation}))	10.45

The Commission approves the Repair & Maintenance (R&M) expenses of INR 10.45 Cr for FY 2019-20

4.9.4. Total Operation and Maintenance Expenses (O&M)

The following table provides the O&M expenses, approved by the Commission in the MYT Order, Petitioner's submission and O&M expenses now approved by the Commission.

Table 60: O&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	73.52	73.52	73.47
2	Administrative & General Expenses (A&G)	4.79	4.79	4.78
3	Repair & Maintenance Expenses	10.20	13.80	10.45
	Total Operation & Maintenance Expenses	88.51	92.11	88.70

The Commission approves the Operation & Maintenance (O&M) expenses of INR 88.70 Cr in the APR of the FY 2019-20.

4.10. Capital Expenditure and Capitalisation

Petitioner's submission

The Petitioner has proposed the capital expenditure and capitalisation during the FY 2019-20 based on the actual capital expenditure and capitalisation incurred in the first half of FY 2019-20. The Petitioner has submitted that the actual capitalisation achieved in the first 6 months of FY 2019-20 is INR 0.44 Cr.

The following table provides the capital expenditure and capitalisation for first 6 months of FY 2019-20 and proposed during the remaining period by the Petitioner.

Table 61: Revised submission for capitalisation (In INR Cr)

Sr. No.	Particulars	FY 2019-20 Apr-Sep (Actual)	FY 2018-19 (RE)
1	Capital Expenditure	26.40	34.28
2	Capitalisation	0.44	19.13

Commission's analysis

The Commission with regard to the capital expenditure and capitalisation proposed to be undertaken during the year directed the Petitioner to submit the details of the schemes to be undertaken during the year along with the supporting documents. The Commission further sought the financial and physical progress of schemes approved in the Business Plan and MYT Order. Against the capital expenditure approved of INR 86.07 Cr approved for FY 2019-20 the Petitioner has only undertaken capital expenditure of INR 26.40 Cr in H1 FY 2019-20. Furthermore, against a capitalisation of INR 69.45 Cr approved in the MYT Order, capitalisation of only INR 0.44 Cr has been achieved in H1 FY 2019-20. The Commission takes a serious note of the inability of the Petitioner to meet the approved capitalisation targets. In the current year, the Petitioner has managed to achieve much lower capitalisation than approved but still is proposing to achieve capitalisation of INR 19.13 Cr by the end of Financial Year. The Commission cautions the Petitioner that such slow pace of implementation will have a substantial bearing on its revenue, will be detrimental to its own financial health and at the same time will have an impact on the quality of power supplied to the consumers. Hence, the Commission directs the Petitioner to expedite its efforts towards achieving capitalisation and submit quarterly status report to the Commission.

The Petitioner has also proposed certain new schemes which the Commission disallows as the same cannot be approved during the Control Period. The Petitioner should have submitted the same during the Business Plan submissions. The Commission shall consider the same during the true-up.

For FY 2019-20, the Commission has approved capital expenditure and capitalisation for all the schemes that have been initiated and were approved in the Business Plan/MYT Order. The remaining schemes which were approved in the Business Plan/MYT Order for FY 2019-20 but on which no works have been started yet have been carried forward and allowed in the subsequent year. Post thorough scrutiny and review of the supporting documents submitted by the Petitioner with regards to the capital expenditure schemes undertaken, the Commission approves the capital expenditure and capitalisation for the year as shown in the following table:

Table 62: Capitalisation approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	86.07	34.28	31.08
2	Capitalisation	69.45	19.13	5.23

The Commission approves capital expenditure of INR 31.08 Cr and capitalisation of INR 5.23 Cr in the APR of the FY 2019-20.

4.11. Capital Structure

Petitioner's Submission

The entire capital deployment shall be through equity for the FY 2019-20.

Commission's analysis

The Regulation 26 of the MYT Regulations, 2018 specifies the following

26. Debt to Equity Ratio

26.1 In case of Existing Projects, debt to equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2018 shall be considered:

Provided that in case of retirement or replacement or De-capitalisation of the assets, the equity capital approved as mentioned above, shall be reduced to the extent of 30% (or actual equity component based on documentary evidence, if it is lower than 30%) of the original cost of such assets:

Provided further that in case of retirement or replacement or De-capitalisation of the assets, the debt capital approved as mentioned above, shall be reduced to the extent of outstanding debt component based on documentary evidence, or the normative loan component, as the case may be, of the original cost of such assets.

26.2 For New Projects, the debt-equity ratio as on the Date of Commercial Operation shall be 70:30 of the amount of capital cost approved by the Commission under Regulation 23, after prudence check for determination of tariff:

Provided that where equity actually deployed is less than 30% of the capital cost of the capitalised asset, the actual equity shall be considered for determination of tariff:

Provided also that if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as a normative loan for the Licensee for determination of tariff:

Provided also that the Licensee shall submit documentary evidence for the actual deployment of equity and explain the source of funds for the equity:

Provided also that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

Provided further that the premium, if any, raised by the Licensee while issuing share capital and investment of internal resources created out of its free reserves, for the funding of the scheme, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilized for meeting the capital expenditure of the transmission system or the distribution system, and are within the ceiling of 30% of capital cost approved by the Commission.

26.3 Any expenditure incurred or projected to be incurred on or after April 1, 2019, as may be admitted by the Commission, as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in this Regulation.

In accordance with above, since the Petitioner has submitted that the entire capitalisation is funded through equity, equity higher than 30% of capitalisation has been considered as normative loan. Further, as per the submission of the Petitioner no assets haven been created by way of consumer contribution or Government grant.

Therefore, in accordance with the MYT Regulations, 2018, the Commission has determined the Capital Structure for FY 2019-20 as follows:

Table 63: Funding Plan approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Capitalisation	69.45	19.13	5.23
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	Normative Loan	48.62	13.39	3.66
5	Equity	20.84	5.74	1.57

Table 64: GFA addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	453.33	452.31	452.31
2	Addition During the FY	69.45	19.13	5.23
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	522.78	471.44	457.54

Table 65: Normative Loan addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	7.72	38.45	7.30
2	Add: Normative Loan During the year	48.62	13.39	3.66
3	Less: Normative Repayment equivalent to Depreciation	12.87	16.47	11.62
4	Closing Normative Loan	43.46	35.37	-

Table 66: Normative Equity addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	130.04	135.69	129.74
2	Additions on account of new capitalisation	20.84	5.74	1.57
3	Closing Equity	150.88	141.43	131.31

4.12. Depreciation

Petitioner's submission

For computation of depreciation, the closing GFA of the FY 2018-19 is taken as the opening GFA for the FY 2019-20 and subsequently the proposed capitalisation during the FY 2019-20 is added. Depreciation has been calculated as per Fixed Asset & Depreciation Register as on 31st March 2019

Commission's analysis

Regulation 30 of the MYT Regulations, 2018 stipulates the following:

30. Depreciation

30.1 The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission:

Provided that the depreciation shall be allowed after reducing the approved original cost of the retired or replaced or decapitalized assets:

Provided also that the no depreciation shall be allowed on the assets financed through consumer contribution, deposit work, capital subsidy or grant.

30.2 The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to a maximum of 90% of the capital cost of the asset.

30.3 Land other than the land held under lease shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the assets.

30.4 In case of existing assets, the balance depreciable value as on April 1, 2019, shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to March 31, 2018, from the gross depreciable value of the assets.

30.5 The depreciation shall be chargeable from the first Year of commercial operations. In case of projected commercial operation of the assets during the Year, depreciation shall be computed based on the average of opening and closing value of assets:

Provided that depreciation shall be re-calculated during truing-up for assets capitalised at the time of truing up of each Year of the Control Period, based on documentary evidence of asset capitalised by the Applicant, subject to the prudence check of the Commission.

30.6 For Transmission Licensee, the depreciation shall be calculated at rates and norms specified in the prevalent CERC Tariff Regulations for transmission system.

30.7 The depreciation for a Distribution Licensee shall be calculated annually, based on the Straight Line Method, over the Useful Life of the asset at rates specified in Appendix I of the Regulations.

30.8 In addition to allowable depreciation, the Distribution Licensee shall be entitled to advance against depreciation (AAD), computed in the manner given hereunder:

AAD = Loan (raised for capital expenditure) repayment amount based on loan repayment tenure, subject to a ceiling of 1/10th of loan amount minus depreciation as calculated on the basis of these Regulations:

Provided that advance against depreciation shall be permitted only if the cumulative repayment upto a particular Year exceeds the cumulative depreciation upto that Year:

Provided further that advance against depreciation in a Year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation upto that Year.

30.9 The Distribution Licensee shall provide the list of assets added during each Year of Control Period and list of assets completing 90% of depreciation in the Year along with Petition for annual performance review, true-up and tariff determination for ensuing Year.

30.10 The remaining depreciable value for a Distribution Licensee shall be spread over the balance useful life of the asset, on repayment of the entire loan.

The Commission has derived the weighted average rate of depreciation based on the asset wise depreciation rate prescribed in MYT Regulations, 2018, provided in the table below:

Table 67: Depreciation Rate (%)

Description	Rate
Plant & Machinery	3.60%
Buildings	1.80%
Vehicles	18.00%
Furniture & Fixtures	6.00%
Computers & Others	6.00%
Land	0.00%

The closing GFA of FY 2018-19 as approved in the True-Up has been considered as opening GFA of FY 2019-20. The Commission has determined the depreciable GFA after deducting the value of assets that have achieved 90% depreciation. Further, depreciation has been computed on average Gross Fixed Assets (GFA) after considering the net addition approved for FY 2019-20.

The following table provides the depreciation as approved in the MYT Order, Petitioner's submission and now approved by the Commission:

Table 68: Depreciation approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening GFA for FY 2019-20 (a)	453.33	-	452.31
2	Less: Assets depreciated upto 90% (b)	114.20	-	121.83
3	Revised opening Gross Fixed Assets (a-b)	339.13	452.31	330.48
4	Addition During the FY	69.45	19.13	5.23
5	Adjustment/Retirement During the FY	0.00	0.00	0.00
6	Closing Gross Fixed Assets	408.58	471.44	335.71
7	Average Gross Fixed Assets	373.86	461.87	333.09
8	Effective Rate of Depreciation (%)	3.44%	3.57%	3.49%
	Depreciation	12.87	16.47	11.62

The Commission now approves depreciation of INR 11.62 Cr in the APR of the FY 2019-20.

4.13. Interest on Loan

Petitioner's submission

The Petitioner has calculated the Interest on Loan on the opening normative loan. The opening normative loan has been considered as 70% of GFA as per Fixed Asset Register as on 31th March 2019 reduced by the Accumulated Depreciation as on that date. The normative loan addition in FY 2018-19 has been computed as 70% of the capitalisation proposed during the FY 2019-20.

The repayment of loans has been considered equivalent to the depreciation during the FY 2019-20. Further the rate of interest has been considered in accordance with the MYT Regulations, 2018.

Commission's analysis:

The Regulation 28 of the MYT Regulations, 2018 specifies the following:

28. Interest on Loan

28.1 The loans arrived at in the manner indicated in Regulation 26 on the assets put to use, shall be considered as gross normative loan for calculation of interest on the loan:

Provided that interest and finance charges on capital works in progress shall be excluded:

Provided further that in case of De-capitalisation or retirement or replacement of assets, the loan capital shall be reduced to the extent of outstanding loan component of the original cost of the de-capitalised or retired or replaced assets, based on documentary evidence.

28.2 The normative loan outstanding as on April 1, 2019, shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2018, from the gross normative loan.

28.3 Notwithstanding any moratorium period availed by the Transmission Licensee or the Distribution Licensee, as the case may be, the repayment of loan shall be considered from the first Year of commercial operation of the project and shall be equal to the annual depreciation allowed in accordance with Regulation 30.

28.4 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each Year applicable to the Transmission Licensee or the Distribution Licensee:

Provided that at the time of truing up, the weighted average rate of interest calculated on the basis of the actual loan portfolio during the Year applicable to the Transmission Licensee or the Distribution Licensee shall be considered as the rate of interest:

Provided also that if there is no actual loan for a particular Year but normative loan is still outstanding, the last available weighted average rate of interest for the actual loan shall be considered:

Provided further that if the Transmission Licensee or the Distribution Licensee does not have actual loan, then one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1) Year period, as may be applicable as on 1st April of the relevant Year plus 100 basis points shall be considered as the rate of interest for the purpose of allowing the interest on the normative loan.

28.5 The interest on loan shall be calculated on the normative average loan of the Year by applying the weighted average rate of interest:

Provided that at the time of truing up, the normative average loan of the Year shall be considered on the basis of the actual asset capitalisation approved by the Commission for the Year.

28.6 For new loans proposed for each Financial Year of the Control Period, interest rate shall be considered as lower of (i) one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1) Year period, as may be applicable as on 1st April of the relevant Year plus 100 basis points, and (ii) weighted average rate of interest proposed by the Distribution Licensee.

28.7 The above interest computation shall exclude the interest on loan amount, normative or otherwise, to the extent of capital cost funded by consumer contribution, deposit work, capital subsidy or grant, carried out by Transmission Licensee or Distribution Licensee.

28.8 The finance charges incurred for obtaining loans from financial institutions for any Year shall be allowed by the Commission at the time of Truing-up, subject to prudence check.

28.9 The excess interest during construction on account of time and/or cost overrun as compared to the approved completion schedule and capital cost or on account of excess drawal of the debt funds disproportionate to the actual requirement based on Scheme completion status, shall be allowed or disallowed partly or fully on a case to case basis, after prudence check by the Commission:

Provided that where the excess interest during construction is on account of delay attributable to an agency or contractor or supplier engaged by the Transmission Licensee, any liquidated damages recovered from such agency or contractor or supplier shall be taken into account for computation of capital cost:

Provided further that the extent of liquidated damages to be considered shall depend on the amount of excess interest during construction that has been allowed by the Commission.

28.10 The Transmission Licensee or the Distribution Licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the equally between the beneficiaries and the Transmission Licensee or the Distribution Licensee and the Consumers of Distribution Licensee.

28.11 Interest shall be allowed on the amount held as security deposit held in cash from Retail Consumers at the Bank Rate as on 1st April of the Financial Year in which the Petition is filed:

Provided that at the time of truing-up, the interest on the amount of security deposit for the Year shall be considered on the basis of the actual interest paid by the Licensee during the Year, subject to prudence check by the Commission.

Hence, the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. However, the Petitioner has submitted that capitalisation during each year has been funded by the Petitioner's equity and no loan has been taken against any of the capitalised assets.

As per the MYT Regulations 2018, if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would be considered as normative loan. Further, the Commission has considered the capitalisation of assets as approved in the foregoing paragraphs. The Commission for the purpose of funding of the capitalisation has considered the normative debt equity ratio of 70:30.

In absence of any actual loans, the Commission has considered the SBI MCLR rate plus 100 basis points as Rate of Interest, in accordance with the MYT Regulations, 2018. The Interest on Loan has been calculated on the average loan during the year with the opening loan for considered equivalent to the closing loan approved for FY 2018-19 in the True-Up.

The following table provides the Interest on Loan approved in the MYT Order, Petitioner's submission and now approved by the Commission:

Table 69: Interest on Loan approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	7.72	38.45	7.30
2	Add: Normative Loan During the year	48.62	13.39	3.66
3	Less: Normative Repayment equivalent to Depreciation	12.87	16.47	11.62
4	Closing Normative Loan	43.46	35.37	0.00
5	Average Normative Loan	25.59	36.91	3.65
6	Rate of Interest (%)	9.55%	9.55%	9.55%
	Interest on Loan	2.44	3.52	0.35

The Commission approves Interest on Loan of INR 0.35 Cr in the APR of the FY 2019-20.

4.14. Return on Equity (RoE)

Petitioner's submission

The Return on Equity (RoE) is computed in accordance with the MYT Regulations 2018, and is computed on 30% of the capital base. The Petitioner has considered the opening equity equivalent to the closing equity for the FY 2018-19 and has considered added equity to the tune of 30% of assets proposed to be capitalized during the year. Accordingly, the EWEDC has computed the Return on Equity for Wires and Retail Supply Business separately.

Commission's analysis:

The Regulations 27.2 and 27.3 of the MYT Regulations, 2018 stipulate the following:

“27.2 The return on equity for the Distribution Wires Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use at post-tax rate of return on equity specified in the prevalent CERC Tariff Regulations for transmission system.

27.3 The return on equity for the Retail Supply Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use, at the rate of sixteen (16) per cent per annum.”

The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the MYT Regulations, 2018 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Commission has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a rate of 16% for the Retail Supply Business. The equity component has been determined in accordance with capital structure as discussed in the section on capital structure. The rate of return on equity for the Distribution Wires Business shall be trued up based on the prevalent CERC Regulations during the True-up of the respective years. The following table provides the total return on equity approved in the MYT Order, Petitioner's submission and now approved by the Commission:

Table 70: RoE approved by Commission (In INR Cr)

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Opening Equity	130.04	135.69	129.74
Additions on account of new capitalisation	20.84	5.74	1.57
Closing Equity	150.88	141.43	131.31
Average Equity	140.46	138.56	130.52
Average Equity (Wires Business)	126.42	124.71	117.47
Average Equity (Retail Supply Business Business)	14.05	13.86	13.05
Return on Equity for Wires Business (%)	15.50%	15.50%	15.50%
Return on Equity for Retail Supply Business (%)	16.00%	16.00%	16.00%
Return on Equity for Wires Business	19.59	19.33	18.21
Return on Equity for Retail Supply Business	2.25	2.22	2.09
Return on Equity	21.84	21.55	20.30

The Commission approves the Return on Equity of INR 20.30 Cr in the APR of the FY 2019-20. Any Income Tax, paid by the Petitioner on return on equity, shall be allowed by the Commission at the time of true up based on actual figures.

4.15. Interest on Consumer Security Deposits

Petitioner's submission

Interest on consumer security has been calculated on normative basis in accordance with the MYT Regulations 2018 with addition of INR 8.00 Cr proposed during the year.

Commission's analysis:

Regulation 28.11 of the MYT Regulations, 2018 stipulates the following:

“Interest shall be allowed on the amount held as security deposit held in cash from Retail Consumers at the Bank Rate as on 1st April of the Financial Year in which the Petition is filed:

Provided that at the time of truing-up, the interest on the amount of security deposit for the Year shall be considered on the basis of the actual interest paid by the Licensee during the Year, subject to prudence check by the Commission. “

The Interest on security deposits has been calculated in accordance with the MYT Regulations 2018, based on the average of the opening and closing consumer security deposits during the year. In accordance with the Petitioner's submission, the Commission has considered a net addition of INR 8.00 Cr in the consumer security deposits during the year. The rate of interest has been considered equivalent the RBI Bank Rate as on 1st April of the Financial Year in which the Petition is filed.

The table below provides the computation of interest on consumer security deposits approved in the MYT Order, Petitioner's submission and now approved by the Commission:

Table 71: Interest on Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	198.96	197.85	197.85
2	Net addition during the year	8.00	8.00	8.00
3	Closing Security Deposit	206.96	205.85	205.85
4	Average Security Deposit	202.96	201.85	201.85
5	Rate of Interest (%)	6.25%	6.25%	6.25%
6	Interest on Security Deposit	12.69	12.62	12.62

The Commission approves Interest on Security Deposit as INR 12.62 Cr in the APR of the FY 2019-20.

4.16. Interest on Working Capital

Petitioner's submission

The Petitioner has determined the interest on working capital in accordance with the MYT Regulations, 2018.

The working capital requirement for the Control Period has been computed considering the following parameters:

- (a) Receivable of two months of billing
- (b) O&M Expenses of one month
- (c) 40% of Repair & maintenance expenses for one month
- (d) Less consumer security deposit but excluding Bank Guarantee

The Interest on Working Capital is computed at the SBI 1 Year MCL as on 1st April, 2019 plus 200 basis points at 10.55%.

Commission's analysis:

The Regulation 52 of the MYT Regulations, 2018 stipulates the following:

52. Norms of Working Capital for Distribution Wires Business

52.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Distribution Wires Business for the Financial Year, computed as follows:

- (a) O&M Expenses for one (1) month; plus*
- (b) Maintenance spares at 40% of repair and maintenance expenses for one (1) month; plus*
- (c) Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution wires at the prevailing tariff;*

Less:

(d) Amount, if any, held as security deposits under clause (b) of sub-section (1) of Section 47 of the Act from distribution system users except the security deposits held in the form of Bank Guarantees:

Provided that at the time of truing up for any Year, the working capital requirement shall be re-calculated on the basis of the values of components of working capital approved by the Commission in the truing up.

Further, Regulation 31.3 of the MYT Regulation, 2018 stipulates the following:

31.3 The interest on working capital shall be a payable on normative basis notwithstanding that the Licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan based on the normative figures. 31.4 The rate of interest on working capital shall be equal one (1)Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1)Year period, as may be applicable as on 1st April of the Financial Year in which the Petition is filed plus 200 basis points.

In accordance with the MYT Regulation, 2018, the Commission has computed the Interest on Working Capital for FY 2019-20. The actual Working Capital requirement, after deduction of the average amount of Consumer Security Deposit is coming out to be negative. Thus, the Interest on Working Capital has been considered as Nil, as shown in the table below:

Table 72: Interest on Working Capital approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	O&M Expense for 1 month	7.38	7.68	7.39
2	Maintenance spares at 40% of R&M expenses for one (1) month;	0.34	0.46	0.35
3	Receivables equivalent to two (2) months of the expected revenue from charges at the prevailing tariff	143.84	147.87	124.93
4	Less: Amount, held as security deposits	202.96	201.85	201.85
5	Net Working Capital	(51.41)	(45.84)	(69.18)
6	Rate of Interest (%)	10.15%	10.55%	10.55%
	Interest on Working Capital	0.00	0.00	0.00

The Commission approves the Interest on Working Capital as nil in the APR of the FY 2019-20.

4.17. Income Tax

Petitioner's submission

No submissions have been made in this regard.

Commission's analysis:

For the FY 2019-20 no income tax liability is computed and the same shall be Trued-up based on the actual income tax paid by the Petitioner.

Table 73: Income tax approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Income Tax	0.00	0.00	0.00

The Commission approved Nil income tax liability for the FY 2019-20.

4.18. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner has proposed provision for bad and doubtful debts for FY 2019-20 in accordance with the MYT Regulations, 2018.

Commission's analysis

The Regulation 62 of the MYT Regulations, 2018 stipulates the following

"62. Provision for bad and doubtful debts

62.1 The Commission may allow bad debts written off as a pass through in the Aggregate Revenue Requirement, based on the trend of write off of bad debts in the previous years, subject to prudence check:

Provided that the Commission shall true up the bad debts written off in the Aggregate Revenue Requirement, based on the actual write off of bad debts excluding delayed payment charges waived off, if any, during the year, subject to prudence check:

Provided also that the provision for bad and doubtful debts shall be limited to 1% of the annual Revenue Requirement of the Distribution Licensee:

Provided further that if subsequent to the write off of a particular bad debt, revenue is realised from such bad debt, the same shall be included as an uncontrollable item under the Non-Tariff Income of the year in which such revenue is realised."

The Commission also has not considered any Provision for Bad & Doubtful Debts for the MYT Control Period. The same shall be accounted for as per actuals in the True-up of respective years.

The table below provides the Provision of Bad & Doubtful Debts approved in the MYT Order, Petitioner's submission and now approved by the Commission:

Table 74: Provision of Bad & Doubtful Debts approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Provision of Bad & Doubtful Debts	0.00	8.87	0.00

The Commission approves Provision of Bad & Doubtful Debts as nil in the APR of the FY 2019-20.

4.19. Non-Tariff Income

Petitioner's submission

The non-tariff income for the FY 2019-20 has been estimated as INR 19.33 Cr based on the actual non-tariff income in the first 6 months of FY 2019-20.

Commission's analysis:

In absence of any precise methodology for projecting the NTI, the Commission, for the APR of FY 2019-20 has considered the same NTI as proposed by the Petitioner. The same shall be Trued-up on actual basis.

The NTI approved in the MYT Order, the Petitioner's submission and now approved by the Commission is shown in the table below:

Table 75: Non-Tariff Income approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Non- Tariff Income	24.97	19.33	19.33

The Commission now approves Non-Tariff Income of INR 19.33 Cr in the APR of the FY 2019-20.

4.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses detailed above, the net aggregate revenue requirement of INR 836.93 Cr is submitted after adjusting the Non -Tariff Income for the FY 2019-20.

Commission's analysis

On the basis of the detailed analysis of the cost parameters of the ARR, the revenue requirement in the APR of the FY 2019-20 are approved as follows:

Table 76: Aggregate Revenue Requirement approved by the Commission for the FY 2019-20 (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost (inclusive of cost towards RPO and adjusting for sale of surplus power)	749.64	701.11	635.31
2	Operation & Maintenance Expenses	88.51	92.11	88.70
3	Depreciation	12.87	16.47	11.62
4	Interest on Loan	2.44	3.52	0.35
5	Return on Equity	21.84	21.55	20.30
6	Interest on Security Deposit	12.69	12.62	12.62
7	Interest on Working Capital	0.00	0.00	0.00
8	Income Tax	0.00	0.00	0.00
9	Provision for Bad & Doubtful Debt	0.00	8.87	0.00
10	Total Revenue Requirement	887.99	856.25	768.89
11	Less: Non-Tariff Income	24.97	19.33	19.33
	Net Revenue Requirement	863.02	836.93	749.56

The Commission approves the net ARR of INR 749.56 Cr in the APR of the FY 2019-20.

4.21. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has calculated the revenue from sale of power at existing tariff on the basis of energy sales in the territory for the FY 2019-20 of INR 887.21 Cr. Besides INR 30.62 Cr has been billed as FPPCA during the first 6 months of the FY 2019-20 and the same has been considered in the total revenue for the FY 2019-20. Further a revenue from Regulatory Surcharge imposed during FY 2018-19 and continued till May 2019 has been considered on actual basis.

Commission's analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the tariff rates applicable for FY 2019-20. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab. The Commission has considered the revenue from Regulatory Surcharge during first two months of FY 2019-20 on actual basis as the same was discontinued in MYT Order however the same came into effect only from May 2019 onwards. The same has been considered while approving the revenue gap/ surplus for FY 2019-20. The FPPCA recovered in H1 FY 2019-20 has also been considered while approving the revenue gap/ surplus for FY 2019-20. The Commission has considered suitable assumptions wherever necessary. The revenue from category/ sub-category/ slab-wise revenue as computed by the Commission for FY 2019-20 has been shown in the following table.

Table 77: Revenue at existing tariff computed by Commission (In INR Cr)

S. No	Category	Energy Sales (MU)	Fixed Charges (INR Cr.)	Energy charges (INR Cr.)	Total Charges (INR. Cr.)	ABR (INR./unit)
1	DOMESTIC SUPPLY (DS)	628.56	10.90	283.66	294.57	4.69
A	LT Domestic					
1	0-150 units	128.40	3.02	35.31	38.33	2.99
2	151-400 units	269.08	3.97	129.16	133.13	4.95
3	401 and above units	206.88	3.44	107.58	111.02	5.37
B	HT Domestic	24.20	0.47	11.61	12.08	4.99
2	COMMERCIAL / NON RESIDENTIAL (NRS)	469.12	48.22	254.26	302.48	6.45
A	LT Commercial					
1	0-150 units (Single Phase)	3.79	1.06	1.89	2.95	7.79
2	151-400 units (Single Phase)	13.28	0.66	7.04	7.70	5.79
3	401 and above units (Single Phase)	70.30	0.00	39.37	39.37	5.60
1	0-150 units (Three Phase)	1.43	0.00	0.71	0.71	5.00
2	151-400 units (Three Phase)	2.69	0.85	1.42	2.27	8.45
3	401 and above units (Three Phase)	122.32	16.03	68.50	84.52	6.91
B	HT Commercial	255.32	29.64	135.32	164.96	6.46
3	INDUSTRY	363.11	30.54	174.64	205.18	5.65
1	Large Industrial Power Supply (LS)	121.59	14.12	60.80	74.92	6.16
2	Medium Industrial Power Supply (MS)	208.59	15.62	98.04	113.65	5.45
3	Small Industrial Power Supply (SP)	32.93	0.80	15.81	16.61	5.04
4	AGRICULTURAL PUMPING SUPPLY(AR)	1.51	0.00	0.44	0.44	2.90
1	Agricultural Pumping Supply	1.51	0.00	0.44	0.44	2.90
5	PUBLIC LIGHTING (PL)	14.30	0.60	7.65	8.25	5.77
6	Bulk Supply (BS)	81.57	10.09	39.97	50.06	6.14
1	Bulk Supply	81.57	10.09	39.97	50.06	6.14
7	Temporary Supply	4.16	0.00	3.36	3.36	8.09
1	Temporary Supply	4.16	0.00	3.36	3.36	8.09

S. No	Category	Energy Sales (MU)	Fixed Charges (INR Cr.)	Energy charges (INR Cr.)	Total Charges (INR. Cr.)	ABR (INR./unit)
8	Electric Vehicle Charging Station	-	-	-	-	-
1	Electric Vehicle Charging Station	-	-	-	-	-
	TOTAL	1562.32	100.36	763.98	864.33	5.53

The Commission has determined revenue from sale of power at existing tariff as INR 864.33 Cr in the APR of the FY 2019-20.

4.22. Standalone Revenue Gap/ (Surplus)

Petitioner's submission

Based on the ARR and the revenue from retail tariff, the standalone revenue surplus of INR 90.93 Cr is arrived at in the APR for the FY 2019-20.

Commission analysis

The Standalone Revenue Gap/Surplus is arrived at and approved as follows:

Table 78: Standalone Revenue Gap/ (Surplus) at existing tariff (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Annual Revenue Requirement	863.02	836.93	749.56
2	Revenue from sale of power at existing tariff	921.17	887.21	864.33
3	FPPCA	-	30.62	30.62
4	Regulatory Surcharge	46.06	10.03	10.03
	Revenue Gap/(Surplus)	(104.21)	(90.93)	(155.42)

The standalone surplus at existing retail tariff is INR 155.42 Cr in the APR of the FY 2019-20. The estimated surplus is carried over to the next year and has been considered while determining the tariff for the FY 2020-21.

5. Chapter 5: Determination of Aggregate Revenue Requirement for the FY 2020-21

5.1. Background

The ARR for FY 2020-21 was approved in the MYT Order issued for the 2nd Control Period (FY 2019-20 to FY 2021-22). In this Chapter the Commission determines the Aggregate Revenue Requirement (ARR) for the FY 2020-21 based on the actual information made available for the previous years and the various norms defined in the MYT Order. The determination of Aggregate Revenue Requirement has been done in accordance with the MYT Regulations, 2018.

5.2. Approach for determination of ARR for the FY 2020-21

The Commission has computed the individual elements constituting the Aggregate Revenue Requirement for FY 2020-21 based on figures approved in the Business Plan and MYT Order, the actual information available of various parameters for the FY 2018-19 as per the audited accounts and the provisional information available for the FY 2019-20. The ARR and revenue at existing tariff has been determined for FY 2020-21 to arrive at the revenue gap/surplus for the FY 2020-21.

5.3. Projection of Number of consumers, Connected Load and Energy Sales

Petitioner's Submission

The Petitioner has estimated the energy sales, connected load and number of consumers for the year based on the historical trends observed in the last five years (FY 2014-15 to FY 2018-19) and the actual data for the first 6 months of FY 2019-20. The following table provides the no. of consumers, connected load and energy sales projected by the Petitioner

Table 79: Projected No. of consumers, Connected Load and Energy Sales

Category	Number of Consumers	Connected Load (kW)	Energy Sales (MU)
Domestic	214,776	978,265	724.81
Commercial	27,134	502,654	472.99
Large Supply	127	71,513	125.15
Medium Supply	1,484	82,609	123.00
Small Power	1,431	22,773	18.87
Agriculture	132	895	1.36
Public Lighting	1,411	5,300	15.09
Bulk Supply	645	42,585	77.31
Others Temporary Supply	357	32,529	3.93
Total	247,498	1,739,123	1,562.52

Commission's Analysis

The Commission for projecting the number of consumers, connected load and energy sales for each category has observed the historical trends in the past 6 years (FY 2013-14 to FY 2018-19) and the actual data provided by the Petitioner for the first 6 months of FY 2019-20. The Commission has calculated the Compound Annual Growth Rate (CAGR) and the year on year (y-o-y) increase for each category and using appropriate growth rate has estimated the category wise consumers, connected load and energy sales. The tables below provides the trends observed in the growth of number of consumers, connected load and energy sales for the Petitioner.

Table 80: Growth in No. of consumers

	Category	Y-o-Y growth rate					CAGR				
		FY15/ FY14	FY16/ FY15	FY17/ Y16	FY18/ FY17	FY19/ Y18	5 year	4 year	3 year	2 year	1 year
1	Domestic	5.05%	2.82%	1.62%	11.00%	-8.44%	2.21%	1.51%	1.08%	0.81%	-8.44%
2	Commercial	3.25%	2.34%	3.67%	10.42%	-5.16%	2.78%	2.67%	2.78%	2.34%	-5.16%
3	Large supply	2.86%	-4.63%	-3.88%	-2.02%	30.93%	3.88%	4.13%	7.23%	13.26%	30.93%
4	Medium supply	3.73%	4.85%	2.63%	1.32%	6.82%	3.85%	3.88%	3.56%	4.03%	6.82%
5	Small Power	-0.78%	-0.47%	0.47%	0.47%	10.69%	1.99%	2.69%	3.77%	5.46%	10.69%
6	Agriculture	-0.82%	-0.83%	-0.83%	4.20%	-1.61%	0.00%	0.21%	0.55%	1.25%	-1.61%
7	Public lighting	4.73%	10.38%	10.63%	7.95%	4.20%	7.54%	8.26%	7.56%	6.06%	4.20%
8	Bulk supply	11.91%	12.67%	9.75%	-12.98%	-7.85%	2.10%	-0.21%	-4.17%	-10.45%	-7.85%
9	Temp. Supply	-15.88%	-7.58%	-23.73%	-11.67%	-7.51%	-13.50%	-12.89%	-14.59%	-9.62%	-7.51%
	Total	4.75%	2.78%	1.83%	10.67%	-7.83%	2.26%	1.65%	1.28%	1.00%	-7.83%

Table 81: Growth in Connected Load

	Category	Y-o-Y growth rate					CAGR				
		FY15/ FY14	FY16/ FY15	FY17/ Y16	FY18/ FY17	FY19/ Y18	5 year	4 year	3 year	2 year	1 year
1	Domestic	2.78%	2.92%	3.93%	6.91%	-1.36%	3.00%	3.06%	3.10%	2.69%	-1.36%
2	Commercial	6.45%	4.40%	6.07%	5.01%	1.92%	4.76%	4.34%	4.32%	3.45%	1.92%
3	Large supply	3.00%	0.20%	-2.59%	-0.88%	-0.29%	-0.13%	-0.89%	-1.25%	-0.58%	-0.29%
4	Medium supply	6.28%	6.46%	1.85%	1.27%	5.78%	4.30%	3.81%	2.95%	3.50%	5.78%
5	Small Power	1.33%	0.50%	1.04%	0.78%	13.21%	3.26%	3.75%	4.85%	6.81%	13.21%
6	Agriculture	0.98%	2.08%	1.49%	12.74%	-1.04%	3.14%	3.69%	4.23%	5.63%	-1.04%
7	Public lighting	2.85%	4.82%	6.68%	1.45%	-27.32%	-3.24%	-4.71%	-7.69%	-14.13%	-27.32%
8	Bulk supply	0.40%	1.09%	1.28%	-0.47%	-0.47%	0.36%	0.35%	0.11%	-0.47%	-0.47%
9	Temp. Supply	-17.00%	-7.41%	-23.69%	-11.65%	384.66%	50.39%	74.48%	115.51%	262.17%	1384.66%
	Total	3.78%	3.25%	3.93%	5.38%	1.98%	3.66%	3.63%	3.76%	3.67%	1.98%

Table 82: Growth in Energy Sales

	Category	Y-o-Y growth rate					CAGR				
		FY15/ FY14	FY16/ FY15	FY17/ Y16	FY18/ FY17	FY19/ Y18	5 year	4 year	3 year	2 year	1 year
1	Domestic	7.75%	0.48%	9.60%	1.42%	-3.73%	2.99%	1.83%	2.28%	-1.19%	-3.73%
2	Commercial	3.14%	0.68%	7.63%	-0.93%	-4.26%	1.17%	0.69%	0.69%	-2.61%	-4.26%
3	Large supply	-5.44%	12.49%	-3.87%	-5.43%	4.42%	0.19%	1.65%	-1.72%	-0.63%	4.42%
4	Medium supply	-0.91%	7.11%	4.63%	2.80%	-2.45%	2.17%	2.96%	1.62%	0.14%	-2.45%
5	Small Power	0.69%	-7.27%	2.74%	-0.13%	-3.26%	-1.51%	-2.05%	-0.25%	-1.71%	-3.26%
6	Agriculture	14.38%	-10.78%	-12.75%	10.03%	-4.60%	-1.34%	-4.93%	-2.89%	2.45%	-4.60%
7	Public lighting	2.22%	3.83%	-2.98%	-18.80%	-14.85%	-6.57%	-8.65%	-12.46%	-16.85%	-14.85%
8	Bulk supply	-3.55%	-7.55%	4.42%	0.00%	-4.08%	-2.23%	-1.90%	0.05%	-2.06%	-4.08%
9	Temp. Supply	3.78%	-18.19%	-23.62%	-11.65%	-10.76%	-12.56%	-16.22%	-15.55%	-11.20%	-10.76%
	Total	3.63%	1.34%	6.71%	-0.17%	-3.34%	1.58%	1.07%	0.98%	-1.76%	-3.34%

Using the appropriate growth rate from the trends observed above, the number of consumers, connected load and energy sales have been estimated for FY 2020-21. For all categories, the growth rate is applied over the figures obtained in FY 2019-20, as estimated in the previous Chapter.

The growth rate adopted and the revised number of consumers, connected load and energy for each category have been tabulated as follows:

Table 83: No. of consumers approved by Commission

S. No.	Category	FY 2019-20 (RE)	Growth Rate		FY 2020-21
1	Domestic	197,503	4-year CAGR	1.51%	200,492
2	Commercial	25,288	5-year CAGR	2.78%	25,992
3	Large supply	127	Subjective Rate	0.00%	127
4	Medium supply	1,394	Subjective Rate	0.00%	1,394
5	Small Power	1,418	Subjective Rate	0.00%	1,418
6	Agriculture	122	4-year CAGR	0.21%	123
7	Public lighting	1,268	1-year y-o-y rate	4.20%	1,321
8	Bulk supply	587	Subjective Rate	0.00%	587
9	Temp. Supply	357	Subjective Rate	0.00%	357
	Total	228,064			231,811

Table 84: Connected Load (kW) approved by Commission

S. No.	Category	FY 2019-20 (RE)	Growth Rate		FY 2020-21
1	Domestic	920,796	2-year CAGR	2.69%	945,553
2	Commercial	463,315	1-year CAGR	1.92%	472,220
3	Large supply	69,231	Subjective Rate	0.00%	69,231
4	Medium supply	76,548	Subjective Rate	0.00%	76,548
5	Small Power	22,321	Subjective Rate	0.00%	22,321
6	Agriculture	865	4-year CAGR	3.69%	897
7	Public lighting	5,009	Subjective Rate	2.00%	5,109
8	Bulk supply	42,053	Subjective Rate	0.00%	42,053
9	Temp. Supply	32,529	Subjective Rate	0.00%	32,529
	Total	1,632,668			1,666,462

Table 85: Energy Sales (MU) approved by Commission

S. No.	Category	FY 2019-20 (RE)	Growth Rate		FY 2020-21
1	Domestic	628.56	4-year CAGR	1.83%	640.05
2	Commercial	469.12	5-year CAGR	1.17%	474.63
3	Large supply	121.59	Subjective Rate	0.00%	121.59
4	Medium supply	208.59	Subjective Rate	0.00%	208.59
5	Small Power	32.93	Subjective Rate	0.00%	32.93
6	Agriculture	1.51	Subjective Rate	2.00%	1.54
7	Public lighting	14.30	Subjective Rate	2.00%	14.59
8	Bulk supply	81.57	Subjective Rate	0.00%	81.57
9	Temp. Supply	4.16	Subjective Rate	0.00%	4.16
	Total	1,562.32			1,579.64

The Commission approves number of consumers as 231,811, connected load as 1,666,462 kW and energy sales of 1,579.64 MU in the ARR of FY 2020-21.

5.4. Inter-State transmission loss

Petitioner's submission

The Petitioner has considered the Inter-State Transmission Loss of 3.60% for FY 2020-21 as approved in the MYT Order.

Commission's analysis

The Commission considers the transmission loss levels for FY 2020-21 in line with those approved in the APR of FY 2019-20. The same shall be revised based on actuals during the True-up exercise.

The following table provides the Inter-State Transmission Losses approved in the MYT Order, Petitioner's Submission and now approved by the Commission.

Table 86: Inter-State transmission loss (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Inter-State Transmission Losses	3.60%	3.60%	3.69%

The Commission approves an Inter-State Transmission Loss of 3.69% in the ARR of FY 2020-21.

5.5. Intra-State Distribution Loss

Petitioner's submission

The Petitioner submitted that the Hon'ble Commission in the Business Plan Order dated 12th November, 2018, had approved the T&D loss of 9.30% for FY 2020-21. While the Petitioner is dedicated for reducing the intra-state T&D losses in the UT of Chandigarh, there are constraints in reducing the T&D loss further. The Petitioner further submitted that losses remained stagnant without much improvement due to majority of the increase in the sales in the LT category.

In addition to the issue of higher LT sales, another important factor is the absence of interconnection point within the UT boundary which has been also submitted to the Hon'ble Commission in its past submissions. The energy input in EWEDC is currently being metered at 400kV Nalagarh, 220kV Mohali and 220kV Dhoolkot (BBMB) which has resulted in higher T&D losses for the Petitioner. The Petitioner has to bear around 3% additional losses of interstate circuit due to not having any interstate point in its boundary. In this regard, the Petitioner submitted that the construction of a 220/66 kV substation at Hallo Majra is under progress by M/s PGCIL. This substation shall cater to the future load growth of Chandigarh resulting in lower losses due to commissioning of an interconnection point within the UT periphery.

Hence, on account of factors as discussed above, the Petitioner has sought revision in the loss target to a level which is achievable under the circumstances discussed above. The Petitioner has Intra-State Distribution loss target as 13.30% for the FY 2020-21.

Commission's analysis

The Commission has discussed the issue in detail in the Business Plan and MYT Order. The Petitioner has not made any additional submissions to substantiate its claim. Hence, the Commission retains the same intra-state Distribution Loss target as approved in the Business Plan/MYT Order.

The table below provides the Intra-State Distribution Loss approved for the FY 2020-21.

Table 87: Intra-State Distribution Loss (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Intra-State Distribution Loss	9.30%	13.30%	9.30%

The Commission approves the Intra-State Distribution Loss of 9.30% in the ARR of FY 2020-21.

5.6. Power Purchase Quantum & Cost

Petitioners Submission

The Petitioner for projecting the energy availability during the FY 2020-21 has considered the firm and infirm allocation from various generating stations. Detailed methodology for projecting the power availability to the Petitioner from various sources is summarized as follows:

1. Power Purchase Quantum:

The Petitioner has firm and infirm allocated share in Central Sector Generating Stations (CSGS) of NTPC, NPCIL, NHPC, BBMB, SJVNL, APCPL etc.

The power availability for each year has been estimated based on the revised allocation issued by the Northern Regional Power Committee letter No. NRPC/OPR/103/02/2019/13456-83 dated 2nd Nov 2019.

The availability of power from various sources has been considered as per the following methodology:

NTPC: The net energy generated from NTPC stations has been estimated by considering average PLF of past three years and normative auxiliary consumption as per CERC Tariff Regulations. Based upon the generated energy from each plant and its corresponding entitlement to the UT of Chandigarh, the energy availability has been calculated.

NHPC: The energy generated from NHPC stations has been estimated by considering design energy of the corresponding stations. Based upon the energy generated by each plant and its corresponding entitlement to the UT of Chandigarh, the energy availability has been calculated.

NPCIL: The energy generated from NPCIL stations has been estimated by considering the average PLF of the past three years. Based upon the generated energy from each plant and its corresponding entitlement to the UT of Chandigarh, the energy availability has been calculated.

SJVNL: The estimation of energy generated from the Nathpa Jhakri generating station has been done based upon the average generation in past three years while for the Rampur hydro station is estimated by considering the design energy of the power plant. Based upon the generated energy from each plant, the energy availability to the UT of Chandigarh has been calculated.

BBMB: The UT of Chandigarh has been allocated fix quota of 1 Lakh Units (LU) and 10 LU per day from the BBMB plant. In addition to that 3.50% of the plant capacity has been allocated to the UT of Chandigarh. The availability of power from BBMB has been considered based on the average generation in the past three years.

THDC: The energy generation from the Koteshwar and Tehri plants has been estimated based upon the average generation in the past three years while the energy available to the UT of Chandigarh for the Control Period has been calculated based upon the entitlement.

APCPL: The energy generated from Jhajjar has been estimated by considering design energy of the stations. Based upon the energy generated by the plant and its corresponding entitlement to the UT of Chandigarh, the unit availability has been calculated.

MUNPL: The energy generated from the Meja has been estimated by considering design energy of the stations. Based upon the energy generated by the plant and its corresponding entitlement to the UT of Chandigarh, the unit availability has been calculated.

Renewable Sources: The Petitioner has proposed to procure 40 MW (100 MU) Non Solar power from SECI at a rate of INR 2.90/kWh to comply with the non-solar RPO

2. Power Purchase Cost:

The Petitioner has estimated the Power Purchase Cost for FY 2020-21 based on the station wise actual power purchase cost of FY 2018-19, provisional cost of six months for FY 2019-20 and the Tariff Orders issued by CERC. The assumptions considered for projection of power purchase cost from various generating stations are detailed as follows:

- The Fixed Cost for each plant is computed based upon the percentage allocation of the plant capacity to EWEDC and the corresponding annual fixed charges approved for the generating stations by CERC.
- The Energy Charges for thermal plants are computed by escalating the Energy charges for FY 2019-20 by 5% and multiplying them with the number of available units for the year.
- In case of hydro plants the variable charge has been computed based on the annual charges and design energy of the plant
- Variable Charges for BBMB plants have been considered as per the average rate in last twelve months along with the annual fixed charges and operation and maintenance charges towards the allocation of 3.50% share.
- PGCIL Charges, NRLDC Charges, Reactive Energy charges are computed at an escalation of 5% y-o-y over actuals billed per unit for FY 2019-20.
- Shortfall in power after accounting for energy availability from all stations and towards a portion of RPO obligation has been considered to be met from short term sources. The rate of short-term power has been projected by escalating the average per unit cost for the FY 2019-20 by 5% y-o-y.
- The Petitioner has also projected revenue from sale of surplus power and treated the same as a revenue item however no submission has been made for the same. In absence of any submission the same has been adjusted in the Power Purchase Cost submitted for FY 2020-21.

The projected power purchase cost is as illustrated in the table below:

Table 88: Power Purchase quantum (MU) and Cost (In INR Cr) submitted by Petitioner

S. No	Source	Name of the Project	Units Available (MU)	Fixed Charges (INR Cr)	Energy Charges (INR Cr)	Other Charges (INR Cr)	Total Charges (INR Cr)
1	NTPC	Singrauli	3.85	0.27	0.48	0.05	0.80
2		Rihand I	65.16	6.49	9.48	(0.50)	15.46
3		Rihand II	51.79	3.98	7.56	(0.38)	11.16
4		Rihand III	39.95	6.90	5.79	(0.29)	12.40
5		Unchahar I	15.74	1.79	5.44	0.25	7.48
6		Unchahar II	19.17	2.50	6.64	0.17	9.31
7		Unchahar III	8.68	1.14	2.91	0.27	4.32
8		Unchahar IV	21.12	4.97	6.85	0.22	12.03
9		Anta	8.73	6.81	3.67	0.39	10.87
10		Auriya	6.31	8.02	2.58	0.18	10.77

S. No	Source	Name of the Project	Units Available (MU)	Fixed Charges (INR Cr)	Energy Charges (INR Cr)	Other Charges (INR Cr)	Total Charges (INR Cr)
11		Dadri	24.80	8.34	9.27	1.31	18.92
12		Kahalgaon II	22.08	3.18	4.91	(0.21)	7.88
13		Dadri II	2.19	0.30	0.86	0.40	1.56
14		Koldam Hydro	53.14	15.71	14.04	(0.04)	29.71
15		Singrauli Hydro	0.17	0.00	0.11	(0.00)	0.10
		Total NTPC	342.89	70.40	80.58	1.81	152.79
16	NHPC	Salal	10.02	0.81	0.66	1.04	2.51
17		Tanakpur	5.71	1.26	0.97	0.04	2.28
18		Chamera I	109.18	7.99	12.49	0.90	21.38
19		Chamera II	35.20	2.05	3.77	0.26	6.09
20		Uri	18.18	2.14	1.61	1.04	4.79
21		Dhauliganga	30.60	4.21	3.95	1.02	9.18
22		Dulhasti	41.72	9.16	10.95	3.75	23.85
23		Sewa II	14.72	3.73	3.42	0.42	7.56
24		Uri II	27.31	6.47	5.74	1.88	14.09
25		Chamara III	24.96	5.28	5.63	0.21	11.12
26		Parbati-III	15.30	5.28	2.70	0.10	8.08
27		Kishanganga	13.93	2.91	2.57	0.03	5.51
	Total NHPC	346.84	51.30	54.44	10.70	116.43	
28	APCPL	Jhajjar (Aravali)	32.35	16.24	12.69	(0.61)	28.33
		Sub Total	32.35	16.24	12.69	(0.61)	28.33
29	NPCIL	NAPP	81.61	0.00	26.10	1.93	28.03
30		RAPP (#3 and #4)	18.75	0.00	6.79	0.32	7.11
31		RAPP (#5 and #6)	94.08	0.00	39.58	0.79	40.37
		Total NPCIL	194.44	0.00	72.47	3.04	75.51
32	SJVNL	Nathpa Jhakri	116.54	15.95	14.81	3.63	34.39
33		Rampur	20.11	4.87	3.97	2.19	11.04
		Total SJVNL	136.65	20.82	18.78	5.82	45.43
34	BBMB	BBMB 3.5%	589.79	0.00	0.00	0.00	0.00
35		BBMB 1 LU	97.46	0.00	14.07	(0.23)	13.84
36		BBMB 10 LU	24.23	0.00	140.68	(2.27)	138.41
37		BBMB O&M Charges		0.00	0.00	11.40	11.40
38		BBMB R&MU Charges		0.00	0.00	4.51	4.51
39		ULDC etc.		0.00	0.00	0.08	0.08
40		Total BBMB	711.48	0.00	154.75	13.49	168.24
41	THDC	Koteshwar	15.99	5.28	3.86	9.73	18.88
42		Tehri	165.84	46.62	38.66	(1.13)	84.15
		Total THDC	181.83	51.91	42.52	8.60	103.03
44	MUNPL	Meja	11.96	6.77	3.94	(0.16)	10.56
		Total MUNPL	11.96	6.77	3.94	(0.16)	10.56

S. No	Source	Name of the Project	Units Available (MU)	Fixed Charges (INR Cr)	Energy Charges (INR Cr)	Other Charges (INR Cr)	Total Charges (INR Cr)
		Annual Total	1,958.44	217.43	440.18	42.69	700.30
45		Open Market	43.12	0.00	6.40	0.00	6.40
46		UI Under-drawal	110.63	0.00	47.06	0.30	47.35
47		SECI	100.00	0.00	28.30	0.70	29.00
48		CREST	9.67	0.00	8.09	0.00	8.09
49		Pvt. Solar	1.38	0.00	1.12	(0.02)	1.10
50		Less: Revenue from Sale of Surplus Power	-	-	97.76	-	97.76
50		Grand Total	2,223.25	217.43	433.39	43.66	694.48

Transmission Charges

The transmission charges payable to PGCIL are projected based on the total capacity allocation in the transmission network.

An y-o-y escalation of 5% over the estimated transmission charges for the FY 2019-20 has been considered for projecting the PGCIL transmission charges for FY 2020-21

Table 89: Transmission charges submitted by Petitioner (In INR Cr)

Particulars	Petitioner's Submission
PGCIL Charges	49.78
NRLDC Charges	0.32
Reactive Energy Charges	0.00
PSPCL/PSTCL Reactive charges	0.31
Total	50.41

Commission's Analysis

The Commission for the purpose of estimating the quantum and cost of power purchase for FY 2020-21 has relied on the station wise actual energy availability for FY 2016-17, FY 2017-18 and FY 2018-19, provisional energy availability for first six months (H1) of FY 2019-20, actual Plant availability factor (PAF) and Plant Load Factor (PLF) for last 3-5 years for each station, allocated share to the Petitioner and norms and cost approved in Tariff Orders for Central Generating Stations approved by CERC.

The source wise methodology followed for projection of quantum and cost of power procurement has been detailed as follows:

5.6.1. Availability of power

Availability of energy from APCPL and NTPC Stations:

- The energy availability from APCPL and the NTPC stations except Singrauli Hydro has been estimated based on the average energy available during the past years two/three financial years FY 2016-17 to FY 2018-19 based on the scheduling of stations.
- For Singrauli Hydro, quantum of energy available has been considered same as the average monthly energy available during H1 of FY 2019-20 due to intermittent scheduling.

Availability of energy from NHPC, THDC, BBMB and SJVNL stations:

- The energy availability from all stations of NHPC, THDC, BBMB and SJVNL has been estimated based on the average energy available in the last two/three financial years FY 2016-17 to FY 2018-19 based on the scheduling of stations.

Availability from NPCIL stations:

- The energy availability from all the stations of NPCIL has been estimated based on the average energy available during the last two financial years from FY 2017-18 and FY 2018-19

Availability from MUNPL Meja Thermal station:

- The Petitioner has started to receive power from this station from April 2019 onwards hence the quantum of energy available has been considered same as the average monthly energy available during H1 of FY 2019-20

Availability of power from CREST and other Renewable Energy Sources

- The energy availability from CREST and other Renewable Energy Sources has been considered same as approved in FY 2019-20
- Energy availability from SECI Wind Power station has been assumed to commence in the last quarter of FY 2020-21.

Availability of power from the Open Market, Unscheduled Interchange and Banking

- The energy surplus for the FY 2020-21, as discussed in the section of energy balance, has been assumed to be sold in the Open Market.
- No power has been projected under UI and Banking.

5.6.2. Power Purchase Cost**Variable Charges:**

- The per unit variable costs for various power stations has been computed by taking the average of the actual per unit variable cost during the first 6 months from April 2019 to September 2019. Y-o-y escalation of 5% has been considered over the actual per unit variable cost to arrive upon the variable per unit cost for FY 2020-21.
- For purchase/sale of power from the Open Market, the Average Round the Clock (RTC) rate for the Northern Region during the calendar year 2019 has been considered.

Fixed Charges:

- The station wise fixed cost determined for FY 2018-19 has been escalated by 2% y-o-y to determine the fixed cost for each station

Other Charges:

Other charges have not been considered for the year. The same shall be considered as per actuals during the True-up/APR of FY 2020-21.

5.6.3. Transmission Charges

The Commission has projected the transmission charges payable to PGCIL based on the total capacity allocation of the Petitioner of the transmission network.

The transmission charges are determined based on the latest quarterly Point of Connection (PoC) rates approved by the Central Electricity Regulatory Commission (CERC) in accordance with Regulation 17(2) of the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 and the latest Regional Power Committee reports specifying the station-wise cumulative weighted average share allocated to the Petitioner for various CG Stations.

5.6.4. Total power purchase quantum and cost

The energy availability and the power purchase cost approved by the Commission for FY 2020-21 have been shown in the following tables:

Table 90: Power Purchase Quantum (MU) and cost (INR Cr) approved for FY 2020-21

Details of the stations	Units Purchased at UT periphery (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Total Charges (INR. Cr.)
NTPC				
Singrauli	3.77	0.45	1.26	1.71
Rihand I	69.40	10.07	6.83	16.90
Rihand II	59.21	8.60	4.56	13.16
Rihand III	44.56	6.23	7.39	13.62
Unchahar I	15.16	5.52	1.61	7.13
Unchahar II	21.74	8.00	2.25	10.26
Unchahar III	9.83	3.59	1.21	4.80
Unchahar IV	20.34	7.00	2.72	9.72
Anta	5.15	2.76	4.88	7.65
Auriya	2.96	1.17	5.86	7.04
Dadri	22.50	8.53	6.01	14.54
Kahalgaoon II	21.83	4.60	2.58	7.17
Dadri II	8.23	3.40	1.38	4.78
Koldam Hydro	42.09	11.43	12.09	23.51
Singrauli Hydro	0.20	0.14	0.00	0.14
Subtotal - NTPC	346.97	81.49	60.64	142.13
NHPC				
Salal	8.26	0.56	0.79	1.34
Tanakpur	3.76	0.68	1.53	2.20
Chamera I	85.58	10.65	8.18	18.83
Chamera II	28.28	3.10	3.70	6.80
Uri	15.73	1.41	2.07	3.48
Dhauliganga	19.08	2.53	4.61	7.14
Dulhasti	34.50	10.34	10.36	20.70
Sewa II	8.89	2.10	3.76	5.86
Uri II	18.58	4.81	9.26	14.07

Details of the stations	Units Purchased at UT periphery (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Total Charges (INR. Cr.)
Chamara III	16.61	3.84	6.29	10.13
Parbati-III	11.28	1.89	7.28	9.18
Kishanganga	13.42	2.47	3.03	5.49
Subtotal- NHPC	263.99	44.37	60.85	105.22
NPCIL				
NAPS	71.64	23.21	0.00	23.21
RAPP (Unit 3 & 4)-B	18.99	6.95	0.00	6.95
RAPP (Unit 5 & 6)-C	76.71	32.83	0.00	32.83
Subtotal- NPCIL	167.35	62.99	0.00	62.99
SJVNL				
Nathpa Jhakri	84.73	11.02	16.32	27.34
Rampur	12.64	2.64	4.95	7.59
Subtotal- SJVNL	97.37	13.66	21.27	34.93
BBMB				
BBMB 3.5%	530.04	110.09	0.00	110.09
BBMB 1 LU- Dehar	82.51	17.14	0.00	17.14
BBMB 10 LU- Pong	21.42	4.45	0.00	4.45
Subtotal- BBMB	633.97	131.67	0.00	131.67
APCPL				
APCPL Jhajjar	43.71	18.22	15.56	33.78
Subtotal- APCPL	43.71	18.22	15.56	33.78
THDC				
Koteshwar	12.96	3.27	5.20	8.47
Tehri	159.67	37.04	30.08	67.12
Subtotal- THDC	172.63	40.31	35.28	75.59
MUNPL				
Meja Thermal	19.39	6.39	6.36	12.76
Subtotal- MUNPL	19.39	6.39	6.36	12.76
RPO				
Crest	9.67	7.47	0.00	7.47
Pvt. solar (Gross)	1.09	0.95	0.00	0.95
Non-Solar SECI	25.00	7.25	0.00	7.25
Subtotal- Others	35.76	15.68	0.00	15.68
Total- Firm Sources	1,781.13	414.78	199.98	614.76
Open Market Purchase/(Sale)	(39.52)	(12.29)	0.00	(12.29)

Details of the stations	Units Purchased at UT periphery (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Total Charges (INR. Cr.)
Total	1741.61	402.49	199.98	602.47
Transmission Charges				
PGCIL Charges			63.26	63.26
Subtotal			63.26	63.26
Total Power Purchase Cost	1741.61	402.49	263.24	665.72

The Commission approves the quantum of power purchase as 1,741.61 MU at the UT Periphery with a total cost of INR 665.72 Cr for the FY 2020-21

The APPC has been computed at the UT Periphery excluding the transmission charges and cost of purchase of renewable energy. The same shall be used for the purpose of compensation / payment of surplus power at the end of each settlement period in case of Net-metering consumers by the Petitioner. The Average Power Purchase Cost (APPC) for FY 2020-21 has been determined as provided in the table below.

Table 91: Average Power Purchase Cost (APPC) for FY 2020-21

Particular	FY 2020-21
Total Power Purchase Cost (INR Cr)	665.72
Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Cr)	78.93
Net Power Purchase Cost (INR Cr) (A)	586.79
Total Power Purchase quantum (MU)	1,741.61
Less: Quantum from renewable energy sources (MU)	35.76
Quantum of energy at State Periphery excluding quantum from renewable energy sources (MU) (B)	1,705.85
APPC (Rs/kWh) (A/B)	3.44

The Commission approves the Average Power Purchase Cost (APPC) as INR 3.44/ kWh for the FY 2020-21

5.7. Renewable Purchase Obligation (RPO)

Petitioner's submission:

The Petitioner is required to procure power from renewable sources for meeting the RPO. The Petitioner has complied with the RPO, both solar & non-solar, till the FY 2018-19 and planning to fulfill the standalone RPO requirement of FY 2019-20 in the respective year. The RPO requirement for FY 2020-21 and the compliance status as submitted by the Petitioner has been provided in the following table:

Table 92: Effective Energy Sales (Excluding Hydro) as submitted by Petitioner

S. No.	Particular	Formula	FY 2020-21
1	Energy Sales within UT (In MUs)	a	1,562.52
2	Hydro Power Purchase (In MUs)	b	1,430.10
3	Inter-State Loss	c	3.60%
4	Inter-State Loss (In MUs)	d=b*c	51.48
5	Intra-State Loss	e	13.30%
6	Intra-State Loss (In MUs)	f=e*(b-d)	183.36
7	Hydro Power Consumed (In MUs)	g=b-d-f	1,195.26
8	Conventional Power Consumed (In MUs)	h=a-g	367.25

Table 93: RPO Requirement (Solar and Non-Solar) as submitted by Petitioner

Particulars	RPO (%)	Target		Procurement for RPO fulfilment for FY 2020-21 (MU)
		Conventional Power Consumed (MU)	Units (MU)	
Solar	6.10%	367.25	22.40	39.17
Non-Solar	8.00%	367.25	29.38	100.00
Total	14.10%		51.78	139.17

The Petitioner has proposed to fulfill the RPO by way of purchase of physical power. The Petitioner has proposed to fulfill the Solar RPO by way of procuring power from roof-top solar plants and from bilateral agreements and Non-Solar RPO by way of procurement from SECI Wind Power. The quantum and cost of the same have been considered in the Overall Power Purchase cost submitted by the Petitioner for FY 2020-21.

Commission's analysis:

As per Regulation 1, Sub-regulation (1) of the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010

“Each distribution licensee shall purchase electricity (in kWh) from renewable energy sources, at a defined minimum percentage of the total consumption of all the consumers in its area during a year.”

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and approved the revised RPO targets. The quantum as per the revised target has to be determined on the effective energy sales. The energy sales without hydro used for calculation of the RPO has been arrived at as follows:

Table 94: Effective energy sales (adjusted for hydro) (in MU)

S.No.	Particular	Formula	FY 2020-21
1	Energy Sales within UT	a	1,579.64
2	Hydro Power Purchase	b	1,256.62
3	Inter-State Loss (%)	c	3.69%
4	Inter-State Loss (MU)	d = c*b	46.37
5	Intra-State Loss (%)	e	9.30%
6	Intra-State Loss (MU)	f = e*(b-d)	112.55
7	Hydro Power Consumed (MU)	g = b - d - f	1,097.69
8	Conventional Power consumed	h = a - g	481.95

In accordance with the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010 and the Petitioner's submission, the Commission has determined the following Renewable Purchase Obligation for the Petitioner for FY 2020-21.

Table 95: Summary of Renewable Purchase Obligation (RPO) (MU)

Description	FY 2020-21
Sales within State from conventional sources (MU)	481.95
RPO obligation (in %)	14.10%
Solar	6.10%
Non-solar	8.00%
RPO obligation for the year (in MU)	67.95
Solar	29.40
Non-solar	38.56
Backlog upto FY 2019-20	0.00
Solar	0.00
Non Solar	0.00
Total RPO to be fulfilled for the year	67.95
Solar	29.40
Non Solar	38.56

Description	FY 2020-21
RPO compliance (Physical purchase)	68.95
- Solar	43.95
<i>Crest power</i>	9.67
<i>Pvt. Solar (Gross Generated)</i>	34.28
-Non-solar	25.00

As can be seen from the table above that the Petitioner is fulfilling the RPO requirement by purchase of physical power. The Commission has considered the energy available from Pvt. Solar (Gross Generated) plants same as submitted by the Petitioner.

Similar to RPO compliance approved in APR of FY 2019-20, the Petitioner is over-achieving the Solar RPO target in FY 2020-21. Hence, in accordance with the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010 and its subsequent amendments the Commission has adjusted the surplus Solar RPO compliance with the Non-Solar RPO. The actual compliance in respect of the pending RPO would be reviewed at the time of true-up and the supporting details such as purchase of RECs, bills from Solar/Non-Solar plants for the year must be submitted. The compliance and cost status towards RPO for FY 2020-21 as approved by the Commission is provided in the table below.

Table 96: Cost towards compliance of Renewable Purchase Obligation for FY 2020-21 (In INR Cr)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	Solar	43.95	8.43	1.92
(i)	CREST	9.67	7.47	7.72
(ii)	Pvt. Solar	34.28		
(a)	<i>Pvt. solar (Gross+ Net)</i>	1.09	0.95	8.75
2	Non-Solar	25.00	7.25	2.90
(i)	SECI	25.00	7.25	2.90
	Total	68.95	15.68	2.27

The Commission approves INR 15.68 Cr towards compliance of RPO in the ARR of FY 2020-21 and the same has been considered in the Power Purchase cost approved for FY 2020-21.

5.8. Energy Balance

Petitioner's submission

The Petitioner has submitted the energy balance as shown in the following page:

Table 97: Energy Balance submitted by Petitioner (MU)

Particulars	Petitioner's Submission
Energy Procured	2,212.19
Less: Outside Sale - Trading	354.16
Energy Available	1,858.03
Inter-State Transmission Loss	3.60%
Transmission Loss (MUs)	66.89
Net Energy Available at UT Periphery	1,791.14

Particulars	Petitioner's Submission
Power procured from Gross & NET Metering Mode (MUs)	11.05
Total Energy Available	1,802.20
Actual Energy Sales (MUs)	1,562.52
T&D Loss (%)	13.30%
T&D Loss (in MUs)	239.69
Total Energy Required at UT Periphery (MUs)	1,802.20

Commission's analysis

Based on the Energy sales, Power Procurement and Inter & Intra- State Loss as approved in the previous sections, the Energy Balance for FY 2020-21 has been shown in following table:

Table 98: Energy Balance approved by Commission (MU)

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Energy Requirement			
Energy sales within the State/UT (a)	1,736.02	1,562.52	1,579.64
Distribution losses (b)			
%	9.30%	13.30%	9.30%
MU	178.00	239.69	161.97
Total Energy requirement (c=a/(1-b))	1,914.02	1,802.20	1,741.61
Energy Availability			
Availability from firm sources (d)	1,762.06	1,802.20	1,781.13
Deficit/(Surplus) (c-d)	151.97	0.00	(39.52)

The Commission has estimated a surplus of 39.52 MU in FY 2020-21 for sale in the Open Market. The revenue from sale of surplus power has been adjusted by the Commission in power procurement cost approved in the earlier section.

5.9. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative & General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). Regulation 51 of the MYT Regulation, 2018 states the following:

51.1 The Operation and Maintenance expenses for the Distribution Wires Business shall be computed in accordance with this Regulation.

51.2 Operation and Maintenance (O&M) expenses shall comprise of the following:

- a) Employee expenses - salaries, wages, pension contribution and other employee costs;
- b) Administrative and General expenses including insurance charges if any; and
- c) Repairs and Maintenance expenses.

51.3 The Distribution Licensee shall submit the required O&M expenses for the Control Period as a part of Multi Year Tariff Petition. O&M expenses for the base Year shall be approved by the Commission considering the latest available audited accounts, business plan filed by the transmission Licensee, estimates of the actuals for the Base Year, prudence check and any other factors considered appropriate by the Commission.

51.4 O&M expenses for the nth Year of the Control Period shall be approved based on the formula given below:

$$O\&M_n = (R\&M_n + EMP_n + A\&G_n) \times (1 - X_n) + \text{Terminal Liabilities}$$

Where,

$$R\&M_n = K \times GF_{A_{n-1}} \times (WPI_{inflation})$$

$$EMP_n = (EMP_{n-1}) \times (1 + G_n) \times (CPI_{inflation})$$

$$A\&G_n = (A\&G_{n-1}) \times (CPI_{inflation})$$

'K' is a constant (expressed in %). Value of K for each Year of the Control Period shall be determined by the Commission in the Multi Year Tariff Order based on Licensee's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;

CPIinflation – is the average increase in Consumer Price Index (CPI) for immediately preceding three (3) Years before the base Year;

WPIinflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three (3) Years before the base Year;

EMP_n – Employee expenses of the Distribution Licensee for the nth Year;

A&G_n – Administrative and General expenses of the Distribution Licensee for the nth Year;

R&M_n – Repair and Maintenance expenses of the Distribution Licensee for the nth Year;

GF_{A_{n-1}} – Gross Fixed Asset of the transmission Licensee for the n-1th Year;

X_n is an efficiency factor for nth Year. Value of X_n shall be determined by the Commission in the Multi Year Tariff Order based on Licensee's filing, benchmarking, approved cost by the Commission in past and any other factor the Commission feels appropriate;

G_n is a growth factor for the nth Year. Value of G_n shall be determined by the Commission for each Year in the Multi Year Tariff Order for meeting the additional manpower requirement based on Licensee's filings, benchmarking, approved cost by the Commission in past and any other factor that the Commission feels appropriate;

Provided that in case the Distribution Licensee has been in operation for less than three (3) Years as on the date of effectiveness of these Regulations, O&M Expenses shall be determined on case to case basis.

51.5 Terminal liabilities of employees of Licensee including pension expenses etc. shall be approved as per actuals submitted by the Licensee, subject to prudence check or be established through actuarial studies. Additionally, any variation due to changes recommended by the pay commission shall be allowed separately by the Commission, subject to prudence check.

51.6 For the purpose of estimation, the same value of factors – CPIinflation and WPIinflation shall be used for all Years of the Control Period. However, the Commission shall consider the actual values of the factors – CPIinflation and WPIinflation during the true up exercise for the Year for which true up is being carried out and true up the O&M Expenses for that Year, only to the extent of inflation.

5.9.1. Employee Expenses

Petitioner's submission

The Petitioner has considered the same employee expenses of INR 76.26 Cr as approved by the Commission in the MYT Order

Commission's analysis

In accordance with the MYT Regulations, 2018, the Commission has determined the Employee expenses for each year of the MYT Control Period. The Regulation 6 of the MYT Regulations, 2018 stipulates the following:

6. Values for Base Year

6.1 The values for the Base Year of the Control Period shall be determined on the basis of the audited accounts or provisional accounts of last three (3) Years, and other factors considered relevant by the Commission:

Provided that, in absence of availability of audited accounts or provisional accounts of last three (3) Years, the Commission may benchmark the parameters with other similar utilities to establish the values for Base Year:

Provided further that the Commission may change the values for Base Year and consequently the trajectory of parameters for Control Period, considering the actual figures from audited accounts.

The Employee expenses are to be revised to the extent of inflation as stipulated in the MYT Regulations 2018. Accordingly, the Commission has considered the revised Employee expenses as approved in the APR of FY 2019-20 as base and considered the Growth Rate (Gn) same as approved by the Commission in the MYT Order. Based on the latest CPI Inflation, the Commission has arrived on the Employee Expenses for FY 2020-21

The CPI Inflation has been computed as follows:

Table 99: Computation of CPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in CPI Index	Average increase in CPI indices over 3 years
2016-17	275.92	4.12%	
2017-18	284.42	3.08%	
2018-19	299.92	5.45%	
		CPI Inflation	4.22%

Accordingly, the employee expenses approved by the Commission for FY 2020-21 have been provided in the following table:

Table 100: Employee Expenses approved by Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21
1	Employee Expenses base year		73.47
2	Growth in number of employees (Gn)		-0.54%
3	CPI Inflation for preceding three years (CPI)		4.22%
4	Employee Expenses	73.47	76.16

The Commission approves Employee Expenses of INR 76.16 Cr in the ARR of FY 2020-21.

5.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has determined the A&G expenses for FY 2020-21 based on the norms specified in the MYT Regulations, 2018. The A&G expenses for the FY 2019-20 have been taken as the base. The average increase in the Consumer Price Index (CPI) has been considered. The following table provides the A&G expenses projected for FY 2020-21 along with various parameters considered.

Table 101: A&G submitted by Petitioner (In INR Cr)

Particular	Unit	Petitioner's Submission
A&G Expenses of FY 2018-19	Rs. Cr.	6.44
A&G Expenses of FY 2019-20	Rs. Cr.	6.78
CPI Inflation	In %	5.28%
Projected A&G expenses	Rs. Cr.	7.14

Commission's analysis

Similar to the methodology followed while estimating the employee expenses, the Commission has considered the A&G expenses approved for FY 2019-20 as base and escalated with the latest CPI Inflation figures to arrive upon the A&G expenses for the FY 2020-21.

The A&G expenses approved by the Commission for FY 2020-21 have been provided in the following table:

Table 102: A&G Expenses approved by Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21
1	A&G Expenses		
2	CPI Inflation		4.22%
3	A&G Expenses	4.78	4.99

The Commission approves the Administrative & General (A&G) expenses of INR 4.99 Cr in the ARR of FY 2020-21.

5.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has considered the R&M Expenses submitted for FY 2019-20 as base and escalated the same with Wholesale Price Index (WPI) to arrive upon the R&M Expenses for FY 2020-21.

The following table provides the R&M expenses proposed for each year of the MYT Control Period along with various parameters considered.

Table 103: R&M expenses submitted by Petitioner (In INR Cr)

Particular	Unit	Petitioner's Submission
Estimated R&M Expenses for FY 2019-20	INR. Cr.	13.80
WPI Inflation	%	2.98%
Projected R&M Expenses	INR. Cr.	14.21

Commission's analysis

The Commission has considered the same 'K' factor as approved in the MYT Order. The 'K' factor is then multiplied with the GFA approved for (n-1)th year based on revised capitalisation for FY 2019-20 and FY 2020-21. The resultant amount is then escalated by WPI Inflation to arrive upon the R&M Expenses for FY 2020-21.

The WPI Inflation has been computed as follows:

Table 104: Computation of WPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in WPI Index	Average increase in WPI indices over 3 years
2016-17	111.62	1.73%	
2017-18	114.88	2.92%	
2018-19	119.84	4.32%	
		WPI Inflation	2.99%

The R&M expenses approved by the Commission for FY 2020-21 have been provided in the following table:

Table 105: R&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	FY 2020-21
1	Opening GFA (GFA _{n-1}) of previous year	452.31
2	K factor approved (K) in MYT Order	2.32%
3	WPI Inflation	2.99%
	R&M Expenses = (K x (GFA_{n-1}) x (1+WPI_{inflation}))	10.81

The Commission approves the Repair & Maintenance (R&M) expenses of INR 10.81 Cr in the ARR of FY 2020-21.

5.9.4. Total Operation and Maintenance Expenses (O&M)

The following table provides the O&M expenses approved in the MYT Order, Petitioner's submission and now approved by the Commission

Table 106: O&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	76.26	76.26	76.16
2	Administrative & General Expenses (A&G)	5.00	7.14	4.99
3	Repair & Maintenance Expenses (R&M)	10.57	14.21	10.81
	Total Operation & Maintenance Expenses	91.82	97.60	91.95

The Commission approves Operation & Maintenance (O&M) expenses of INR 91.95 Cr in the ARR of FY 2020-21.

5.10. Capital Expenditure and Capitalisation

Petitioner's submission

The Petitioner has proposed the capital expenditure and capitalisation as approved by the Commission in the MYT Order.

Commission's analysis:

The Commission in the APR of FY 2019-20 had approved the schemes that had been approved in the MYT Order and against which the works had been initiated in the H1 of FY 2019-20. The Financial and Physical progress of the various schemes had been submitted by the Petitioner. As the capital expenditure schemes are under various stages of progress the Commission after proper scrutiny of the supporting documents submitted by the Petitioner approves all the schemes which are expected to spill over in FY 2020-21. In addition, the Commission approves the standalone capital expenditure and capitalisation as approved by the Commission in the MYT Order for FY 2020-21. No new schemes have been approved by the Commission in the MYT Period, the same shall be taken up during the True-up of respective years of the Control Period. Accordingly, the Commission revises the capital expenditure and capitalisation plan in light of the submissions of the Petitioner.

The following table provides the capital expenditure and capitalisation approved by the Commission for FY 2020-21:

Table 107: Capital Expenditure and Capitalisation approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	131.89	131.89	135.87

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
2	Capitalisation	67.14	67.14	86.08

The Commission approves the capital expenditure of INR 135.87 Cr and capitalisation of INR 86.08 Cr in the ARR of FY 2020-21.

5.11. Capital Structure

Petitioner's Submission

The Petitioner has proposed that the entire capitalisation for FY 2020-21 shall be through deployment of capital equity.

Commission's analysis

The Regulation 26 of the MYT Regulations, 2018 specifies the following

26. Debt to Equity Ratio

26.1 In case of Existing Projects, debt to equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2018 shall be considered:

Provided that in case of retirement or replacement or De-capitalisation of the assets, the equity capital approved as mentioned above, shall be reduced to the extent of 30% (or actual equity component based on documentary evidence, if it is lower than 30%) of the original cost of such assets:

Provided further that in case of retirement or replacement or De-capitalisation of the assets, the debt capital approved as mentioned above, shall be reduced to the extent of outstanding debt component based on documentary evidence, or the normative loan component, as the case may be, of the original cost of such assets.

26.2 For New Projects, the debt-equity ratio as on the Date of Commercial Operation shall be 70:30 of the amount of capital cost approved by the Commission under Regulation 23, after prudence check for determination of tariff:

Provided that where equity actually deployed is less than 30% of the capital cost of the capitalised asset, the actual equity shall be considered for determination of tariff:

Provided also that if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as a normative loan for the Licensee for determination of tariff:

Provided also that the Licensee shall submit documentary evidence for the actual deployment of equity and explain the source of funds for the equity:

Provided also that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

Provided further that the premium, if any, raised by the Licensee while issuing share capital and investment of internal resources created out of its free reserves, for the funding of the scheme, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilized for meeting the capital expenditure of the transmission system or the distribution system, and are within the ceiling of 30% of capital cost approved by the Commission.

26.3 Any expenditure incurred or projected to be incurred on or after April 1, 2019, as may be admitted by the Commission, as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in this Regulation.

In accordance with above, since the Petitioner has submitted that the entire capitalisation is funded through equity, equity higher than 30% of capitalisation has been considered as normative loan. Further, as per the submission of the Petitioner no assets haven been created by way of consumer contribution or Government grant.

Therefore, in accordance with the MYT Regulations, 2018, the Commission has determined the Capital Structure for each year of the MYT Control Period as follows:

Table 108: Funding Plan approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Capitalisation	67.14	67.14	86.08
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	Normative Loan	47.00	47.00	60.25
5	Equity	20.14	20.14	25.82

Table 109: GFA addition approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	522.78	471.44	457.54
2	Addition During the FY	67.14	67.14	86.08
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	589.92	538.58	543.62

Table 110: Normative Loan addition approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	43.46	35.37	-
2	Add: Normative Loan During the year	47.00	47.00	60.25
3	Less: Normative Repayment equivalent to Depreciation	15.22	18.01	13.21
4	Closing Normative Loan	75.24	64.35	47.04

Table 111: Normative Equity addition approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	150.88	141.43	131.31
2	Additions on account of new capitalisation	20.14	20.14	25.82
3	Closing Equity	171.02	161.57	157.13

5.12. Depreciation

Petitioner's submission

The Petitioner has determined the depreciation on normative basis considering proposed capitalisation during the year and average of opening and closing GFA for each year. The Depreciation rate has been considered the

same as the weighted average rate of depreciation calculated as per addition in GFA. The Depreciation amount has been submitted as follows:

Table 112: Depreciation submitted by the Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Opening Gross Fixed Assets	471.44
2	Add: Assets added during year	67.14
3	Less: Adjustment/With-drawl	-
4	Closing Gross Fixed Assets	538.58
5	Average Gross Fixed Assets	505.01
6	Average Depreciation Rate	3.57%
	Depreciation for year	18.01

Commission's analysis

Regulation 30 of the MYT Regulations, 2018 stipulates the following:

30. Depreciation

30.1 The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission:

Provided that the depreciation shall be allowed after reducing the approved original cost of the retired or replaced or decapitalized assets:

Provided also that the no depreciation shall be allowed on the assets financed through consumer contribution, deposit work, capital subsidy or grant.

30.2 The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to a maximum of 90% of the capital cost of the asset.

30.3 Land other than the land held under lease shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the assets.

30.4 In case of existing assets, the balance depreciable value as on April 1, 2019, shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to March 31, 2018, from the gross depreciable value of the assets.

30.5 The depreciation shall be chargeable from the first Year of commercial operations. In case of projected commercial operation of the assets during the Year, depreciation shall be computed based on the average of opening and closing value of assets:

Provided that depreciation shall be re-calculated during truing-up for assets capitalised at the time of truing up of each Year of the Control Period, based on documentary evidence of asset capitalised by the Applicant, subject to the prudence check of the Commission.

30.6 For Transmission Licensee, the depreciation shall be calculated at rates and norms specified in the prevalent CERC Tariff Regulations for transmission system.

30.7 The depreciation for a Distribution Licensee shall be calculated annually, based on the Straight Line Method, over the Useful Life of the asset at rates specified in Appendix I of the Regulations.

30.8 In addition to allowable depreciation, the Distribution Licensee shall be entitled to advance against depreciation (AAD), computed in the manner given hereunder:

AAD = Loan (raised for capital expenditure) repayment amount based on loan repayment tenure, subject to a ceiling of 1/10th of loan amount minus depreciation as calculated on the basis of these Regulations:

Provided that advance against depreciation shall be permitted only if the cumulative repayment upto a particular Year exceeds the cumulative depreciation upto that Year:

Provided further that advance against depreciation in a Year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation upto that Year.

30.9 The Distribution Licensee shall provide the list of assets added during each Year of Control Period and list of assets completing 90% of depreciation in the Year along with Petition for annual performance review, true-up and tariff determination for ensuing Year.

30.10 The remaining depreciable value for a Distribution Licensee shall be spread over the balance useful life of the asset, on repayment of the entire loan.

The Commission has derived the weighted average rate of depreciation based on the asset wise depreciation rate prescribed in MYT Regulations, 2018, provided in the table below:

Table 113: Depreciation Rate (%)

Description	Rate
Plant & Machinery	3.60%
Buildings	1.80%
Vehicles	18.00%
Furniture & Fixtures	6.00%
Computers & Others	6.00%
Land	0.00%

The closing GFA of FY 2019-20 as approved in the APR has been considered as opening GFA of FY 2020-21. Further, depreciation for each year has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during each year.

The following table provides the calculation of depreciation during the MYT Control Period.

Table 114: Depreciation approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets (a-b)	408.58	471.44	335.71
2	Addition During the FY	67.14	67.14	86.08
3	Adjustment/Retirement During the FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	475.72	538.58	421.78
5	Average Gross Fixed Assets	442.15	505.01	378.75
6	Effective Rate of Depreciation (%)	3.44%	3.57%	3.49%
	Depreciation	15.22	18.01	13.21

The Commission approves a depreciation of INR 13.21 Cr in the ARR of FY 2020-21

5.13. Interest on Loan

Petitioner's submission

In line with the methodology adopted for computation of depreciation, the Petitioner has determined the Interest on Loan on normative basis. The Opening loan has been considered equivalent to closing loan based on the submissions in APR of FY 2019-20. Subsequently 70% of capitalisation proposed for FY 2020-21 has been considered to arrive at the opening and closing normative loan for FY 2020-21.

Repayment of the normative loan has been considered equivalent to the depreciation for the respective year in line with the MYT Regulations, 2018.

The interest at the SBI MCLR rate as on 1st April 2019 has been applied on the average normative debt in order to project the interest on normative loan for FY 2020-21.

The following table provides the Interest on Loan projected for FY 2020-21.

Table 115: Interest on Loan submitted by the Petitioner (In INR Cr)

Particular	Petitioner's Submission
Opening Normative Loan	35.37
Add: Normative Loan during the year (70% of proposed capitalization)	47.00
Less: Normative Repayment	18.01
Closing Normative Loan	64.35
Average Normative Loan	49.86
Rate of Interest	9.55%
Interest on Normative Loan	4.76

Commission's analysis:

The Regulation 28 of the MYT Regulations, 2018 specifies the following:

28. Interest on Loan

28.1 The loans arrived at in the manner indicated in Regulation 26 on the assets put to use, shall be considered as gross normative loan for calculation of interest on the loan:

Provided that interest and finance charges on capital works in progress shall be excluded:

Provided further that in case of De-capitalisation or retirement or replacement of assets, the loan capital shall be reduced to the extent of outstanding loan component of the original cost of the de-capitalised or retired or replaced assets, based on documentary evidence.

28.2 The normative loan outstanding as on April 1, 2019, shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2018, from the gross normative loan.

28.3 Notwithstanding any moratorium period availed by the Transmission Licensee or the Distribution Licensee, as the case may be, the repayment of loan shall be considered from the first Year of commercial operation of the project and shall be equal to the annual depreciation allowed in accordance with Regulation 30.

28.4 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each Year applicable to the Transmission Licensee or the Distribution Licensee:

Provided that at the time of truing up, the weighted average rate of interest calculated on the basis of the actual loan portfolio during the Year applicable to the Transmission Licensee or the Distribution Licensee shall be considered as the rate of interest:

Provided also that if there is no actual loan for a particular Year but normative loan is still outstanding, the last available weighted average rate of interest for the actual loan shall be considered:

Provided further that if the Transmission Licensee or the Distribution Licensee does not have actual loan, then one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1) Year period, as may be applicable as on 1st April of the relevant Year plus 100 basis points shall be considered as the rate of interest for the purpose of allowing the interest on the normative loan.

28.5 The interest on loan shall be calculated on the normative average loan of the Year by applying the weighted average rate of interest:

Provided that at the time of truing up, the normative average loan of the Year shall be considered on the basis of the actual asset capitalisation approved by the Commission for the Year.

28.6 For new loans proposed for each Financial Year of the Control Period, interest rate shall be considered as lower of (i) one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1) Year period, as may be applicable as on 1st April of the relevant Year plus 100 basis points, and (ii) weighted average rate of interest proposed by the Distribution Licensee.

28.7 The above interest computation shall exclude the interest on loan amount, normative or otherwise, to the extent of capital cost funded by consumer contribution, deposit work, capital subsidy or grant, carried out by Transmission Licensee or Distribution Licensee.

28.8 The finance charges incurred for obtaining loans from financial institutions for any Year shall be allowed by the Commission at the time of Truing-up, subject to prudence check.

28.9 The excess interest during construction on account of time and/or cost overrun as compared to the approved completion schedule and capital cost or on account of excess drawal of the debt funds disproportionate to the actual requirement based on Scheme completion status, shall be allowed or disallowed partly or fully on a case to case basis, after prudence check by the Commission:

Provided that where the excess interest during construction is on account of delay attributable to an agency or contractor or supplier engaged by the Transmission Licensee, any liquidated damages recovered from such agency or contractor or supplier shall be taken into account for computation of capital cost:

Provided further that the extent of liquidated damages to be considered shall depend on the amount of excess interest during construction that has been allowed by the Commission.

28.10 The Transmission Licensee or the Distribution Licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the equally between the beneficiaries and the Transmission Licensee or the Distribution Licensee and the Consumers of Distribution Licensee.

28.11 Interest shall be allowed on the amount held as security deposit held in cash from Retail Consumers at the Bank Rate as on 1st April of the Financial Year in which the Petition is filed:

Provided that at the time of truing-up, the interest on the amount of security deposit for the Year shall be considered on the basis of the actual interest paid by the Licensee during the Year, subject to prudence check by the Commission.

Hence, the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. However, the Petitioner has submitted that capitalisation during each year has been funded by the Petitioner's equity and no loan has been taken against any of the capitalised assets.

As per the MYT Regulations 2018, if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would be considered as normative loan. Further, the Commission has considered the capitalisation of assets as approved in the foregoing paragraphs. The Commission for the purpose of funding of the capitalisation has considered the normative debt equity ratio of 70:30.

The Commission has considered the SBI MCLR rate plus 100 basis points as Rate of Interest, in accordance with the MYT Regulations, 2018. The Interest on Loan has been calculated on the average loan during the year with the opening loan considered equivalent to the closing loan approved for FY 2019-20 in the APR.

The following table provides the Interest on Loan approved in the MYT Order, Petitioner's Submission and now approved by the Commission

Table 116: Interest on loan approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	43.46	35.37	0.00
2	Add: Normative Loan During the year	47.00	47.00	60.25
3	Less: Normative Repayment equal to Depreciation	15.22	18.01	13.21
4	Closing Normative Loan	75.24	64.35	47.04
5	Average Normative Loan	59.35	49.86	23.52
6	Rate of Interest (%)	9.55%	9.55%	8.85%
	Interest on Loan	5.67	4.76	2.08

The Commission approves Interest on Loan as INR 2.08 Cr in the ARR of FY 2020-21.

5.14. Return on Equity (RoE)

Petitioner's submission

The Return on Equity (RoE) is computed in accordance with the MYT Regulations 2018, and is computed on 30% of the capital base. The Petitioner has considered the opening equity equivalent to the closing equity for the FY 2018-19 and has considered added equity to the tune of 30% of assets proposed to be capitalized during the year. Accordingly, the EWEDC has computed the Return on Equity for Wires and Retail Supply Business separately. The following table provides the RoE as submitted by the Petitioner.

Table 117: RoE submitted by Petitioner (In INR Cr)

Particulars	Petitioner's Submission
Opening Equity	141.43
Additions on account of new capitalisation	20.14
Closing Equity	161.57
Average Equity	151.50
Average Equity (Wires Business)	136.35
Average Equity (Retail Supply Business)	15.15
Return on Equity for Wires Business (%)	15.50%
Return on Equity for Retail Supply Business (%)	16.00%
Return on Equity for Wires Business	21.13
Return on Equity for Retail Supply Business	2.42
Return on Equity	23.56

Commission's analysis:

The Regulations 27.2 and 27.3 of the MYT Regulations, 2018 stipulate the following:

“27.2 The return on equity for the Distribution Wires Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use at post-tax rate of return on equity specified in the prevalent CERC Tariff Regulations for transmission system.

27.3 The return on equity for the Retail Supply Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use, at the rate of sixteen (16) per cent per annum.”

The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the MYT Regulations, 2018 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Commission has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a rate of 16% for the Retail Supply Business. The equity component has been determined in accordance with capital structure as discussed in the section on capital structure. The rate of return on equity for the Distribution Wires Business shall be trued up based on the prevalent CERC Regulations during the True-up of the respective years. The following table provides the total return on equity approved for FY 2020-21.

Table 118: RoE approved by Commission (In INR Cr)

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Opening Equity	150.88	141.43	131.31
Additions on account of new capitalisation	20.14	20.14	25.82
Closing Equity	171.02	161.57	157.13
Average Equity	160.95	151.50	144.22
Average Equity (Wires Business)	144.86	136.35	129.80
Average Equity (Retail Supply Business)	16.10	15.15	14.42
Return on Equity for Wires Business (%)	15.50%	15.50%	15.50%
Return on Equity for Retail Supply Business (%)	16.00%	16.00%	16.00%
Return on Equity for Wires Business	22.45	21.13	20.12
Return on Equity for Retail Supply Business	2.58	2.42	2.31
Return on Equity	25.03	23.56	22.43

The Commission approves Return on Equity of INR 22.43 Cr in the ARR of FY 2020-21. Any Income Tax, paid by the Petitioner on return on equity, shall be allowed by the Commission at the time of true up based on actual figures.

5.15. Interest on Consumer Security Deposits

Petitioner's submission

Interest on consumer security has been calculated on normative basis with addition of INR 8.00 Cr proposed for FY 2020-21. The table below provides the calculation of interest on consumer security deposits proposed for FY 2020-21.

Table 119: Interest on Consumer Security Deposit submitted by the Petitioner (In INR Cr)

Particular	Petitioner's Submission
Opening Consumer Security Deposit	205.85
Net Addition During the year	8.00
Closing Consumer Security Deposit	213.85
Average Security Deposit	209.85

Bank Rate	6.25%
Interest on Consumer Security Deposit	13.12

Commission's analysis:

Regulation 28.11 of the MYT Regulations, 2018 stipulates the following:

“Interest shall be allowed on the amount held as security deposit held in cash from Retail Consumers at the Bank Rate as on 1st April of the Financial Year in which the Petition is filed:

Provided that at the time of trueing-up, the interest on the amount of security deposit for the Year shall be considered on the basis of the actual interest paid by the Licensee during the Year, subject to prudence check by the Commission. “

The Interest on security deposits has been calculated in accordance with the MYT Regulations 2018, based on the average of the opening and closing consumer security deposits during the year. In accordance with the Petitioner's submission, the Commission has considered a net addition of INR 8.00 Cr in the consumer security deposits during the year. The rate of interest has been considered equivalent the RBI Bank Rate as on 1st April of the Financial Year in which the Petition is filed.

The table below provides the computation of interest on consumer security deposits approved for each year of the MYT Control Period.

Table 120: Interest on Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	206.96	205.85	205.85
2	Net addition during the year	8.00	8.00	8.00
3	Closing Security Deposit	214.96	213.85	213.85
4	Average Security Deposit	210.96	209.85	209.85
5	Rate of Interest (%)	6.25%	6.25%	6.25%
6	Interest on Security Deposit	13.19	13.12	13.12

The Commission approves Interest on Security Deposit as INR 13.12 Cr in the ARR of FY 2020-21.

5.16. Interest on Working Capital

Petitioner's submission

The interest on working capital has been calculated based on the normative principles outlined in the MYT Regulations, 2018.

The working capital requirement for the Control Period has been computed considering the following

- Receivable of two months of billing
- O&M Expenses of one month
- Maintenance Spares at 40% of repair and maintenance expenses for one month
- Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt

The SBI 1 Year MCLR as on 1st April, 2019 plus 200 basis points i.e. 10.55% has been considered for computation of interest on working capital. The following table provides the Interest on working Capital proposed for each year of the Control Period.

Table 121: Interest on Working Capital submitted by the Petitioner (In INR Cr)

Particular	Petitioner's Submission
Two months receivables	149.65
Add: One Month O&M Expenses	8.13
Add: 40% of repair and maintenance expenses for one month	0.47
Less: Consumer Security Deposit excl. BG/FDR	209.85
Total Working after deduction of Security Deposit	(51.60)
Interest Rate (%)	10.55%
Interest on Working Capital	0.00

Commission's analysis:

The Regulation 52 of the MYT Regulations, 2018 stipulates the following:

52. Norms of Working Capital for Distribution Wires Business

52.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Distribution Wires Business for the Financial Year, computed as follows:

(a) O&M Expenses for one (1) month; plus

(b) Maintenance spares at 40% of repair and maintenance expenses for one (1) month; plus

(c) Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution wires at the prevailing tariff;

Less:

(d) Amount, if any, held as security deposits under clause (b) of sub-section (1) of Section 47 of the Act from distribution system users except the security deposits held in the form of Bank Guarantees:

Provided that at the time of truing up for any Year, the working capital requirement shall be re-calculated on the basis of the values of components of working capital approved by the Commission in the truing up.

Further, Regulation 31.3 of the MYT Regulation, 2018 stipulates the following:

31.3 The interest on working capital shall be a payable on normative basis notwithstanding that the Licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan based on the normative figures. 31.4 The rate of interest on working capital shall be equal one (1)Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1)Year period, as may be applicable as on 1st April of the Financial Year in which the Petition is filed plus 200 basis points.

In accordance with the MYT Regulation, 2018, the Commission has computed the Interest on Working Capital for FY 2020-21. The actual Working Capital requirement, after deduction of the average amount of Consumer Security Deposit is coming out to be negative. Thus, the Interest on Working Capital has been considered as Nil, as shown in the table below:

Table 122: Interest on Working Capital approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	O&M Expense for 1 month	7.65	8.13	7.66
2	Maintenance spares at 40% of R&M expenses for one (1) month;	0.35	0.47	0.36
3	Receivables equivalent to two (2) months of the expected revenue	155.29	149.65	131.53

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
	from charges at the prevailing tariff			
4	Less: Amount, held as security deposits	210.96	209.85	209.85
5	Net Working Capital	(47.67)	(51.60)	(70.30)
6	Rate of Interest (%)	10.15%	10.55%	10.55%
	Interest on Working Capital	0.00	0.00	0.00

The Commission approves the Interest on Working Capital as nil in the ARR of FY 2020-21

5.17. Income Tax

Petitioner's submission

No submission has been made in this regard.

Commission's analysis:

Regulation 32 of MYT Regulations, 2018 stipulates the following:

32. Tax on Income

32.1 The treatment of tax on income for a Transmission Licensee shall be in accordance with the prevalent CERC Tariff Regulations.

32.2 The Commission in its MYT Order shall provisionally approve Income Tax payable for each Year of the Control Period, if any, based on the actual income tax paid, including cess and surcharge on the same, if any, as per latest audited accounts available for the Distribution Licensee, subject to prudence check.

32.3 Variation between Income Tax actually paid, including cess and surcharge on the same, if any, and approved, if any, on the income stream of the Licensed business of the Distribution Licensees shall be reimbursed to/recovered from the Distribution Licensees, based on the documentary evidence submitted at the time of truing up of each Year of the Control Period, subject to prudence check.

32.4 Under-recovery or over-recovery of any amount from the Consumers on account of such tax having been passed on to them shall be adjusted every Year on the basis of income-tax assessment under the Income-Tax Act, 1961, as certified by the statutory auditors. The Distribution Licensee may include this variation in its truing up Petition:

Provided that tax on any income stream other than the core business shall not be a pass-through component in tariff and tax on such other income shall be borne by the Distribution Licensee.

Since no Income tax has been paid by the Petitioner in the previous years, no income tax liability is computed for the FY 2020-21 and the same shall be Trued-up based on the actual income tax paid by the Petitioner.

Table 123: Income Tax approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Income Tax	0.00	0.00	0.00

The Commission approves Income Tax as nil in the ARR of FY 2020-21.

5.18. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner has proposed provision for bad and doubtful debts for FY 2020-21 in accordance with the MYT Regulations, 2018.

Commission's analysis

The Regulation 62 of the MYT Regulations, 2018 stipulates the following

"62. Provision for bad and doubtful debts

62.1 The Commission may allow bad debts written off as a pass through in the Aggregate Revenue Requirement, based on the trend of write off of bad debts in the previous years, subject to prudence check:

Provided that the Commission shall true up the bad debts written off in the Aggregate Revenue Requirement, based on the actual write off of bad debts excluding delayed payment charges waived off, if any, during the year, subject to prudence check:

Provided also that the provision for bad and doubtful debts shall be limited to 1% of the annual Revenue Requirement of the Distribution Licensee:

Provided further that if subsequent to the write off of a particular bad debt, revenue is realised from such bad debt, the same shall be included as an uncontrollable item under the Non-Tariff Income of the year in which such revenue is realised."

The Commission also has not considered any Provision for Bad & Doubtful Debts for the FY 2020-21. The same shall be accounted for as per actuals in the True-up of respective years.

5.19. Non-Tariff Income (NTI)

Petitioner's submission

The Petitioner has estimated the non-tariff income for FY 2020-21 as provided in the table below:

Table 124: Non-Tariff Income submitted by the Petitioner (In INR Cr)

Particular	Petitioner's Submission
Non-Tariff Income	20.30

Commission's analysis:

The Regulation 64 of the MYT Regulations, 2018 stipulates the following:

"64. Non-Tariff Income

64.1 The amount of Non-Tariff Income relating to the retail supply of electricity as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in calculating the tariff for retail supply of electricity by the Distribution Licensee:

Provided that the Distribution Licensee shall submit full details of its forecast of Non-Tariff Income to the Commission along with its application for determination of tariff.

64.2 The Non-Tariff Income shall inter-alia include:

- (a) Income from rent of land or buildings;
- (b) Income from sale of scrap;
- (c) Income from statutory investments;
- (d) Interest on advances to suppliers/contractors;
- (e) Rental from staff quarters;
- (f) Rental from contractors;
- (g) Income from hire charges from contactors and others;
- (h) Income from advertisements, etc.;
- (i) Meter/metering equipment/service line rentals;
- (j) Service charges;
- (k) Consumer charges;
- (l) Recovery for theft and pilferage of energy;
- (m) Rebate availed on account of timely payment of bills;
- (n) Miscellaneous receipts;
- (o) Deferred Income from grant, subsidy, etc., as per Annual Accounts;
- (p) Prior period income, etc.:

Provided that the interest/dividend earned from investments made out of Return on Equity corresponding to the Retail Supply Business of the Distribution Licensee shall not be included in Non-Tariff Income:

Provided further that any income earned by a Distribution Licensee by sale of power to other Distribution Licensees or to Consumers as per Section 49 of the Act using the existing power purchase agreements or bulk supply capacity allocated to the Distribution Licensee's Area of Supply shall be reduced from the Aggregate Revenue Requirement of the Distribution Licensee for the purpose of determination of tariff. Such reduction shall be carried out in accordance with Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017, as amended from time to time."

The Commission considers the same NTI as approved for FY 2019-20 in the FY 2020-21. The same shall be considered as per actuals in True-up/ APR for each year.

The NTI approved in the MYT Order, Petitioner's Submission and now approved by the Commission has been shown in the following table:

Table 125: Non -Tariff Income approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Non- Tariff Income	24.97	20.30	19.33

The Commission approves Non-Tariff Income of INR 19.33 in the ARR of FY 2020-21.

5.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses detailed above, the Petitioner submitted the net aggregate revenue requirement for FY 2020-21 as shown in the following table:

Table 126: Aggregate Revenue Requirement (ARR) submitted by the Petitioner (In INR Cr)

S. No.	Particular	Petitioner's Submission
1	Cost of power purchase for full year	744.90
2	Employee costs	76.26
3	Administration and General expenses	7.14
4	R&M expenses	14.21
5	Depreciation	18.01
6	Interest and finance charges	4.76
7	Interest on working capital	0.00
8	Interest on Security Deposit	13.12
9	Return on NFA /Equity	23.56
10	Provision for Bad Debt	8.98
11	Total Revenue Requirement	910.94
12	Less: Non-Tariff Income	20.30
13	Net Revenue Requirement	890.64

Commission's analysis

On the basis of the detailed analysis of the cost parameters of the ARR the net revenue requirement for FY 2020-21 along with the ARR approved in the MYT Order and Petitioner's Submission has been shown in the following table:

Table 127: Aggregate Revenue Requirement approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost inclusive of cost towards RPO	805.77	744.90	665.72
2	Operation & Maintenance Expenses	91.82	97.60	91.95
3	Depreciation	15.22	18.01	13.21
4	Interest on Loan	5.67	4.76	2.08
5	Return on Equity	25.03	23.56	22.43
6	Interest on Security Deposit	13.19	13.12	13.12
7	Interest on Working Capital	0.00	0.00	0.00
8	Income Tax	0.00	0.00	0.00
9	Provision for Bad & Doubtful Debt	0.00	8.98	0.00
10	Total Revenue Requirement	956.69	910.94	808.51
11	Less: Non-Tariff Income	24.97	20.30	19.33
	Net Revenue Requirement	931.73	890.64	789.18

The Commission approves net ARR of INR 789.18 Cr for FY 2020-21.

5.21. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has estimated revenue from sale of power at existing tariff as INR 897.87 Cr for FY 2020-21 based on the projected energy sales, connected load and number of consumers.

Commission's analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the tariff rates applicable. The revenue from demand charges and the energy charges have been projected for each consumer category/ sub-category and slab. The Commission has considered suitable assumptions wherever necessary. No energy sales and revenue has been considered for Electric Vehicle Charging Station category created in the last Tariff Order as no sales have been booked under the category in H1 FY 2019-20. The revenue from category/ sub-category/ slab-wise revenue as computed by the Commission for FY 2020-21 has been shown in the following table

Table 128: Revenue at existing tariff computed by Commission (In INR Cr)

S. No.	Category	Sales (MU)	Fixed Charges (INR Cr.)	Energy charges (INR Cr.)	Total Charges (INR. Cr.)
1	DOMESTIC SUPPLY (DS)	640.05	11.05	288.85	299.90
A	LT Domestic				
1	0-150 units	130.75	3.06	35.96	39.02
2	151-400 units	274.00	4.02	131.52	135.54
3	401 and above units	210.67	3.49	109.55	113.04
B	HT Domestic	24.64	0.48	11.83	12.30
2	COMMERCIAL / NON RESIDENTIAL (NRS)	474.63	48.69	257.24	305.93
A	LT Commercial				
1	0-150 units (Single Phase)	3.83	1.07	1.92	2.98
2	151-400 units (Single Phase)	13.44	0.66	7.12	7.79
3	401 and above units(Single Phase)	71.13	0.00	39.83	39.83
1	0-150 units (Three Phase)	1.44	0.00	0.72	0.72
2	151-400 units (Three Phase)	2.72	0.85	1.44	2.30
3	401 and above units (Three Phase)	123.75	16.18	69.30	85.48
B	HT Commercial	258.31	29.93	136.91	166.83
3	INDUSTRY	363.11	30.54	174.64	205.18
1	Large Industrial Power Supply (LS)	121.59	14.12	60.80	74.92
2	Medium Industrial Power Supply (MS)	208.59	15.62	98.04	113.65
3	Small Industrial Power Supply (SP)	32.93	0.80	15.81	16.61
4	AGRICULTURAL PUMPING SUPPLY(AR)	1.54	0.00	0.45	0.45
1	Agricultural Pumping Supply	1.54	0.00	0.45	0.45
5	PUBLIC LIGHTING (PL)	14.59	0.60	7.80	8.41
6	Bulk Supply (BS)	81.57	10.09	39.97	50.06
1	Bulk Supply	81.57	10.09	39.97	50.06
7	Temporary Supply	4.16	0.00	3.36	3.36
1	Temporary Supply	4.16	0.00	3.36	3.36
	TOTAL	1579.64	100.98	772.31	873.29

The Commission has determined revenue from sale of power at existing tariff as INR 873.29 Cr in the FY 2020-21.

5.22. Standalone Revenue Gap/ (Surplus)

Petitioner's submission

Based on the ARR and the revenue from the retail tariff, the standalone revenue surplus of INR 7.23 Cr is arrived for FY 2020-21.

Commission's analysis

The Commission based on the approved ARR and existing retail tariff has derived the following Revenue Gap/Surplus:

Table 129: Standalone Revenue Gap/ (Surplus) determined at existing tariff for FY 2019-20 (INR Cr)

S. No	Particulars	Petitioners submission	Now Approved
1	Annual Revenue Requirement	890.64	789.18
2	Revenue from sale of power	897.87	873.29
	Revenue Gap/(Surplus)	(7.23)	(84.12)

The standalone revenue surplus at existing retail tariff is determined as INR 84.12 Cr for FY 2020-21. The treatment of the estimated surplus has been dealt with while determining the retail tariff for FY 2020-21, as discussed in the subsequent Chapter.

6. Chapter 6: Tariff Principles and Design

6.1. Overall Approach

The Commission while designing retail tariffs for the FY 2020-21 has kept in view the principles of determination of tariff set out in the Electricity Act, 2003 (EA 2003), Tariff Policy, 2016 and the MYT Regulations, 2018.

The Commission, with this Tariff Order, has tried to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the rationalisation of tariffs. The EA, 2003 also directs to maintain a healthy balance between the interests of the Utilities and the reasonableness of the cost of power being supplied to consumers. The Commission has also taken into consideration the EWEDC's submissions as well as the public responses in these proceedings.

The provision of supply of electricity to all the people is an essential driver for development, and also influences social and economic change.

6.2. Applicable Regulations

Regulation 19 of MYT Regulations, 2018 states the following:

“19. Annual determination of tariff

19.1 The Commission shall determine the tariff of a Generating Company, Transmission Licensee and Distribution Licensee covered under a Multi Year Tariff framework for each Year during the Control Period, in accordance with timelines specified in Regulation 17, having regard to the following:

- a) The approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges of the Generating Company, Transmission Licensee and Distribution Licensee for such Financial Year, including modifications approved at the time of Mid-term Review, if any; and*
- b) Approved gains and losses, including the incentive available, to be passed through in tariff, following the truing up of previous Year.”*

Further, Regulation 67 of MYT Regulations, 2018 states the following:

“67. Determination of Tariff

67.1 The Commission may categorize Consumers on the basis of their load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required and any other factor as considered appropriate by the Commission.

67.2 The Commission shall endeavour to determine cost of supply for each category/ sub-category of Consumers.

67.3 The Commission shall endeavour to reduce gradually the cross-subsidy between Consumer categories with respect to the cost of supply in accordance with the provisions of the Act.

67.4 The tariff proposal by Licensee and the tariff determination by the Commission shall be based on the following principles:

- (a) The tariff for all categories shall preferably be two part, consisting of fixed and variable charges.*
- (b) The fixed charges in tariff shall progressively reflect actual fixed cost incurred by Distribution Licensee;*
- (c) The overall retail supply tariff for different Consumer categories shall progressively reflect the cost of*

supply for respective categories of Consumers;

(d) The tariff for residential Consumers shall be set considering the affordability of tariff for various class of Consumers;

(e) The tariff shall be set in such a manner that it may not present a tariff shock to any category of Consumers.”

6.3. Cumulative Revenue Gap/ (Surplus) at Existing Tariff

Petitioner’s Submission

The Petitioner has proposed a cumulative revenue surplus of INR 198.98 Cr till the FY 2020-21. The standalone and consolidated revenue gap/surplus as submitted by the Petitioner has been tabulated below:

Table 130: Standalone Revenue Gap/ (Surplus) submitted by Petitioner (In INR Cr)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21
Net Revenue Requirement	804.68	836.93	890.64
Revenue on existing tariff	805.56	887.21	897.87
FPPCA Charges	59.62	30.62	-
Regulatory Surcharge	43.49	10.03	-
Gap/(Surplus) for the year	(103.99)	(90.93)	(7.23)

Table 131: Cumulative Revenue Gap/ (Surplus) submitted by Petitioner (In INR Cr)

Particular	FY 2018-19	FY 2019-20	FY 2020-21
Opening (Surplus)/Gap	(165.84)	(72.52)	(174.72)
Add: (Surplus)/Gap during the year	(103.99)	(90.93)	(7.23)
Cumulative (Surplus)/Gap for the FY 2010-11 to FY 2013-14	208.17	0.00	0.00
Add: Amortization of Regulatory Asset	0.00	0.00	0.00
Closing (Surplus)/Gap	(61.66)	(163.45)	(181.95)
Average (Surplus)/Gap	(113.75)	(117.99)	(178.34)
Interest Rate	9.55%	9.55%	9.55%
Carrying/Holding Cost	(10.86)	(11.27)	(17.03)
Closing (Surplus)/Gap after adjusting Carrying Cost	(72.52)	(174.72)	(198.98)

Commission’s analysis

Regulation 8.4 of the MYT Regulation, 2014 stipulates the following:

“While approving such expenses/revenue to be adjusted in the future years as arising out of the Review and / or Truing up exercises, the Commission may allow the carrying costs as determined by the Commission of such expenses/revenue. Carrying costs shall be limited to the interest rate approved for working capital borrowings.”

The Commission, notices that the Petitioner has not taken any loan till date. As per the preamble of the Electricity Act, 2003, the Commission is required to balance the interest of all the stakeholders while determining the tariff. Keeping in mind all of the above, the Commission has considered the carrying cost @ 8.00% which is the opportunity cost for the Petitioner for the FY 2018-19.

Further, Regulation 11.5 (c) of the MYT Regulation, 2018 stipulates the following:

“11.5 Upon completion of the exercise, the Commission shall pass an order recording:

c) Carrying cost shall be allowed for a Generating Company, Transmission Licensee or Distribution Licensee on the amount of revenue gap for the period from the date on which such gap has become due, i.e., from the end of the Year for which true-up has been done, till the end of the Year in which it is addressed, on the basis of actual rate of loan taken by the Licensee to fund the deficit in revenue:

Provided that carrying cost on the amount of revenue gap shall be allowed subject to prudence check and submission of documentary evidence for having incurred the carrying cost in the years prior to the year in which the revenue gap is addressed:

Provided also that if no loan has been taken to fund revenue deficit, the Commission shall allow Carrying Cost on simple interest basis at one (1) Year State Bank of India (SBI) MCLR /any replacement thereof as notified by RBI for the time being in effect applicable for 1 Year period, as may be, applicable as on 1st April of the relevant Year plus 100 basis points;

Provided further that in case of revenue surplus, the Commission shall charge the Licensee a Carrying Cost from the date on which such surplus has become due, i.e., from the end of the Year for which trueup has been done, till the end of the Year in which it is addressed on simple interest basis at one(1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for 1 Year period, as may be, applicable as on 1st April of the relevant Year plus 100 basis points.”

Since the Petitioner has not borrowed any loan therefore the Commission allows Carrying Cost on simple interest basis at one (1) Year State Bank of India (SBI) MCLR for FY 2019-20 and FY 2020-21.

Accordingly, the Commission determines the standalone revenue gap/surplus for each year and likewise taking into account the previous year's gap/surplus, determines the cumulative revenue gap/ surplus at the end of FY 2020-21 as shown in the table as follows:

Table 132: Standalone Revenue Gap/ (Surplus) determined by Commission at existing tariff (In INR Cr)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21
Net Revenue Requirement	792.07	749.56	789.18
Revenue from Retail Sales at Existing Tariff	805.56	864.33	873.29
Regulatory Surcharge %	43.49	10.03	0.00
FPPCA Charges	59.62	30.62	0.00
Total Revenue	908.67	904.98	873.29
Standalone Gap /(Surplus) for the year	(116.60)	(155.42)	(84.12)

Table 133: Cumulative Revenue Gap/ (Surplus) determined by Commission at existing tariff (In INR Cr)

Carrying cost	FY 2018-19	FY 2019-20	FY 2020-21
Opening Gap/(Surplus)	(165.84)	(83.87)	(254.73)
Addition Gap/(Surplus) due to standalone year	(116.60)	(155.42)	(84.12)
Cumulative Gap/(Surplus) for the FY 2010-11 to FY 2013-14	208.17	0.00	0.00
Closing Gap/(Surplus)	(74.27)	(239.29)	(338.84)
Average Gap/(Surplus)	(120.05)	(161.58)	(296.78)
Rate of Interest	8.00%	9.55%	8.85%
Carrying cost	(9.60)	(15.43)	(26.27)
Closing Gap/ (Surplus)	(83.87)	(254.73)	(365.11)

The Commission determines a cumulative revenue surplus of INR 365.11 Cr till the FY 2020-21 at existing tariff.

6.4. Treatment of the cumulative Gap/ (Surplus) and Tariff Design

As derived from above, the resultant cumulative revenue surplus is INR 365.11 Cr despite consideration of cumulative revenue gap of INR 208.17 Cr till FY 2013-14 recognised in the Tariff Order of FY 2018-19. In view of this surplus the Commission has made some modifications in the existing tariff schedule. The approach adopted and the applicability of the same has been discussed in the following sections.

6.4.1. Designing of Tariff

Petitioner's Submission

1. The Petitioner has proposed no change in tariff for the FY 2020-21 from FY 2019-20.
2. The Petitioner has requested for certain modifications in respect of certain tariff categories as per following:
 - a) Applicability for consumer type such as 'Government recognised institutions/ schools etc.' may be changed to 'Government and Government aided institutions/ schools' under the Domestic category
 - b) Applicability for consumer type such as 'Hostels, Sports institutions/Gymnasium halls, Pvt. Schools/colleges, coaching institutes, research institutes, Coaching institutes and research institutes etc. may be covered under Commercial/NRS category other than those not covered under the Domestic supply category and those not run by the Chandigarh Administration

The category wise existing and proposed tariff submitted by the Petitioner is as follows:

Table 134: Retail tariff proposed by the Petitioner (In INR Cr)

S. No.	Category	Existing		Proposed	
		Fixed Cost (INR/kW/month)	Variable Cost (INR/kWh)	Fixed Cost (INR/kW/month)	Variable Cost (INR/kWh)
1	DOMESTIC SUPPLY (DS)				
A	LT Domestic				
1	0-150 units	10.00	2.75	10.00	2.75
2	151-400 units	10.00	4.80	10.00	4.80
3	401 and above units	10.00	5.20	10.00	5.20
B	HT Domestic	10.00	4.80	10.00	4.80
2	COMMERCIAL / NON RESIDENTIAL (NRS)				
A	LT Commercial				
1	0-150 units	INR. 20/kW/month for Single Phase	5.00	INR. 20/kW/month for Single Phase	5.00
2	151-400 units	INR. 100/kW/month for Three Phase	5.30	INR. 100/kW/month for Three Phase	5.30
3	401 and above units		5.60		5.60
B	HT Commercial	100.00	5.30	100.00	5.30
3	INDUSTRY				
1	Large Industrial Power Supply (LS)	200.00	5.00	200.00	5.00
2	Medium Industrial Power Supply (MS)	200.00	4.70	200.00	4.70
3	Small Industrial Power Supply (SP)	30.00	4.80	30.00	4.80

S. No.	Category	Existing		Proposed	
		Fixed Cost (INR/kW/month)	Variable Cost (INR/kWh)	Fixed Cost (INR/kW/month)	Variable Cost (INR/kWh)
4	AGRICULTURAL PUMPING SUPPLY(AR)				
1	Agricultural Pumping Supply	-	2.90	-	2.90
5	PUBLIC LIGHTING (PL)				
1	Public Lighting system managed by Municipal Corporation, Panchayat and Street Lights maintained / outsourced to an external Agency	100	5.35	100	5.35
2	Advertisement / Neon sign Boards- Advertisement boards, billboards(apart from advertisement boards installed on commercial establishments and charged under commercial tariff)	100	7.10	100	7.10
6	BULK SUPPLY (BS)				
1	Bulk Supply	200.00	4.90	200.00	4.90
7	TEMPORARY SUPPLY				
1	Temporary Supply	Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.		Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.	
8	ELECTRIC VEHICLE CHARGING STATIONS				
1	Electric Vehicle Charging Stations	100.00	4.00	100.00	4.00

Commission's analysis

As discussed above, the Commission has determined the retail tariff for the FY 2020-21 in accordance with the principles stated in the Electricity Act, 2003 Tariff Policy, 2016, and the MYT Regulations, 2018. The Tariff design in general is guided by the following principles:

1. Cost reflective: The tariffs determined should efficiently reflect the cost of supply for each consumer category.

2. Progressive tariffs: Ensuring progressivity among tariffs by having telescopic tariff slabs which encourages efficient consumption and at the same time promotes intra-category cross-subsidy by way of charging higher tariff for higher consumption to subsidise the lower consumption consumers
3. Revenue neutrality: There should be no impact on the utility's yearly revenue due to rationalization of tariffs i.e. the overall status quo should be maintained.
4. Affordability: Assessing affordability of electricity for Domestic & Commercial consumers for defining slab ranges and setting tariffs
5. Revenue stability: Utilities should ensure adequate fixed cost recovery from fixed/demand charges
6. Avoiding tariff shocks: Tariff shocks should be prevented and consumers should be kept informed about the future trends in tariffs
7. Demand management and grid stability: Demand management and grid stability should be ensured with demand-based tariffs
8. Simplified tariff structure: Tariff structure should be simplified to make it easily administrable by the utility and easy to understand for the consumer.
9. Smart tariff design: Tariff rate design should take into consideration trends in electric power such as small-scale renewable generation by consumers, energy efficiency, electric vehicle charging, etc.

While all the above parameters contribute significantly in developing a sustainable tariff framework, there are certain parameters namely Cost of Supply and Tariff Affordability which are of importance and constitute the building blocks in achieving the overall objective. The context and the approach for these parameters have been discussed as follows:

1. Cost of Supply

a) Context

Due to electricity being a crucial utility item for all consumers, over the period of time, various socio-economic issues have been factored in to determine the end user's tariffs. This has unfortunately led to severe imbalance between the tariffs levied vis-a-vis the cost of supply of the electricity, causing distress to the Discom. For example, in order to ensure that tariffs are kept in check for residential consumers, while still allowing cost recovery for Discoms, cross subsidy is built in between categories. The tariffs so determined, are skewed, with tariff for industrial and commercial consumers being higher and for other categories being lower than their respective costs of supply. The implications of this imbalance in tariffs is twofold – uncompetitive industries owing to higher input costs and inability of Discoms to recover sufficient tariffs from domestic consumers, resulting in financial distress. The issue is more pronounced for rural supply where tariffs are highly subsidized, actual cost of supply is higher and revenue recovery is poor.

It is thus essential that tariffs reflect the true cost to service a category of consumer. As a crucial first step towards cost-reflective tariffs, it is important for distribution utilities to determine the costs of supply (which cascade from generation to transmission and finally to distribution and retail supply of power) that should be prudently recovered from each consumer category. These costs should correspond to the actual costs being imposed by each consumer category on the Discom. By determining consumer category wise costs of supply, the Discom would be in a better position to allocate costs where relevant and determine how tariffs can be levied fairly on each category.

The overall approach that can be followed for accurately determining the Cost of Supply has been discussed as follows:

b) Approach:

Presently, the most commonly used approach for determining the cost of supply of electricity for tariff determination is the Average Cost of Supply (ACoS) method. The ACoS is computed by dividing the Annual Revenue Requirement (ARR) determined by the Commission for recovery through tariffs by the total energy sales for the year. However, this methodology doesn't indicate the costs incurred by consumers at different voltage levels using different assets of the network. Therefore, it doesn't help in determining accurate tariffs for particular consumers, eventually resulting in insufficient cost coverage.

As a next logical step, the Voltage wise cost of supply (VCoS) method provides a better reflection of cost to supply to consumers at different voltage levels. A simplified version of the same was suggested by Hon'ble ATE in 2010, to determine VCoS in the absence of all necessary data. In this method, the power purchase costs and other costs (such as network costs, wheeling costs etc.) are allocated to various consumer categories based on energy input or energy sales (as considered appropriate by the State Commission). This approach factors in the voltage level differentiation based on losses, however, it does not factor in asset utilization at different voltage levels.

A more refined version of determination of VCoS uses three parameters for allocating various costs to voltage levels – energy input at each voltage level, energy sales and asset allocation to voltage levels. The losses segregated voltage wise (as percentage of input energy) are to be allocated to different voltage levels based on energy input to each voltage level (as explained in subsequent sections). Subsequently, the cost elements such as power procurement costs, employee expenses, administrative and general expenses and income tax can be allocated to each voltage levels based on total sales at each voltage level. The cost elements, which are dependent on assets such as depreciation, interest costs, return allowed to utility etc. are allocated in ratio of assets allocated to each voltage level. The sum of all the cost components at each voltage level is the cost to supply the particular voltage (EHT/HT/LT).

The Commission is of the opinion that while VCoS differentiates cost allocation based on voltage levels, it does not factor in consumer category level differentiation. For instance, at the same LT level, cost of supplying electricity to a Commercial consumer may be different from that of a Residential consumer. Thus, it believes that the most progressive way forward for EWEDC is to accurately determine the cost of supply is to attempt to determine Cost of Supply at various category level. The Commission notes that States like Andhra Pradesh and Telangana have determined Category wise Cost of Supply albeit with several assumptions and EWEDC must also attempt to determine the same.

On studying the existing methodologies followed internationally, among developing nations with energy access situations like India's, the Commission is of the opinion that the Category wise Cost of Supply methodology is an appropriate starting point. The embedded cost method identifies and appropriately assigns the historical or accounting costs that make up a Discom's revenue requirement to all categories and sub-categories of consumers.

This method involves three steps:

- Cost Functionalization
- Cost Classification
- Cost Allocation

Cost functionalization separates cost data into the functional activities performed in the operation of a utility system - power generation/supply, transmission, distribution and retail supply. Classification determines the portion of the cost that is related to specific cost-causal factors, such as those that are demand-related, energy-related, or customer-related. Finally, the cost allocation step assigns the costs to specific customer categories based on the customer's contribution to the specific classifier selected.

The Commission as part of this Order has determined the tariff according to the Average Cost of Supply (ACoS) due to lack of requisite data. The Commission strongly believes that determination of Category wise Cost of Supply is essential to ensure cost reflectivity in tariffs fixed for different categories. However, the Commission feels that to carry out this exercise a lot of field level information would be required such as Category wise co-incident and non- co-incident demand, Voltage wise value of assets (Voltage wise asset ratio), Voltage wise losses, Category wise break-up of costs related to Metering, Billing and Collection etc. which currently the Petitioner doesn't maintain. Therefore, in absence of the same the Commission is unable to determine the Category wise CoS in this Order but directs the Petitioner to start maintaining this data and submit the same in the tariff proceedings of next year.

2. Tariff Affordability

a) Context

The Commission understands that the consumer base of EWEDC is varied and covers a wide spectrum of socio-economic backgrounds, specially the domestic category consumers. It is aware that most low income households spend a substantial share of their income on utility services such as electricity, heating and water. However, any envisaged tariff reforms are often objected to avoid further burdening of these consumers. But to improve the quality of service of electricity, the Discom has to undergo significant capital expenditure which eventually deteriorates the affordability of tariffs. Thus, to tackle this problem and in the spirit of economic wellbeing of all consumer classes, the concept of cross-subsidies has been built into the current tariff structure.

However, the Commission believes that a more scientific and logical approach can be adopted to identify the right categories of consumers and the right cross-subsidy/subsidy requirement that will benefit the end consumers at the same time. Hence, the Commission believes that there is a strong need to develop a scientific methodology to assess the social impact of electricity tariffs.

The overall approach that can be followed for determining the tariff affordability has been discussed as follows.

b) Approach

On reviewing methodologies adopted globally for social impact assessment of electricity tariffs by studying international research reports and studying model practices internationally, the Commission found that Tariff Affordability Ratio (TAR) is a reliable parameter to measure affordability of electricity in households.

TAR is defined by obtaining the burden incurred by a household for electricity as compared to the overall household expenditure. The rationale behind this concept is that the electricity is basic utility and is unavoidable in today's scenario, however, this does not ensure that the expenditure level is in line with the overall household expenditure. Hence, this concept helps to understand the affordability level of electricity on households with different economic levels.

The electricity expenditure can be determined initially for domestic consumers by computing the average consumption levels across each slab and the household expenditure can be estimated from national surveys of household expenditure across economic levels conducted by organizations like NSSO. Thereafter the distribution of consumers of the Discom across tariff slabs can be mapped across the established economic levels to develop the final affordability ratio matrix for the Discom's domestic consumer base.

Following the identification of the current ratio of Tariff Affordability, the Commission in consultation with the stakeholders will develop benchmarks for acceptable affordability levels by studying trends across countries with a demography and energy scenario similar to that of India and propose appropriate tariffs. The final output shall help understand the Commission to modify tariffs in cases where there is more room for tariff increase or a need to correct tariffs. The exercise would also help the Commission in setting tariff slabs as per the paying capacity of the consumers which would be beneficial especially for Domestic category consumers. Additionally, this shall also help the Government to formulate better schemes to effectively channelize its intended benefits.

The Commission in these tariff proceedings is not carrying out this exercise due to unavailability of accurate data. The Petitioner is directed to ensure the sanctity of the data maintained pertaining to various categories.

Keeping in view the above principles and based on the category wise information submitted by the Petitioner, the Commission has determined the Retail Tariff applicable for FY 20120-21 as per the following:

1. No increase has been made in the retail tariff for existing categories due to standalone revenue surplus in FY 2020-21.
2. In order to promote the use of Electric Vehicles (E.V.), the Commission has introduced a single-part tariff for Electric Vehicle Charging Stations where the Demand/Fixed Charges have been removed and the Energy Charges have been rationalised on the basis of APPC.
3. On account of revenue surplus in FY 2020-21, the Petitioner is hereby directed to stop recovery of FPPCA from all consumer categories starting from 1st April 2020 onwards till further orders of the Commission. The Petitioner is, however, directed to submit the quarterly FPPCA calculation to the Commission for review.

6.4.2. Tariff Adjustment and Schedule:

The existing retail tariff and tariff now approved by the Commission for each consumer category has been shown in the table below:

Table 135: Existing and approved tariff

S. No	Consumer Category	Existing Tariff		Approved Tariff	
		Fixed Charge INR/kW/month	Energy Charge INR/kWh	Fixed Charge INR/kW/month	Energy Charge INR/kWh
1.	DOMESTIC SUPPLY (DS)				
I.	LT Domestic				
a.	0-150 kWh per month	10.00	2.75	10.00	2.75
b.	151-400 kWh per month		4.80		4.80
c.	Above 400 kWh per month		5.20		5.20
II.	HT Domestic	10.00	4.80	10.00	4.80
2.	COMMERCIAL/ NON RESIDENTIAL (NRS)				
I.	LT Commercial				
a.	0-150 kWh per month	INR.	5.00	INR.	5.00
b.	151-400 kWh per month	20/kW/Month for Single Phase	5.30	20/kW/Month for Single Phase	5.30
c.	Above 400 kWh per month	INR. 100/kW/Month for Three Phase	5.60	INR. 100/kW/Month for Three Phase	5.60
II.	HT Commercial	100.00	5.30	100.00	5.30
3.	INDUSTRY				

S. No	Consumer Category	Existing Tariff		Approved Tariff	
		Fixed Charge INR/kW/month	Energy Charge	Fixed Charge INR/kW/month	Energy Charge
			INR/kWh		INR/kWh
I	Large Industrial Power Supply (LS)	200.00	5.00	200.00	5.00
II	Medium Industrial Power Supply (MS)	200.00	4.70	200.00	4.70
III	Small Industrial Power Supply (SP)	30.00	4.80	30.00	4.80
4.	AGRICULTURAL PUMPING SUPPLY (AR)	-	2.90	-	2.90
5.	PUBLIC LIGHTING (PL)				
I	Public Lighting system managed by Municipal Corporation, Panchayat and Street Lights maintained / outsourced to an external agency	100.00	5.35	100.00	5.35
II	Advertisement/ Neon-sign Boards Advertisement boards, billboards (apart from advertisement boards installed on commercial establishments and charged under commercial tariff)	100.00	7.10	100.00	7.10
6.	BULK SUPPLY (BS)	200.00	4.90	200.00	4.90
7.	TEMPORARY SUPPLY	Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.		Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.	
8.	ELECTRIC VEHICLE CHARGING STATION	100.00	4.00	-	3.80

6.4.3. Revenue from Approved Retail Tariff for FY 2020-21

Based on the retail tariff approved above, the Revenue from approved tariff is shown in the following table. The Commission has not estimated any revenue for Electric Vehicle Charging Station category and Advertisement/ Hoardings category due to unavailability of requisite data. The Commission as of now approves the k factor for the category as shown in the table, however, directs the Petitioner to submit the requisite data for energy sales, no. of consumers and connected load in case any consumers are identified under this category.

Table 136: Revenue from approved retail tariff determined by Commission (In INR Cr)

S. No	Category	Sales (MUs)	Fixed Charges (INR Cr)	Energy Charges (INR Cr)	Total Charges (INR Cr)	ABR (INR/unit)	K Factor
1	DOMESTIC SUPPLY (DS)	640.05	11.05	288.85	299.90	4.69	0.85
A	LT Domestic						
1	0-150 units	130.75	3.06	35.96	39.02	2.98	0.54
2	151-400 units	274.00	4.02	131.52	135.54	4.95	0.89
3	401 and above units	210.67	3.49	109.55	113.04	5.37	0.97
B	HT Domestic	24.64	0.48	11.83	12.30	4.99	0.90
2	COMMERCIAL / NON RESIDENTIAL (NRS)	474.63	48.69	257.24	305.93	6.45	7.15
A	LT Commercial						
1	0-150 units (Single Phase)	3.83	1.07	1.92	2.98	7.78	1.41
2	151-400 units (Single Phase)	13.44	0.66	7.12	7.79	5.79	1.05
3	401 and above units (Single)	71.13	0.00	39.83	39.83	5.60	1.01
1	0-150 units (Three Phase)	1.44	0.00	0.72	0.72	5.00	0.90
2	151-400 units (Three Phase)	2.72	0.85	1.44	2.30	8.44	1.53
3	401 and above units (Three Phase)	123.75	16.18	69.30	85.48	6.91	1.25
B	HT Commercial	258.31	29.93	136.91	166.83	6.46	1.17
3	INDUSTRY	363.11	30.54	174.64	205.18	5.65	1.02
1	Large Industrial Power Supply	121.59	14.12	60.80	74.92	6.16	1.11
2	Medium Industrial Power Supply	208.59	15.62	98.04	113.65	5.45	0.99
3	Small Industrial Power Supply	32.93	0.80	15.81	16.61	5.04	0.91
4	AGRICULTURAL PUMPING SUPPLY(AR)	1.54	0.00	0.45	0.45	2.90	-
1	Agricultural Pumping Supply	1.54	0.00	0.45	0.45	2.90	-
5	PUBLIC LIGHTING (PL)	14.59	0.60	7.80	8.41	5.76	1.04
1	Public Lighting system managed by Municipal Corporation, Panchayat and Street Lights maintained / outsourced to an external Agency	14.59	0.60	7.80	8.41	5.76	1.04
2	Advertisement / Neon sign Boards- Advertisement boards, billboards(apart from advertisement boards installed on commercial establishments and charged under commercial tariff)	-	-	-	-	-	1.00
6	Bulk Supply (BS)	81.57	10.09	39.97	50.06	6.14	1.11
1	Bulk Supply	81.57	10.09	39.97	50.06	6.14	1.11
7	Temporary Supply	4.16	0.00	3.36	3.36	8.09	1.50*
1	Temporary Supply	4.16	0.00	3.36	3.36	8.09	1.50*
8	Electric Vehicle Charging Station	-	-	-	-	-	0.69
	TOTAL	1579.64	100.98	772.31	873.29	5.53	1.00

*1.50 times the k factor of the relevant category in which the connection falls

The Commission approves revenue from approved Retail Tariff of INR 873.29 Cr for the FY 2020-21.

6.4.4. Cumulative Revenue Gap/ (Surplus) at Approved Tariff

Accordingly, the resultant cumulative Revenue Gap/Surplus has been shown in the table below:

Table 137: Cumulative Revenue Gap/ (Surplus) approved by Commission (In INR Cr)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21
Net Revenue Requirement (a)	792.07	749.56	789.18
Revenue from Retail Sales at Approved Tariff (b)	805.56	864.33	873.29
Regulatory Surcharge (c)	43.49	10.03	0.00
FPPCA Charges (d)	59.62	30.62	0.00
Total Revenue (e= b+c+d)	908.67	904.98	873.29
Standalone Gap / (Surplus) for the year (f=a-e)	(116.60)	(155.42)	(84.12)
Opening Gap / (Surplus) (g)	(165.84)	(83.87)	(254.73)
Add: Gap/ (Surplus) (f)	(116.60)	(155.42)	(84.12)
Cumulative Gap/ (Surplus) for the FY 2010-11 to FY 2013-14 (h)	208.17	-	-
Closing Gap / (Surplus) (i=f+g+h)	(74.27)	(239.29)	(338.84)
Average Gap/ (Surplus) (j=(g+i)/2)	(120.05)	(161.58)	(296.78)
Interest Rate on carrying cost (% ,k)	8.00%	9.55%	8.85%
Carrying Cost (l=j*k)	(9.60)	(15.43)	(26.27)
Final Closing Gap/ (Surplus) (i+l)	(83.87)	(254.73)	(365.11)

The Commission approves a cumulative revenue surplus of INR 365.11 Cr till FY 2020-21.

6.4.5. Highlights of the Tariff Structure

The highlights of the tariff structure approved by the Commission for FY 2020-21 are as follows:

- 1) On account of projected standalone surplus at existing tariff during 2020-21, no tariff hike has been made in the retail tariff for existing categories.
- 2) The Commission has approved the Average Billing Rate (ABR) of INR 5.53/kWh against the approved Average Cost of Supply (ACoS) of INR 5.00/kWh.
- 3) On account of revenue surplus in FY 2020-21, the Petitioner is hereby directed to stop recovery of FPPCA from all consumer categories starting from 1st April 2020 onwards till further orders of the Commission. The Petitioner is, however, directed to submit the quarterly FPPCA calculation to the Commission for review.
- 4) In order to promote the use of Electric Vehicles (E.V.), the Commission has introduced a single-part tariff for Electric Vehicle Charging Stations where the Demand/Fixed Charges have been removed and the Energy Charges have been rationalised on the basis of APPC.

7. Chapter 7. Open Access Charges for the FY 2020-21

7.1. Wheeling Charges

7.1.1. Allocation Matrix - Allocation of ARR into Wheeling and Retail Supply of Electricity

Petitioner's submission:

The Petitioner has not submitted any computation of Open Access Charges.

Commission's analysis:

It is seen from the Petitioner's submission that the Transmission and Distribution businesses have not been segregated and the Petitioner continues to function as an integrated utility. The Commission has a firm view that there has to be a proper bifurcation of all the expenses pertaining to the Petitioner between the functions of the wheeling business (wire business) and the retail supply business. The Regulation 48 of the MYT Regulations, 2018 stipulates the following:

"48. Separation of Accounts of Distribution Licensee

48.1 Every Distribution Licensee shall segregate accounts for Distribution Wires Business and Retail Supply Business and shall prepare an Allocation Statement. The wheeling charges pertaining to Distribution Wires Business of the Distribution Licensee shall be determined by the Commission on the basis of these segregated accounts:

Provided that in case complete accounting segregation has not been done, the following Allocation Statement shall be applicable:

Table 1: Allocation Statement for segregation of Distribution Wires Business and Retail Supply Business

Particulars	Wires Business (%)	Retail Supply Business (%)
<i>Power Purchase Expenses</i>	0%	100%
<i>Inter-State Transmission Charges</i>	0%	100%
<i>Intra-State Transmission Charges</i>	0%	100%
<i>Employee Expenses</i>	40%	60%
<i>Administration & General Expenses</i>	50%	50%
<i>Repair & Maintenance Expenses</i>	90%	10%
<i>Capital Cost</i>	90%	10%
<i>Depreciation</i>	90%	10%
<i>Interest on Long-term Loan Capital</i>	90%	10%
<i>Interest on working capital and on consumer security deposits</i>	10%	90%
<i>Bad Debts Written off</i>	0%	100%
<i>Income Tax</i>	90%	10%
<i>Non-Tariff Income</i>	10%	90%
<i>Income from Other Business</i>	50%	50%

Therefore, in absence of segregated accounts, the Commission has considered the allocation matrix as provided in the MYT Regulations, 2018

The allocation between wheeling and retail supply business for the FY 2020-21 as per the ARR approved in this Order is provided in the following table:

Table 138: Allocation matrix approved by Commission

Particulars	Allocation (%)		FY 2020-21		
	Wires Business (%)	Retail Supply Business (%)	Wires Business (INR Cr.)	Retail Supply Business (INR Cr.)	Total ARR (INR Cr.)
Power purchase expenses inclusive of Inter-State Transmission expenses	0%	100%	0.00	665.72	665.72
Employee costs	40%	60%	30.46	45.69	76.16
Administration and General Expenses	50%	50%	2.49	2.49	4.99
Repair and Maintenance Expenses	90%	10%	9.73	1.08	10.81
Depreciation	90%	10%	11.89	1.32	13.21
Interest on Loan	90%	10%	1.87	0.21	2.08
Interest on Working Capital	10%	90%	0.00	0.00	0.00
Interest on consumer security deposit	10%	90%	1.31	11.80	13.12
Return on Equity	90%	10%	20.12	2.31	22.43
Bad & Doubtful Debt written off	0%	100%	0.00	0.00	0.00
Income Tax	90%	10%	0.00	0.00	0.00
Total Revenue Requirement			77.88	730.63	808.51
Less: Non -Tariff Income	10%	90%	1.93	17.40	19.33
Net Revenue Requirement			75.94	713.23	789.18

To determine the wheeling charges, the Wires Business cost has been allocated on the basis of voltage levels. The wheeling charges are levied for distribution network utilized by the Open Access consumers and primarily comprises of cost components as provided in the table above.

The methodology adopted for allocating the derived costs of Wires Business at respective voltage levels has been elaborated as follows:

- O&M Expenses consisting of Employee, A&G and R&M expenses are allocated to each voltage level on the basis of number of consumers.
- All expenses other than the O&M expenses are allocated to each voltage level on the basis of voltage wise asset allocation. The Petitioner in this regard was directed to submit the voltage wise asset allocation but has failed to submit the desired information and in the absence of such information, the Commission has assumed the voltage wise asset allocation shown in the Table 135.
- The resultant cost at HT/EHT voltage level is divided among LT and HT/EHT voltage levels on the basis of input energy at respective voltage levels as the HT/EHT network is used by consumers at all voltage levels. The cost at LT voltage level is allocated completely to LT voltage level.

The energy input has been determined assuming the loss level of HT/EHT voltage as 3.95%, same as that approved in the MYT Order. The Petitioner in this regard has failed to submit the Energy Audit Report and voltage wise losses. The resultant losses have been loaded to the LT voltage level in order to maintain the overall Intra-State T&D loss at 9.30% as approved in the ARR of the FY 2020-21 above.

In case the Petitioner submits the voltage wise asset allocation in due course, the Commission shall review the same based on the actual information provided. The voltage wise asset allocation assumed and the number of consumers in each category has been shown as follows:

Table 139: Parameters assumed for voltage wise allocation of costs for Wires Business

Category	No. of Consumers	Sales (MU)	Asset Allocation (%)	Cumulative Voltage wise Losses (%)	Energy Input (MU)
LT level	230,290	966.51	60.00%	12.40%	1,103.26
HT/EHT level	1,521	613.13	40.00%	3.95%	638.35
Total	231,811	1,579.64	100%	9.30%	1,741.61

Accordingly, the Commission approves the Wheeling Charges as follows:

Table 140: Allocation of costs based on voltage level

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)	Energy Sales (MU)
LT level	42.40	19.96	62.36	966.51
HT/EHT level	0.28	13.30	13.58	613.13
	42.68	33.26	75.94	1,579.64

Table 141: Wheeling Charges approved by Commission

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)	Energy Sales (MU)	Wheeling Charges (INR/kWh)
LT level	42.58	28.38	70.96	966.51	0.73
HT/EHT level	0.10	4.88	4.98	613.13	0.08
	42.68	33.26	75.94	1,579.64	

The Commission approves wheeling charge of INR 0.73/ kWh at LT voltage level, and INR 0.08/kWh at HT/EHT voltage level

7.2. Additional Surcharge

Petitioner's submission:

No submission has been made by the Petitioner in this regard.

Commission's analysis:

The Commission has notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017. Regulation 4.5 (1) of the said Regulations states the following:

"An Open Access Consumer, receiving supply of electricity from a person other than the Distribution Licensee of his area of supply, shall pay to the Distribution Licensee an additional surcharge in addition to wheeling charges and cross-subsidy surcharge, to meet the fixed cost of such Distribution Licensee arising out of his obligation to supply as provided under sub-section (4) of Section 42 of the Act:

Provided that such additional surcharge shall not be levied in case Open Access is provided to a person who has established a captive generation plant for carrying the electricity to the destination of his own use."

Regulation 4.5 (2) of the said Regulations stipulates:

"This additional surcharge shall become applicable only if the obligation of the Licensee in terms of power purchase commitments has been and continues to be stranded or there is an unavoidable obligation and incidence to bear fixed costs by the Licensee consequent to such a contract. However, the fixed costs related to network assets would be recovered through wheeling charges."

Further, Regulation 5.2 (1) (b) states the following:

“The quantum of drawal of electricity by a partial Open Access Consumer from the Distribution Licensee during any Time Block of a Day should not exceed the “Admissible Drawl of Electricity by the Open Access Consumer” which is the difference of Contract Demand and maximum quantum of Open Access for which approval has been granted by the Nodal Agency.

[Illustration: If an Open Access Consumer with a Contract Demand of 10 MW has been given an approval for a maximum Open Access quantum of 6MW for a period of 3 Months, the Admissible Drawl of Electricity from the Distribution Licensee during any Time Block shall be 4 MW for any Day during a period of 3 Months.]”

Therefore, in accordance with the above Regulations, the Commission has determined the Additional Surcharge as follows:

Table 142: Additional Surcharge approved by Commission

Particulars	FY 2020-21
Total Power Purchase cost approved (INR Cr)	665.72
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges) (INR Cr)	199.98
Energy Sales (MU)	1579.64
Additional Surcharge (INR/kWh)	1.27

As per the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Open Access in Transmission and Distribution) Regulations, 2009, a consumer availing Open Access was required to pay fixed charges on contracted load even when the load was drawn partially from the Distribution Licensee. In addition, the consumer was also required to pay wheeling charges, additional surcharge and the cross-subsidy surcharge. **As per the new “Open Access Regulations, 2017”, a consumer is now required to pay fixed charges on reduced demand after adjusting for demand drawn through Open Access in accordance with the regulation.**

The Commission approves an Additional Surcharge of INR 1.27/kwh for the FY 2020-21.

The Commission directs the Petitioner to submit quarterly details of power stranded on account of consumers opting for open access along with the Additional Surcharge recovered from these consumers. The Commission will analyse the information and revise the applicable Additional Surcharge, if required.

7.3. Cross-Subsidy Surcharge

Petitioner’s submission:

The Petitioner has not submitted any computation of Cross subsidy surcharge.

Commission’s analysis:

The Commission in this Order has calculated the cross-subsidy surcharge with respect to voltage wise cost of supply. The following approach has been adopted to determine the voltage wise cost of supply:

- Voltage Wise losses at each voltage level are assumed for LT & HT/EHT voltage categories. The remaining losses are adjusted in the LT voltage level in order to maintain the Intra-State T&D losses at 9.30%, as approved in the ARR for FY 2020-21. Voltage wise losses assumed at each level have been shown in the table as follows:

Table 143: Voltage Wise Losses considered by the Commission

Category	Voltage Level Loss (%)	Cumulative Losses upto that voltage level (%)
LT level	8.79%	12.40%
HT/ EHT level	3.95%	3.95%
Total	9.30%	9.30%

Using these losses, the energy input at each voltage level is determined based on the energy sales. The table below shows the energy input at each voltage level

Table 144: Energy Input at each voltage level (MU)

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
LT level	966.51	12.40%	1,103.26
HT/ EHT level	613.13	3.95%	638.35
Total	1,579.64	9.30%	1,741.61

Now the overall ARR approved for FY 2020-21 is divided into variable and fixed ARR with variable ARR comprising of variable power purchase cost and fixed ARR comprising of all the other costs.

The fixed component comprising of fixed cost of power purchase, O&M etc. is further allocated to each voltage category as per the following principles:

- The fixed cost of power purchase is assigned to each voltage level on the basis of energy input at respective voltage levels.
- The O&M expenses are allocated to each voltage level on the basis of the number of consumers. The resultant cost allocated to HT/EHT level is then further allocated to LT level on the basis of input energy, as the HT/EHT network is utilized by both HT/EHT and LT network consumers.
- The remaining fixed costs are allocated on the basis of voltage wise asset allocation assumed earlier and further allocated to respective voltage levels on the basis of input energy.

Table 145: Parameters used for allocation of fixed costs

Category	Energy Input (MU)	Voltage wise Asset Allocation (%)	Number of Consumers
LT level	1,103.26	60.00%	230,290
HT/EHT level	638.35	40.00%	1,521
Total	1,741.61	100%	231,811

The Variable component of the Power purchase cost is allocated on the basis of energy input. The Voltage wise cost of supply (VCoS) is then determined on the basis of energy sales of respective categories.

Accordingly, the VCoS is determined as shown in the following table:

Table 146: Voltage Wise Cost of Supply (VCoS)

Category	Allocated Fixed Cost (INR. Cr.)	Allocated Variable Cost (INR. Cr.)	Total Cost (INR. Cr.)	Energy Sales (MU)	VCoS (INR./kwh)
LT level	285.37	254.96	540.33	966.51	5.59
HT/EHT level	101.32	147.52	248.85	613.13	4.06
Total	386.69	402.49	789.18	1,579.64	

The VCoS as determined above is used to determine the Cross-Subsidy Surcharge

Table 147: Cross-Subsidy Surcharge approved by Commission

Category	VCoS (INR/kWh)	ABR (INR./kWh)	Cross- Subsidy (INR./kWh)
LT	5.59	5.23	-
HT & EHT	4.06	6.00	1.94

Therefore, the Commission approves Cross-Subsidy Surcharge as nil at LT Voltage level and INR. 1.94/kWh at HT/EHT Voltage level, in FY 2020-21.

8. Chapter 8. Fuel and Power Purchase Adjustment Mechanism

The State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry receive power from the Central Generating Stations, State Generating Stations, Independent Power Producer's (IPP's) through the long-term power purchase agreements and short term purchases – through exchange, bilateral purchases etc. The distribution licensees procure power from various available sources and supply power to the consumers at retail tariffs determined by the Commission. Power purchase cost accounts for more than 80% of the Annual Revenue Requirements (ARR) of the distribution licensees and includes the cost paid for procurement of power, transmission charges, Deviation Settlement Mechanism (DSM) charges, State Load Dispatch Center (SLDC)/ Regional Load Dispatch Center (RLDC) charges and is netted off with revenue earned from the sale of surplus power.

The cost of the long term power being procured by the distribution licensees is fixed by the Central Electricity Regulatory Commission (CERC) for plants supplying power to more than one State/UT (for example NTPC, NHPC etc.) and by the JERC for plants located within its territory/state (for IPP's, licensees own generation and other State generating sources). Charges for the Over-drawl/Under-drawl from the Grid and the Inter State Transmission charges, RLDC charges are fixed by the CERC, while Intra-State Transmission charges and SLDC charges are fixed by the JERC. Short term purchase/ sale of power is done through traders, bilateral contracts, banking and power exchanges at market determined prices.

While determining retail tariff for any year, the Commission first determines the ARR based on the projection of various cost elements including power purchase cost. Power purchase cost of the distribution licensee is derived from the power purchase quantum and per unit power purchase cost. Quantum of power purchase depends upon the energy sales to the retail consumer and distribution losses, out of which energy sales is not under the control of the distribution licensee. There is also variation in actual per unit power purchase cost vis-a-vis projected per unit power purchase cost due to change in fuel cost, change in power purchase mix i.e. thermal /hydel/renewable mix, long term/short term power mix etc. This makes power purchase cost uncontrollable in nature.

The Commission undertakes the trueing up exercise for the variation in the cost and revenue once the audited accounts of the distribution licensee are available. For example, True-up of the FY 2017-18 will be undertaken by the Commission once the audited accounts of the FY 2017-18 are available. If the audited accounts for the FY 2017-18 are prepared timely, the impact of True-up of various cost and revenue items is allowed in the tariff of the FY 2019-20, along with the carrying cost for 2 years. As the power purchase cost is the major cost element of the ARR of the distribution licensee, adjustment due to change in power purchase cost at regular intervals is important in order to avoid the burden of carrying cost on the additional power purchase cost incurred during the year.

8.1. Legal Provisions

The relevant provisions of the Electricity Act, Regulations, Policy document and the ATE judgments, which enable the Commission to devise, adopt and implement a power purchase/ fuel price adjustment mechanism are as follows:-

(a) Indian Electricity Act, 2003- Section 62 (4)

“No tariff or part of any tariff may ordinarily be amended more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified.”

(b) Tariff Policy, 2016, clause 5.11 – sub clause (h-4)

“Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of inflation, taxes and cess, variations in power purchase unit costs including on account of adverse natural events.”

(c) Tariff Policy, 2016, clause 8.2– sub clause 8.2.1-(1)

“8.2 Framework for revenue requirements and costs

Actual level of retail sales should be grossed up by normative level of T&D losses as indicated in MYT trajectory for allowing power purchase cost subject to justifiable power purchase mix variation (for example, more energy may be purchased from thermal generation in the event of poor rainfall) and fuel surcharge adjustment as per regulations of the SERC.”

(d) Hon’ble ATE judgement in OP1 of 2011 dated 11 November, 2011

The Hon’ble ATE directed the SERCs to develop a power purchase cost adjustment mechanism within six months of the date of the Order. The relevant excerpt of the Order is shown as follows:

“(vi) Fuel and Power Purchase cost is a major expense of the distribution Company which is uncontrollable. Every State Commission must have in place a mechanism for Fuel and Power Purchase cost in terms of Section 62 (4) of the Act. The Fuel and Power Purchase cost adjustment should preferably be on monthly basis on the lines of the Central Commission’s Regulations for the generating companies but in no case exceeding a quarter. Any State Commission which does not already have such formula/mechanism in place must within 6 months of the date of this Order must put in place such formula/mechanism.”

8.2. Formula

The following mechanism shall be followed for calculation and passing on of variations in the Fuel and Power Purchase Cost Adjustment (FPPCA) in the end consumer tariff, which shall come into force w.e.f. 1st April 2020 (i.e. Power Purchased by the Licensee from 1st April 2020 onwards).

1. Periodicity for recovery (Cycle)

The licensee shall compute the fuel and power procurement cost variations on a quarterly basis. The adjustment shall be made in the consumers bills starting after a month following the end of the quarter on the units billed in the months following the quarter.

For example, FPPCA for the quarter April- June shall be done in the month of July and shall be reflected in the consumer bills raised in the months of August, September and October on the units billed for the months of July, August and September respectively.

2. Chargeability

FPPCA charges shall be levied on all consumer categories excluding Below Poverty Line (BPL) and Agriculture category consumers on per unit basis on consumption depending on the billing cycle.

3. Formula

The FPPCA formula shall contain the following three components:

1. Power Purchase Cost adjustments which shall contain the following elements:
 - Variation in the Power Purchased from long term/ firm sources viz. CGS, IPP’s, State, Own generation etc. This may consist of fixed cost, variable costs, arrears, other charges but excluding any kind of penalties
 - Variation in Short term power purchase cost through IEX, Bilateral etc. (shall be allowed upto a certain ceiling rate as may be fixed in the Tariff Order by the Commission).

- Variation on account of Deviation Settlement Mechanism – Shall be allowed, but the incentive/penalty shall be excluded
2. Transmission cost adjustments which shall contain the following elements:
 - Variation on account of Central Transmission Charges including arrears/ revisions.
 - Variation on account of State Transmission charges including arrears/revisions
 3. Other Charges which shall contain all the other elements not forming part of the above two components for example:
 - Any adjustments /reversals due to over recovery of charges
 - Any adjustments due to under recovery of charges in case the Commission decides to limit the FPPCA charges in previous quarters to avoid tariff shock or other reasons
 - Any other adjustments on account of factors not envisaged at the time of tariff fixation
 4. Less any revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost.

Based on the components as defined above, the new FPPCA formula can be represented as follows:

$$FPPCA \left(\frac{Rs.}{Unit} \right) = \left(\frac{(Pact + Tact + Oact - ASact) * 10}{\{ [PPOact * (1 - TLapp) + PPIact - PSOact] * (1 - DLapp) \} - Zact} \right) - Rapp$$

Where:

- *Pact (in Rs. Cr.)*: Actual Power purchase cost inclusive of fixed cost, variable costs, arrears, and other charges excluding any kind of penalties incurred in the quarter. This shall include:
 - Cost of procurement from sources outside the State,
 - Cost of procurement from sources within the State,
 - Cost of DSM excluding any penal charges,
 - Cost of procurement from the Bilateral/ exchange etc.
 - Less: Revenue from sale of surplus power/ DSM
- *Tact (in Rs. Cr.)*: Actual Transmission cost inclusive of any kind of arrears, other charges etc. and excluding any kind of penalties incurred in the quarter. This shall include:
 - Inter-State transmission cost (PGCIL charges),
 - Intra-State transmission cost
- *Oact (in Rs. Cr.)*: Adjustments from the previous FPPCA quarter on account of over/ under recovery and any other incidental costs not accounted for at the time of retail tariff fixation
- *ASact (in Rs. Cr.)*: Revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost
- *PPOact (in MU)*: Quantum of power purchased in the quarter from sources outside State/ Union Territory
- *TLapp (in %)*: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- *PPIact (in MU)*: Quantum of power purchased in the quarter from sources within State/Union Territory, Bilateral/ Exchange and Over-drawal under the DSM
- *PSOact (in MU)*: Actual quantum of sale of surplus power/ under-drawal under the DSM in the quarter

- *DLapp* (in %): Approved T&D losses for the year in consideration as provided in the relevant Tariff Order
- *Zact* (in MU): Actual energy sales for agriculture and BPL category consumers in the quarter

$$Rapp \left(\frac{Rs}{unit} \right) = \left(\frac{(Papp + Tapp) * 10}{\{ [PPOapp * (1 - TLapp) + PPIapp - PSOapp] * (1 - DLapp) \} - Zapp} \right)$$

- *Papp* (in Rs. Cr.): Total power purchase cost approved in the Tariff Order for a quarter inclusive of fixed costs, variable costs etc. and containing the following elements:
 - Cost of procurement from sources outside the State,
 - Cost of procurement from sources within the State,
 - Cost of procurement from the Bilateral/ exchange etc.
 - Less: Revenue from sale of surplus power
- *Tapp* (in Rs. Cr.): Total transmission charges approved in the Tariff Order for a quarter consisting of the following elements:
 - Inter-State transmission charges (PGCIL charges),
 - Intra-State transmission charges
- *PPOapp* (in MU): Quantum of power to be procured from sources outside State/ Union Territory in a quarter as approved in the Tariff Order
- *TLapp* (in %): Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- *PPIapp* (in MU): Quantum of power to be procured from sources within the State, bilateral/ exchange in a quarter as approved in the Tariff Order
- *DLapp* (in %): Approved T&D losses for the year in consideration as provided in the Tariff Order
- *PSOapp* (in MU): Quantum of sale of surplus power approved in the Tariff Order for a quarter
- *Zapp* (in MU): Sales for agriculture and BPL category consumers for a quarter as approved in the relevant Tariff Order

4. Other Terms and conditions

1. For the purpose of the Fuel and Power Purchase Cost Adjustment, all the bills admitted and credits, if any, received by the distribution licensee during the period in consideration, irrespective of the period to which they pertain, may be considered.
2. The FPPCA charges determined as per the formula above may be calculated considering the consumers of all categories based on their billed units excluding the BPL and the agriculture category consumers.
3. The per unit FPPCA so worked out is charged differentially as per the approved retail tariff of the consumers. The determination of differential per unit FPPCA is mentioned below:
 - Step 1: Determination of Value of K

$$\frac{\text{Approved Retail Tariff for a category or sub category} \left(\frac{Rs.}{unit} \right)}{\text{Weighted Average Retail Tariff (WART)} \left(\frac{Rs.}{unit} \right)}$$

The value of K for different consumer category or sub category for the year in consideration is considered as approved in this Tariff Order.

- Step 2: Determination of proportionate FPPCA (INR/unit) consumer category/sub-category wise

$$FPPCA \left(\frac{Rs.}{Unit} \right) = Average FPPCA * K \text{ for that consumer category or sub - category}$$

5. The Petitioner shall compute fuel and power procurement cost variations, and adjustments shall be made in the consumer bills based on the Fuel and Power Purchase Cost Adjustment (FPPCA) formula notified by the Commission in this Order.

For the purpose of calculation, the approved per unit cost of power purchase ($R_{approved}$) shall be taken as INR 4.22 per unit for the FY 2020-21.

Table 124: $R_{approved}$ determined by Commission for FY 2020-21

Particulars	Amount
Total Power Purchase Cost (INR Cr), P_{app}	602.47
Transmission Charges (INR Cr), T_{app}	63.26
Power Purchase Quantum from CGS Stations at Generator Ex-bus (NTPC, NHPC, SJVNL, BBMB, THDC, NPCIL, APCPL) (MU), PPO_{app}	1812.24
Approved Weighted Average Inter-State Transmission Loss (%), TL_{app}	3.69%
Power Purchase Quantum from sources within State/ Open Market, PPI_{app}	35.76
Quantum of Sale of Surplus Power (MU), PSO_{app}	41.04
Approved Intra-State T&D Loss (%), DL_{app}	9.30%
Energy Sales for Agriculture consumer category (MU), Z_{app} (MU)	1.54
R_{app} (INR/kWh)	4.22

On account of revenue surplus in FY 2020-21, the Petitioner is hereby directed to stop recovery of FPPCA from all consumer categories starting from 1st April 2020 onwards till further orders of the Commission. The Petitioner is, however, directed to submit the quarterly FPPCA calculation to the Commission for review.

9. Chapter 9: Tariff Schedule

9.1. Tariff Schedule

Table 148: Tariff Schedule

S. No.	Consumer Category	Fixed Charge INR/kW/month	Energy Charge INR/kWh
1.	DOMESTIC SUPPLY (DS)		
I.	LT Domestic		
a.	0-150 kWh per month	10.00	2.75
b.	151-400 kWh per month		4.80
c.	Above 400 kWh per month		5.20
II.	HT Domestic	10.00	4.80
2.	COMMERCIAL/ NON RESIDENTIAL (NRS)		
I.	LT Commercial		
a.	0-150 kWh per month	INR. 20/kW/Month for Single Phase INR. 100/kW/Month for Three Phase	5.00
b.	151-400 kWh per month		5.30
c.	Above 400 kWh per month		5.60
II.	HT Commercial	100.00	5.30
3.	INDUSTRY		
I	Large Industrial Power Supply (LS)	200.00	5.00
II	Medium Industrial Power Supply (MS)	200.00	4.70
III	Small Industrial Power Supply (SP)	30.00	4.80
4.	AGRICULTURAL PUMPING SUPPLY (AR)	-	2.90
5.	PUBLIC LIGHTING (PL)		
I	Public Lighting system managed by Municipal Corporation, Panchayat and Street Lights maintained / outsourced to an external agency	100.00	5.35
II	Advertisement/ Neon-sign Boards Advertisement boards, billboards (apart from advertisement boards installed on commercial establishments and charged under commercial tariff)	100.00	7.10
6.	BULK SUPPLY (BS)	200.00	4.90
7.	TEMPORARY SUPPLY	Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both.	

S. No.	Consumer Category	Fixed Charge INR/kW/month	Energy Charge INR/kWh
		For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.	
8.	ELECTRIC VEHICLE CHARGING STATION	-	3.80

9.2. Applicability

Table 149: Applicability of Tariff Schedule

Applicability	Character of service
DOMESTIC SUPPLY (DS)	
LT Domestic	
<p>This schedule shall apply for light, fan, domestic pumping sets and household appliances in the following premises:</p> <ol style="list-style-type: none"> Single private houses/flats. Government schools along with related facilities. Supply to hostels and /or residential quarter attached with the private educational institutions where separately metered. Paying Guest (PG) authorized by the Chandigarh Administration Administrative Training Institutes/Correctional Institutes/Training Centres exclusively run/managed by the UT/State/Central Government to undertake research, consultancy/Training and allied activities to improve management efficiency Government and public sports institutions/Gymnasium halls etc. banks and PCOs exclusively for the use of educational institutions. Religious Institutions viz. Temples, Gurudwaras, Mosques, Churches, provided that the Sub Divisional officer concerned authenticates the genuineness of the place being exclusively used for worship by the general public. Housing colonies and multi storied flats/buildings as defined in the Electricity Supply Code Regulations notified by the JERC. Dispensaries / Hospitals / Public Libraries / Schools / Colleges / Working Women's Hostels / run by the Chandigarh Administration. Recognized Centers/ societies for the welfare of blind, deaf and dumb, spastic children, physically handicapped persons, mentally retarded persons, as approved by the Chandigarh Administration. Orphanages/ Cheshire Homes/ Old age homes/ charitable homes and Gashalas. Charitable Organizations viz. Schools, Hospitals, Dispensaries, Education and Research Institutes and Hostels attached to such Institutions registered with the Income Tax authorities under Section 80G, or 80 GGA, or 35 AC. The individual organization shall apply in writing to the Electricity Department 	<p>AC, 50 cycles, Single phase 230 volts or three phase 400 volts.</p> <p>For loads up to 5 KW supply shall be connected on single phase 230 volts and above 5 KW up to 100 kVA supply shall be given on three phase 400 volts.</p>

Applicability	Character of service
<p>along with a certificate from the IT Department or getting considered for the tariff in the Domestic Category</p> <p>m) Shelter Homes (including Night Shelters) approved by Chandigarh Administration.</p> <p>n) Crematoriums (including electric) and Burial Grounds. The Halls or Gardens/ Lawns or any portion of the premises listed in Para (i) above let out for consideration or used for Commercial activities at any time shall be charged at Commercial Rate of Electricity Tariff.</p> <p>NOTES:</p> <p>i. Where a portion of the dwelling is used for mixed load purposes the connection shall be billed for the purpose for which the tariff is higher.</p> <p>ii. Hostels shall be considered as one unit and billed under domestic supply tariff without compounding.</p> <p>iii. STD/PCOs, shops attached to Religious Institutions will be billed under Non- Domestic Tariff.</p> <p>iv. A room or a part of a residential house utilized by a teacher for imparting tuition work, self-occupied handicapped persons operating from their residences, cooking classes taken by house ladies, beauty parlour run by house ladies, ladies doing tailoring work etc. shall be covered under domestic tariff.</p> <p>v. For cottage & commercial activities operating in residences such as repair of shoes by cobbler, dhobi, ironing of clothes, stitching/ knitting, paan-shop and bakery products etc. small shops, tea shops etc. with total load (maximum demand) of 5 kW domestic tariff shall be applicable subject to installation of MDI Meters. In cases where total load is more than 5 kW, separate metering shall be done for commercial and domestic use and consumption shall be charged according to the tariff applicable.</p> <p>vi. Professionals such as Doctors, Engineers, Lawyers, CAs, Journalists and Consultants practicing from their residence irrespective of location provided that such use shall not exceed 25% of the area of the premises or as specified in the rules/regulations of their respective State or Union Territory.</p> <p>vii. The load of common amenities for consumers of housing societies may include pumps for pumping water supply, lifts and lighting of common area. The consumption of energy for common services shall be separately metered with meters installed and sealed by the licensee and shall be billed at Domestic Tariff. The user shall inform the details of every non-domestic activity within the residential complex, such as commercial complex, industrial activity, and recreation club, along with the connected load, and shall seek a separate connection for the same under the commercial category.</p>	
HT Domestic	
This schedule shall apply to all the consumer falling under the LT Domestic category above but connected at 11 kV or above voltage level	AC, 50 cycles, Three phase 11 Kilo volts. For loads above 100 KVA, supply shall be connected on 11 KV and a separate transformer of adequate capacity shall be

Applicability	Character of service
	installed at consumers cost as per Electricity Supply Code Regulations notified by JERC. In case of consumers where the metering is being done on the low voltage side of the transformer instead of the high voltage side, the consumption should be computed by adding 3% extra on account of transformation/ losses. This arrangement shall be continued for a maximum of one year within which metering shall be shifted to HT(11KV) side of the transformers
COMMERCIAL / NON RESIDENTIAL SUPPLY (NRS)	
LT Commercial	
<p>This schedule shall apply to all consumers, using electrical energy for light, fans appliances like pumping sets, central air conditioning plant, lift ,welding set, small lathe, electric drill, heater, battery charger, embroidery machine, printing press, ice candy, dry cleaning machines, power press, small motors in non-residential premises such as defined below:</p> <ol style="list-style-type: none"> Hostels (other than those recognized/aided institutions of Chandigarh Administration) Schools and colleges (excluding Government schools and related facilities) Coaching institutes and research institutes Auditoriums, Hospitals, clinics, dispensaries, nursing homes / diagnostic centers other than those run by the Chandigarh Administration. Railways (other than traction) Hotels, restaurants, guest houses, boarding / lodging houses, marriage houses Cinemas Banks Petrol pumps. Government / Public Sector offices and undertakings Public halls, auditoriums, exhibitions, theatres, circus, cinemas etc. All other establishments, i.e., shops, chemists, tailors, washing, dyeing etc. which do not come under the Factories Act. Cattle farms, fisheries, piggeries, poultry farms, floriculture, horticulture, plant nursery Farm houses being used for commercial activity. Ice-cream parlors, bars, coffee houses etc. Any other category of commercial consumers not specified/covered in any other category in this Schedule. <p>NRS supply shall also be applicable to multi consumer complexes including commercial complexes as defined in the Electricity Supply Code Regulations notified by the JERC. No separate circuit/connection</p>	<p>AC, 50 cycles, single phase at 230 Volts or 3 Phase at 400 Volts</p> <p>For loads up to 5 KW, supply shall be connected on single phase 230 volts and above 5 KW up to 100 KVA, supply shall be given on 3 phase 400 volts.</p>

Applicability	Character of service
for power load including pumping set/central air conditioning plant, lifts etc. is permitted.	
HT Commercial	AC, 50 cycles, Three phase 11 Kilo volts.
This schedule shall apply to all the consumers falling under the LT Commercial category above but connected at 11 kV or above voltage level	For loads above 100 KVA, supply shall be given on 11 KV in case of multi consumer complex including commercial complex and in other cases for load above 100 KVA the supply shall be on 11 KV. In case of consumers where metering is done on the low voltage side of the transformer instead of the high voltage side, the consumption should be computed by adding 3% extra on account of transformation losses.
LARGE INDUSTRIAL POWER SUPPLY (LS)	
<p>The schedule shall apply for consumers having industrial connected load above 100kVA. Their contract demand shall not be less than 100 kVA. No consumers shall increase their connected load without prior approval of the Electricity department. The consumer availing supply at high tension shall indicate rated capacity of all the step down transformers installed in his premises and shall not increase the capacity of such step down transformers without prior approval of the department.</p> <p>NOTE</p> <ol style="list-style-type: none"> The above tariff covers supply at 11 kV. Surcharge at 20% on the tariff shall be leviable for all the existing consumers which are being given supply at 400 volts. A consumer getting supply at 33 kV and above will get a rebate of 3%. Surcharge @ 17.5% on the tariff shall be leviable for all the arc furnace consumers which are being given supply at 11 kV. This surcharge at 17.5% shall also be leviable on other industrial consumers having contract demand exceeding 5000 kVA and running at 11kV. In case of steel rolling mills having supply at 400 volts, an additional surcharge of 5% shall be leviable. In case of HT consumers (11kV and above) where maximum demand and energy consumption is recorded on the lower voltage side of the consumer transformer instead of the high voltage side, maximum demand and energy consumption for billing purpose should be computed by adding 3% extra on units on account of transformation/cables losses. However, this agreement shall in no case continue for more than three months and the meter shall be installed on the HT side of the transformer within the said period including such existing connection. For new connections, all metering will be on HT side only. 	<p>AC, 50 Cycles, 3 phase 11 kV supply for loads above 100 kVA Supply can be given at 33/66/220kV depending on quantum/type of load and contract demand and availability of bus voltage and transformer winding capacity at the feeding substation wherever possible at the discretion of supplier.</p> <p>For arc furnace loads and other loads of equally violent fluctuating nature, voltage of supply will be 33kV and above depending upon availability of bus voltage and transformer winding capacity at the feeding substation wherever possible, at the discretion of supplier.</p> <p>Contract demand is the load kW, kVA or HP, as the case may be agreed to be supplied by the licenses and contracted by the consumer and specified in the agreement. If the consumer in a month exceeds the contract demand, such excess shall be</p>

Applicability	Character of service
	charged at an additional rate of INR 250/kVA.
MEDIUM INDUSTRIAL POWER SUPPLY (MS)	
This tariff schedule shall apply to all industrial power supply consumers having connected load ranging from 21 kVA to 100 kVA	AC, 50 cycles, 3 phase, 400 volts
SMALL INDUSTRIAL POWER SUPPLY (SP)	
This schedule shall apply to small power industries with connected load not exceeding 20 KW (26BHP) in urban and rural areas	AC, 50 cycles, single phase 230 volts, or 3 phase, 400 volts.
AGRICULTURAL PUMPING SUPPLY (AP)	
This schedule shall apply to all consumers for use of electrical energy for irrigation pumping load upto 20 kW (26 BHP). Supply for loads above 26 BHP/20 KW shall be charged in accordance with the relevant industrial tariff (Govt. Tubewells meant for water supply are covered under the relevant Industrial Tariff)	AC, 50 Cycles, three phase, 400 volts, Single Phase at 230 volts.
<p>NOTE</p> <ul style="list-style-type: none"> Pumping sets shall be ISI marked. The responsibility for ensuring installation of ISI marked pumping sets as well as shunt capacitors shall be that of the Junior Engineer concerned, who shall verify the same at the time of verification of test reports before the release of the connection. Supply for agriculture/Irrigation pump sets, at one point, may also be given to a registered co-operative society or to a group of farmers recognized by the competent authority. An agriculture consumer, if he so desires, may shift the location within his premises of his connection, with the approval of the competent authority, after payment of applicable charges. 	
PUBLIC LIGHTING (PL)	
This tariff schedule shall apply for use of Public Lighting system including signaling system, road and park lighting managed by municipal corporation, panchayats, institutions(at the discretion of the supplier)etc. The tariff schedule shall also apply for use of electricity by street lights managed/outsourced to an external agency and advertisement boards, sign boards, bill boards, signages etc., (apart from the advertisement boards installed on commercial establishments & charged under commercial tariff).	AC, 50 cycles, Single phase at 230 Volts or three phase at 400 Volts.
BULK SUPPLY (BS)	
This tariff schedule shall apply to general or mixed loads exceeding 10 kW to MES, Defense establishments, Railways, Central PWD, Institutions, Hospitals, Departmental Colonies and other similar establishments where further distribution is to be done by the consumer. Above schedule shall not be applicable, if 50 % or more of the total sanctioned load is motive/ manufacturing load	AC, 50 cycles, three phase, 400 volts or 11 kV or higher voltage at the option of the department. Loads exceeding 100 kVA shall be released on HT only.
TEMPORARY SUPPLY	
Available to any person requiring power supply for a purpose temporary in nature. The Temporary Tariff is applicable for a temporary period of supply for a period of maximum one (1) year at a time, which may be further extended, as per the provisions of Supply Code Regulations notified by JERC.	AC, 50 cycles, Single phase at 230 Volts or three phase at 400 Volts
ELECTRIC VEHICLE CHARGING STATIONS	

Applicability	Character of service
This tariff schedule shall apply to consumers that have set up Public Charging Stations (PCS) in accordance with the technical norms/standards/specifications laid down by the Ministry of Power, GoI and Central Electricity Authority (CEA) from time to time. The tariff for domestic consumption shall be applicable for domestic charging (LT/HT)	AC, 50 cycles, three phase, 11 kV or higher voltage.

In order to mitigate the hardship of Electricity Consumers and DISCOMs/EDs in view of nation wide lockdown due to COVID-19. The Commission has issued SUO MOTU Order No. JERC/LEGAL/SMP/27/2020 on April 10, 2020 giving directions, wherein the Commission has provided relief to Industrial and Commercial consumers and acknowledged the need for additional working capital requirement by the Distribution Licensees. Further, the Commission is of the view that the lockdown will also impact certain other parameters of ARR like sales/sales mix, power purchase quantum and cost, revenue etc. However, it may not be possible to take into account all these impacts in totality with the desired accuracy and efficacy at this point of time. The Commission will consider all such additional costs and variations in parameters appropriately while evaluating the APR of FY 2020-21 and thereafter True-up of FY 2020-21.

9.3. General Conditions of HT and LT Supply

The above mentioned LT/HT Tariffs are subjected to the following conditions, applicable to all category of consumers.

- 1) The tariffs are exclusive of electricity duty, taxes and other charges levied by the Government or other competent authority from time to time which are payable by the consumers in addition to the charges levied as per the tariffs.
- 2) Unless otherwise agreed to, these tariffs for power supply are applicable for supply at one point only.
- 3) If energy supplied for a specific purpose under a particular tariff is used for a different purpose, not contemplated in the contract for supply and / or for which higher tariff is applicable, it will be deemed as unauthorized use of electricity and shall be dealt with for assessment under the provisions of section 126 of the Electricity Act, 2003 & Supply Code Regulation notified by JERC.
- 4) Fixed charges, as applicable, will be charged on pro-rata basis from the date of release of connection.
- 5) The billing in case of HT/EHT shall be on the maximum demand recorded during the month or 85% of the contracted demand, whichever is higher. If in any month, the recorded maximum demand of the consumer exceeds its contracted demand, that portion of the demand in excess of the contracted demand shall be billed at double the normal rate. Similarly, energy consumption corresponding to excess demand shall also be billed at double the normal rate. The definition of the maximum demand would be in accordance with the provisions of the Supply Code Regulations notified by JERC. If such over-drawl is more than 20% of the contract demand then the connection shall be disconnected immediately.

Explanation: Assuming the contract demand as 100 KVA, maximum demand at 120 KVA and total energy consumption as 12000 kWh, then the consumption corresponding to the contract demand will be 10000 kWh (12000*100/120) and consumption corresponding to the excess demand will be 2000 kWh. This excess demand of 20 KVA and excess consumption of 2000 kWh will be billed at twice the respective normal rate. Such connections drawing more than 120 kVA, shall be disconnected immediately.

6) Power Factor Charges for HT and EHT

- (a) Power factor means, the average monthly power factor and shall be the ratio expressed as percentage of total kWh to total kVAh supplied during the month. The ratio shall be rounded up to two figures.
- (b) The consumer shall maintain the monthly average power factor of the supply not less than 90% (lagging). If the monthly average power factor of (a) consumer falls below 90% (0.9 lagging), such consumer shall pay a surcharge in addition to his normal tariff @ 1% on billed demand and energy

charges for each fall of 1% in power factor upto 70%(lagging).

- (c) In case the monthly average power factor of the consumer is more than 95% (95% lagging), a power factor incentive @ 1% on demand and energy charges shall be given for each increase of 1% in power factor above 95% (lagging)
- (d) If the average power factor falls below 70% (lagging) consecutively for 3 months, the licensee reserves the right to disconnect the consumer's service connection without prejudice for the levy of the surcharge.
- 7) Delayed payment surcharge shall be applicable to all categories of consumers. Delayed payment surcharge of 2% per month or part thereof shall be levied on all arrears of bills. Such surcharge shall be rounded off to the nearest multiple of one rupee. Amounts less than 50 paise shall be ignored and amounts of 50 paise or more shall be rounded off to the next rupee. In case of permanent disconnection, delayed payment surcharge shall be charged only upto the month of permanent disconnection.
- 8) **Advance Payment Rebate:** If full advance payment of the current bill is made before the issue date of previous cycle bill, rebate @1% shall be given on the amount consisting of SOP plus fixed charges plus FPPCA. However, if the advance payment is not adequate as per current bill amount consisting of SOP plus Fixed Charges plus FPPCA or payment made after the issue date of previous cycle bill, such cases shall be treated for prompt payment rebate. Sample calculation for the same has been in Annexure 2 of this Order.
- 9) **Prompt Payment Rebate:** If payment is made at least 7-days in advance of the due date of payment of the current bill a rebate for prompt payment @ 0.25 % of the bill amount (SOP +Fixed Charges +FPPCA) amount shall be given. Those consumers having arrears shall not be entitled for such rebate. Sample calculation for the same has been in Annexure 2 of this Order.

Provided that in case the payment is made by cheque, the prompt payment discount will be applicable only if the payment by cheque is made 3 days prior to date of availing the prompt payment discount i.e. before 10 days from the due date of payment.

- 10) The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with the FPPCA formula specified in Chapter 8 of this Tariff Order. Such charges shall be recovered / refunded/adjusted in accordance with the terms and conditions specified in the FPPCA mechanism. However, no FPPCA shall be recovered from the consumers from 1st April 2020 onwards till further orders of the Commission.
- 11) The values of the 'K' factor applicable for the different consumer categories for use in the FPPCA formula shall be as specified in this Tariff Order.
- 12) **Surcharge for Low Power Factor/Non Installation of Required rated LT Shunt Capacitors**
- (a) Consumers with L.T connections where the meter provided by the licensee has the power factor recording feature, shall install shunt capacitors of adequate rating to ensure power factor of 85% or above failing which low power factor surcharge at the rates noted below will be levied.

Table 150: PF Range for LT consumer

S. No.	Power Factor range	Surcharge
1.	85% and above	NIL
2.	Below 85% and upto 80%	2% of billed energy charges of that month for every 1% fall in P.F from 85%
3.	Below 80% and upto 75%	2.5% of billed energy charges of the month for every 1% fall in P.F from 80%
4.	Below 75%	3% of billed energy charges of that month for every 1% fall in P.F from 75%

The conditions for disconnection of a consumer supply in case of non-achievement of minimum level of power factor as prescribed in the Supply Code Regulations notified by JERC, shall apply.

13) **Unauthorized use of Electricity:** The unauthorized use of electricity shall be treated as specified in the Supply Code Regulations notified by JERC. The penalty applicable shall continue unless the unauthorized use is stopped.

14) **Taxes and duties**

The tariff does not include any tax or duty etc. on electricity energy that may be payable at any time in accordance with any law then in force. Such charges, if any, shall be payable by the consumer in addition to the tariff charges.

15) **Time of Day (TOD) tariff**

- a) Under the Time of Day (ToD) Tariff, electricity consumption and maximum demand in respect of HT/EHT consumers for different periods of the day, i.e. normal period, peak load period and off-peak load period, shall be recorded by installing a ToD meter.
- b) The maximum demand and consumption recorded in different periods shall be billed at the following rates on the tariff applicable to the consumer, as TOD metering is not yet implemented.

Table 151: Applicability of ToD Charges

Period of use	Hrs.	Demand Charges	Energy Charges
Normal period	6:00 a.m. to 6:00 p.m.	Normal Rate	Normal rate of energy charges
Evening peak load period	6:00 p.m. to 10.00 p.m.	Normal Rate	120% of Normal rate of energy charges
Off-peak load period	10:00 p.m. to 6:00 a.m.	Normal Rate	90% of Normal rate of energy charges

Applicability and Terms and Conditions of TOD tariff:

- a) TOD tariff shall be **optional** unless otherwise specifically stated to the contrary in the Tariff Order.
- b) The facility of aforesaid TOD tariff shall not be available to HT/EHT consumers having captive power plants and/or availing supply from other sources through wheeling of power.
- c) The HT/EHT industrial consumers who have installed standby generating plants shall also be eligible for the aforesaid TOD tariff.
- d) In the event of applicability of TOD tariff to a consumer, all other terms and conditions of the applicable tariff shall continue to apply.

9.4. Schedule of Other Charges

Table 152: Schedule of Other Charges

S. No.	Description	Approved
A	Application processing charges for new connection/ enhancement of load/ reduction of load	
i	Domestic supply (LT)	INR 25/-
ii	Non-Domestic Supply (LT)	INR 100/-
iii	Small Power, Medium Supply and street lighting supply (LT)	INR 250/-
iv	Agriculture Power supply (LT)	INR 25/-
v	Temporary metered supply (LT)	Two times the normal rates of category of permanent supply
vi	HT/EHT Supply	As specified in Supply Code Regulations specified by JERC
B	Charges for Re-fixing/ Changing of meter/Meter Board in the same premise on consumer request when no additional material is required.	

S. No.	Description	Approved
	(When the cause leading to subsequent change/replacement of meter is either manufacturing defect or Department's fault then, it shall be free of cost and further, if shifting of meter is done in the interest of department work then it is free of cost.)	
i	Single Phase Meter	INR 250/- per meter
ii	Three Phase Meter without CT	INR 500/- per meter
iii	Three Phase Meter (with CTs & PTs)	INR 1,000/- per meter
iv	Tri-vector and special type meters	INR 1,200/- per meter
v	HT/ EHV metering equipment	INR 3,000/- per meter
C	Meter Inspection & Testing Charges	
	(In case correctness/accuracy of a meter belonging to the Licensee is challenged by the consumer)	
i	Single phase	INR 150/- per meter
ii	3-phase whole current i.e. without C.T	INR 500/- per meter
iii	L.T. meter with CTs	INR 1,500/- per meter
iv	H.T. & E.H.F metering equipment.	INR 3,000/- per meter
	NOTE: If the challenged meter is found to be incorrect / defective, the credit of these charges will be given to the consumer, otherwise these will be forfeited.	
D	Re-sealing charges (irrespective of the number of seals involved against each item below and where seals found to have been broken by the consumer):	
i	Meter cupboard	INR 50/-
ii	Where cut-out is independently sealed	INR 50/-
iii	Meter cover or Meter Terminal cover (Single phase)	INR 150/-
iv	Meter cover or Meter Terminal cover (3- phase)	INR 375/-
v	Maximum Demand Indicator or C.T.s Chamber	INR 900/-
vi	Potential fuses	INR 900/-
	Note: If M&T and ME seals are found to be broken/tampered cost of meter shall be recoverable and the case shall be treated as theft case.	
E	Reconnection Charges	
A	Reconnecting/connecting the premises of any consumer who was previously disconnected on account of breach of his agreement with the department or of any other provisions of the Act as may be relevant.	
i	Domestic supply	INR 250/-
ii	Non-Domestic Supply	INR 500/-
iii	Small Power, Medium Supply and street lighting supply	INR 500/-
iv	Large Supply and bulk supply	INR 1000/-
v	Agriculture Power supply	INR 250/-
vi	Temporary metered supply	INR 1,500/-
F	Testing/ Inspection of Consumer's installation	
A	Initial Test/ Inspection	Free of Cost.
B	For subsequent test of a new installation or an extension to an existing installation if the installation is found to be defective	

S. No.	Description	Approved
	or the wiring contractor or his representative fails to be present	
i	Single Phase	INR 150/- (Payable in advance for each subsequent visit for the purpose of testing the installation.)
ii	Three Phase	INR 200/- (Payable in advance for each subsequent visit for the purpose of testing the installation)
iii	Medium Supply/Bulk Supply loads upto 100 kVA	INR 500/- (Payable in advance for each subsequent visit for the purpose of testing the installation.)
iv	Large Supply/Bulk Supply (loads above 100 kVA)	INR 1,000/- (Payable in advance for each subsequent visit for the purpose of testing the installation.)
G	Meter Reading Cards/ Passbook (New/ Replacement)	
i	Provision of meter reading cards including PVC jacket	INR 5/- per card
ii	Replacement of meter card found to be missing on consumer's premises	
iii	Domestic & NRS	INR 5/- per card
iv	SP and AP	INR 10/- per card
v	MS	INR 25/- per card
vi	LS	INR 45/- per card
vii	Replacement of Passbook in case it is lost by AP Consumer	INR 60/- each
viii	Replacement of identification card missing on the premises of AP Consumer	INR 25/- each
ix	Temporary	INR 60/- per card
H	Meter Rentals (In case where consumer opts that licensee should supply meter)	
i	Single Phase meter	INR 20/- per month
ii	Three Phase LT meter	INR 50/- per month
iii	Three Phase LT meter with CT	INR 70/- per month
iv	11 kV Metering System	INR 500/- per month
v	33 kV Metering System	INR 1,000/- per month
vi	66 kV Metering System	INR 2,000/- per month
I	Replacement of broken glass	
a	Replacement of broken glass of meter cupboard (when the cause of the breakage is considered to be an act or fault of the consumer).	INR 60/- each
b	Replacement of meter glass where the same has been tampered with or broken by the consumer	
i	Single phase meter	INR 250/-
ii	Three phase meter	INR 450/-

S. No.	Description	Approved
J	Amount of Security deposit for new/ extension of load	As per the procedure prescribed in clause 5.130 to clause 5.134 of JERC Electricity Supply Code Regulation 2018.
K	Charges recoverable from the consumer when the meter is found damaged / burnt owing to negligence or default on the part of consumer	
i	Single Phase Meter	INR 700/- each
ii	Three Phase Meter	INR 1,550/- each
iii	LT CT operated Solid State Meter. (Without CTs)	INR.3,000/- each
iv	LT CTs	
	a) Upto 50/5A	INR.1,580/- each
	b) Above 50/5 A	INR. 600/- each
	c) Solid State HT TPT metering equipment (without CT/PT unit)	INR.20,000/- each
	d) H.T.C.T./P.T. Unit	INR. 40,470/-
L	Special Meter reading charges in case of change in occupancy/ vacation of premises	
i	Domestic	INR. 50/-
ii	Other Consumer-Single phase meter	INR 250/-
iii	Other Consumer-Three phase meter	INR 450/-
M	Supply of duplicate copies of electricity bills	
i	Domestic consumers	INR 5/-
ii	Non-Domestic consumers	INR 10/-
iii	Temporary consumers	INR 10/-
iv	L.T. Industrial (upto 20 kW) & AP consumer	INR 10/-
v	L.T. Industrial (above 20 kW) & Street lighting consumer	INR 15/-
vi	H.T. Industrial & bulk supply consumer	INR 20/-
N	Review of electricity bills (If the accuracy of licensee's bill is challenged by the consumer and a review of the bills is demanded)	
i	Single Phase Supply	INR 10/-
ii	Three Phase Supply	
	load upto 20 kW	INR 250/-
	load above 20 kW upto 60 kW	INR 450/-
	load above 60 kW upto 100 kVA	INR 750/-
iii	Large Supply (above 100 kVA)	INR 1,000/-
	NOTE: If the challenged bill is found to be incorrect, the credit of the fee will be given to the consumer, otherwise these will be forfeited.	
O	Testing and calibration including sealing of energy meter owned /supplied by the consumer	
i	Single Phase	INR 100/-
ii	Polyphase whole current meter	INR 500/-
iii	Polyphase meters with CTs	INR 1200/-

S. No.	Description	Approved
iv	HT and EHT metering equipment	INR 3,500/-
P	Checking of the capacitors at the request of the consumer	
i	Consumer receiving supply at 230/440 V	INR 250/- per visit
ii	Consumer receiving supply at Above 400 V and up to 11 KV	INR 500/- per visit
Q	Demand notice extension fee (for each period of three months)	
i	DS and NRS	INR 50/-
ii	AP	INR 500/-
iii	SP	INR 200/-
iv	MS/LS/BS	INR 2,500/-
	Note: Demand notice shall be valid for three months initially with an extended/grace period of further three months. After the expiry of grace/extended period of three months, the application shall be deemed as cancelled. Revival fee(one time only) for cancelled application shall be twice the demand notice extension fee as prescribed above and will be done by load sanctioning authority for another three months only	

9.5. Schedule for service connection charges and service rentals

Service connection charges are provided in the schedule of general and service connection charges and are to be recovered from all prospective consumers and existing consumers seeking extension in load. These charges won't be payable by consumers who have got the works executed at their own expense. Schedule of service connection charges as applicable is given under:

A. Service connection charges for domestic supply

Table 153: Service Connection Charges

S. No	Particulars	Category	INR
1	Single Phase Fixed Per kW Charges		
a	Up to 1 kW	Domestic	250/-
		Non Residential Supply	250/-
b	Above 1 kW and up to 3 kW	Domestic	300/-
		Non Residential Supply	300/-
c	Above 3 kW and 5 kW	Domestic	500/-
		Non Residential Supply	750/-
2	Three Phase Fixed Per kW Charges		
a	Above 5 kW	Domestic	750/-
		Non Residential Supply	1,000/-

B. Variable Charges

No variable charges are leviable upto 75 meters of service line length from the point of interconnection. Beyond 75 meters for all loads variable charges @ INR 125 per meter length of service line shall be recoverable for loads in excess of 5 kW.

- a) Domestic and Non Residential consumers falling under the following categories have the option, either to pay in lump sum the service connection charge as mentioned in the preceding clause or to pay monthly service rentals at 1.6 paisa per rupee of the estimated cost of the service line beyond the cost

of 30.48 meters.

- (i) Members of Schedule Castes.
 - (ii) Religious and Charitable institutions run by recognized/ registered associations or societies registered with Register of Societies
- b) All such prospective and existing consumers who will pay or have paid service connection charges in full, shall be exempted from the payment of monthly service rentals.
- c) The service rentals to the consumers existing prior to 1st November 2002, if applicable already shall continue.

C. Service connection charges for industrial and bulk Supply (For new Connections):

Table 154: Service Connection Charges for Industrial and Bulk Load Supply

S. No	Load	Service Connection
1	Up to 100 kVA	INR 750/kW

Service connection charges under Para i) shall be applicable for loads upto 100 KVA where the length of new and augmented or both line(s) to be provided is up to 100 meters which will include 11kV line (whether overhead or cable LT line and service cable. Where this limit exceeds 100 meters, the applicant shall be required to pay the actual cost of @ INR 125 per meter of 11 kV line, LT line and service cable in excess of 100 meters as additional service connection charges (nonrefundable). However, no component of the distribution substation transformer to be created would be charged wherever applicable.

Extension of Load

- a) **Where the consumer is either paying service rentals or had paid the service connection charges on kW basis for the original load.**
- i) Extension in load bringing to be charged at INR 750/- per the total load up to 100 kVA for extension part only. However, charges for service line in excess of 100 meters shall be charged @ INR 125 per meter for length of service line (new or augmented or both) feeding such consumer. Rentals on original load, if applicable, already shall continue.
- b) **Where the consumers had paid the service connection charge in full.**
- i) No charges for extension shall be recoverable where the cost of service/common part of service line had been paid by the applicant at the time of release of the original connection provided. No augmentation of service/common portion of service lines had been carried out ever since the release of connection and also the additional load can be released from the existing line without augmentation and the cost deposited by the consumer at the time of release of original connection is not less than 'per kW charges' payable on the basis of total connected load (including extension in load). For calculating per kW charges, the rate as applicable at the time of release of original connection shall apply for the existing load and prevailing rates for the extension in load. Difference, if any, between the actual cost paid and the recoverable amount 'per KW charges' shall be payable by such consumers at the time of extension in load. This shall also apply to the cases fed through an independent feeder laid at the cost of the consumer. The cost of line/bay (33/66/132/220kV) paid by the consumer or at the time of clubbing/conversion paid by the consumer at the time of clubbing of supply to higher voltage shall be appropriated towards service connection charges at the time of subsequent release of extension in load, if applicable. However, for calculating total 'per kW charges' service connection charges already recovered from the consumer in respect of clubbing cases, applicable rates to different connections as existing immediately prior to clubbing are to be taken into account.

Cases involving augmentation of service/Common portion of service line or if the augmentation had

taken place subsequent to release of connection shall be default with as per provisions of sub Para (a)

- c) While accessing the connected load for working out service connection charges, both general and industrial loads of an individual consumer at one location shall be taken into account.
- d) The “per kW”, service charges for extension in load shall be as contained in above and those shall be in addition to the service rentals on the original load, if applicable thereon.
- e) An increase in the connected load even without increase in the contract demand shall call for payment of service connection charges on “per kW” basis as applicable to the category in which total connected load after extension falls and shall be recoverable for extension of the electrical part only. Consumers seeking extension in contract demand within the sanctioned connected load shall not be required to pay service connection charges on KW basis.
- f) Consumers seeking contract demand higher than 60% of the connected load, shall be charged one time charge termed ‘Contract Demand Charges’ as follows :

Table 155: Charges applicable for contract demand higher than 60% of connected load

S. No	Particulars	INR/kVA
1	For Contract Demand above 60% and up to 80% of connected load	200/-
2	For Contract Demand above 80% and up to 100% of connected load	300/-
3	Large Supply Consumers getting at 33 kV and above are exempted from the payment of one time contract demand charges for purpose of increasing contract demand	

- g) In case of LT connections, Service rentals to the consumer existing prior to 1-11- 2002, if applicable already shall continue.

D. Recovery of service connection charges for extension of load by consumers who had paid the full cost of the line

Industrial and Bulk supply consumers availing connection for load exceeding 1 MW have to pay the entire cost of service line laid for them. By virtue of paying the entire cost of the line involved in releasing the connection, the consumer is entitled to avail (within five years) extension in load upto 100% of the original line for which the line had been erected provided that line so erected is capable of carrying the load i.e. original load and extended load up to 100% of the original load. If, however, line already erected is unable to take 100% extension of load, extension in load shall be limited to the capacity of the line. In such an event, the consumer is not required to pay service connection charges for the extension in load, provided the cost of the line already provided by him is more than the per kW charges calculated at the applicable rate from time to time on the total load including extension in load applied by the consumer.

- a) If the extension in load applied by the consumer is in excess of the capacity of line already erected or more than 100 % of the original load, consumer shall pay the service connection charges as applicable to the new applicants.
- b) If during the period of 5 years from the date of connection some load has already been released from the line, whose entire cost has been paid by the consumer, who seeks extension in load within five years up to the extent of the capacity of the line or 100% of the original load within 5 years up to the extent of the capacity of the line or 100 % of the original load, whichever is lesser, release of additional load shall be regulated as under:

Load released on voltage above 11 kV and loads 1MW and above:

Extension in load to the original consumer shall be allowed (within the contract demand for which the line was originally erected for the said consumer) at the cost of the electricity department, even if augmentation/erection of new lines are required.

Load less than 1MW released on 11 kV

In this case care should be taken for a period of 5 years that a margin of 100 % of the load of the original consumer is available in the capacity of the line. If other consumer(s) want connection(s) to be released by utilizing the available margin, new consumer(s) singly or jointly, as the case may be shall pay towards the cost of augmentation of the line so that sufficient margin in electricity carrying capacity is available to cater to the additional requirement of the original consumer.

- a) Provisions of the preceding Para's of this schedule shall not be applicable where as a result of extension in load the supply voltage level of the consumer changes or when the consumer changes the site of the premises.

E. Service connection charges for agriculture power

All prospective tube well consumers covered under general category shall pay INR 3,000 per BHP as service connection charges. The above charges are recoverable where the total length of the service line including new 11 kV line, LT line (new/augmented) and service cable is upto 1 Km (out of which LT line/Service cable route length should not exceed 500 meters from the common pole). Where the total length of the service line is more than 1 km (out of which LT line/Service cable route length should not exceed 500 meters), any applicant under this category shall be required to pay the cost of the new 11 kV line beyond this limit at INR 125 per meter as additional service connection charges. However, no component of distribution substation/transmission cost would be charged.

10. Chapter 10: Directives

Over the years, the Commission has issued various directives to the Petitioner for necessary action at its end. It has been observed that the Petitioner is not fully complying with many of the directives issued by the Commission. In order to strengthen the effective monitoring and ensure timely implementation of all the directives in true spirit, the Commission hereby directs that the Petitioner shall now compulsorily submit:

- *The detailed action plan for compliance of all the directives within 1 month of the issuance of this Order.*
- *The quarterly progress report as per the detailed action plan for all the directives issued in the subsequent sections within 10 days of the end of each quarter of the calendar year.*

10.1. Directives continued in this Order

While examining the compliance note and supporting documents submitted by the Petitioner in the present Petition, it is observed that some of the directives issued in the previous Tariff Orders have not been fully complied with by the Petitioner.

The Commission is of the view that substantial time has already been given to the utility for compliance with these directions. Thus, the Commission hereby directs the utility to comply with the directions mentioned below in the given timeframe, failing which the Commission shall be constrained to take appropriate action under Section 142 of the Electricity Act 2003 and various other provisions of the Act, and Regulations framed by JERC.

10.1.1. Management Information System

Originally Issued in Tariff Order dated 7th May 2012
Commission's Latest Directive in Tariff Order Dated 20th May 2019
<i>The Commission directs the Petitioner to expedite the process of online generation of MIS. The Commission thus directs the Petitioner to complete the roll-out of the MIS for the Discom at the earliest under intimation to the Commission.</i>
Petitioner's Response in the Present Tariff Petition
<i>The M/s NIELIT is already been designated for computerized billing of all types of consumers of Electricity Wing of Engineering Department UT, Chandigarh (EWEDC), who fully support to EWEDC and supplies all types of MIS in required format time to time . However, EWEDC is regularly forwarding the MIS data like monthly SOP details, progress of enforcement under directive-9, metering & billing information, RPO information etc. to Hon'ble commission in prescribed format time to time.</i>
<i>Further, if more information/MIS is needed then suitable format may be devised by the commission, so that the information may be supplied by EWEDC accordingly.</i>
Commission's Response
<i>The Petitioner has been submitting the requisite data. The Petitioner is directed to timely submit the reports in prescribed formats as per orders/directions of the Commission.</i>

10.1.2. Metering /replacement of Non-Functional or defective/ 11KV Meters

<p>Originally Issued in Tariff Order dated 16th July 2011</p>
<p>Commission's Latest Directive in Tariff Order Dated 20th May 2019</p> <p><i>The Commission has taken a serious view of the fact that the Petitioner is yet to ensure full compliance (including installation of smart meters as per Clause 8.4(3) of National Tariff Policy notified on 28th January 2016) despite repeated directives of the Commission.</i></p> <p><i>The Commission has observed that the quarterly report is only being submitted for consumer meters. The Petitioner is directed to submit the quarterly report of 11 kV feeder meters and DT meters also.</i></p>
<p>Petitioner's Response in the Present Tariff Petition</p> <p><i>The work of installation of DLMS meters is under process to carry out the energy audit of Electricity Wing of Engineering Department UT, Chandigarh (EWEDC). The work of replacement of non functional and defective 11 KV meters is under process and the quarterly report of 11kV feeder meter and DT meters will be submitted accordingly.</i></p>
<p>Commission's Response</p> <p><i>The Commission has observed that the quarterly report is only being submitted for consumer meters. The Commission in the previous order had also emphasized and directed the Petitioner to submit the quarterly report of 11 kV feeder meters and DT meters also. The Petitioner is directed to submit the progress report within one month of issuance of this order.</i></p>

10.1.3. Energy Audit

<p>Originally Issued in Tariff Order dated 16th July 2011</p>
<p>Commission's Latest Directive in Tariff Order Dated 20th May 2019</p> <p><i>The Commission believes that the Petitioner is well equipped to carry out the Energy Audit in its territory and the Commission does not intend to intervene in the operational decision making of the Petitioner. The Commission thus directs the Petitioner to carry out the Energy Audit at the earliest and submit the same to the Commission along with the next tariff Petition.</i></p>
<p>Petitioner's Response in the Present Tariff Petition</p> <p><i>The DNIT for the work of providing DLMS Energy Audit Meter amounting to Rs. 81,97,100/- has approved on dated 03.01.2019 and the tender for the same is under process.</i></p>
<p>Commission's Response</p> <p><i>Although DNIT for the work of providing DLMS Energy audit had been approved in Jan 2019, no tender for the same has been initiated till now. The Commission further directs the petitioner to submit the status report on the same within one month from issuance of this order</i></p>

10.1.4. Demand Side Management and Energy Conservation

<p>Originally Issued in Tariff Order dated 16th July 2011</p>
<p>Commission's Latest Directive in Tariff Order Dated 20th May 2019</p> <p><i>The Commission observes that Petitioner has not yet reverted with the status of the action plan for installation of ToD meters. The Commission takes a serious view of the fact that the Petitioner is yet to roll-out TOD metering for its willing consumers. The Petitioner is directed to submit an action plan in this regard.</i></p>
<p>Petitioner's Response in the Present Tariff Petition</p> <p><i>The UJALA scheme for distribution of LED bulb, LED tube light & energy efficient fan has been launched through M/S EESL in Chandigarh on dated 06.03.2017 and 5,73,556 Nos. LED bulb, 57,662 Nos. LED tube light and 16,137 Nos. energy efficiency fans has been distributed through this scheme upto 30.09.2019. It is estimated that this is leading to energy savings of more than 72,847 MWh with monetary savings of over 29 Crore per year.</i></p> <p><i>Further, the smart meter have an additional feature of TOD metering and its allied infrastructure under the area of S/Division No. 5 has already been allotted to M/S REC and the work is likely to be completed in this Financial Year.</i></p> <p><i>Further, DPR for whole Chandigarh for Approx. Rs. 241.49 Crore has already been approved by the Empowered Committee, MoP, GoI under NSGM scheme on dated 28.09.2018. as per the direction of MHA GoI the memorandum for Smart Grid Project has been resubmitted to Devolvment Investment Board (DIB) on dated for approval. The REP/Tendering Process will be initiated after investment approval from concerned ministry GoI.</i></p>
<p>Commission's Response</p> <p><i>The Commission appreciates the effort undertaken by the Petitioner for compliance of this directive. The Petitioner is directed to expedite the process and submit quarterly reports to the Commission.</i></p>

10.1.5. Manpower Deployment

<p>Originally Issued in Tariff Order dated 16th July 2011</p>
<p>Commission's Latest Directive in Tariff Order Dated 20th May 2019</p> <p><i>The Commission notes that the Petitioner has repeatedly failed to comply with the above directive. The Commission advises that the Chief Engineer and the Secretary (Power) to expedite the process and convince the competent authority in this regard in the interest of the consumers.</i></p>
<p>Petitioner's Response in the Present Tariff Petition</p> <p><i>The matter of shortage of staff in the department was taken up with the competent authority of Chandigarh Administration, however, Chief Engineer cum Spl. Secy. (Engg.), UT., Chandigarh dated 23.10.2019 has intimated that the process to appoint the consultant to study the feasibility of corporatization of Electricity Wing of Engineering Department UT, Chandigarh (EWEDC) has been undertaken and the manpower study also lies in the scope of said consultancy. The tender for corporatization stands floated.</i></p>
<p>Commission's Response</p> <p><i>The Petitioner is directed to expedite the process and submit a status report by next tariff filing.</i></p>

10.1.6. Segregation of T&D losses and loss reduction trajectory

Originally Issued in Tariff Order dated 7th May 2012
Commission's Latest Directive in Tariff Order Dated 20th May 2019
<i>The Commission directed the Petitioner to submit the action plan for installation of interface meters at all feeders. The Commission directed the Petitioner to expedite the execution of the study. The Commission also directed the Petitioner to submit a detailed report of voltage wise T&D losses along with the next Tariff Petition.</i>
Petitioner's Response in the Present Tariff Petition
<i>The work of installation of DLMS meters is under process to carry out the energy audit of Electricity Wing of Engineering Department UT, Chandigarh (EWEDC). The RFP will be floated after installation of DLMS meters at various nodes.</i>
Commission's Response
<i>The Commission directs the Petitioner to expedite the execution of the study. The Commission also directs the Petitioner to submit a detailed report of voltage wise T&D losses along with the next Tariff Petition.</i>

10.1.7. Assets created from consumer contribution

Originally Issued in Tariff Order dated 28th March 2018
Commission's Latest Directive in Tariff Order Dated 20th May 2019
<i>The Commission directed the Petitioner to submit detailed scheme wise consumer contributions, the impact of which had to be accounted by the Commission in future Tariff Orders. The Petitioner in this regard was directed to submit the desired information positively along with the next Tariff Petition.</i>
Petitioner's Response in the Present Tariff Petition
<i>All the assets created from the consumer contribution are under compilation.</i>
Commission's Response
<i>The Petitioner, despite repeated directions has failed to submit the desired information. Every year the Petitioner submits that the compilation of information is in process. The Petitioner in this regard is hereby directed to submit the desired information positively along with the next Petition otherwise the Commission will consider the value based on certain assumptions which will have financial repercussions on the Petitioner's ARR</i>

10.1.8. Creation of SLDC

Originally Issued in Tariff Order dated 28th March 2018
Commission's Latest Directive in Tariff Order Dated 20th May 2019
<i>The Commission had directed the Petitioner to form a separate SLDC which is ring fenced from the CED. The Petitioner was directed to deploy employees dedicated to the SLDC operations, which are independent from the CED. Till the operationalization of SLDC, the Petitioner was directed to immediately appoint an officer responsible for receipt and processing of Open Access applications. The Commission further directed the Petitioner that the process of creation of SLDC be expedited with help from POSOCO and funds from PSDF.</i>
Petitioner's Response in the Present Tariff Petition
<i>The process of creation of SLDC for Electricity Wing of Engineering Department UT, Chandigarh (EWEDC) as per Open Access Regulation 2017 is under process.</i>
Commission's Response

Originally Issued in Tariff Order dated 28th March 2018
Commission's Latest Directive in Tariff Order Dated 20th May 2019
<i>The Commission had directed the Petitioner to form a separate SLDC which is ring fenced from the CED. The Petitioner was directed to deploy employees dedicated to the SLDC operations, which are independent from the CED. Till the operationalization of SLDC, the Petitioner was directed to immediately appoint an officer responsible for receipt and processing of Open Access applications. The Commission further directed the Petitioner that the process of creation of SLDC be expedited with help from POSOCO and funds from PSDF.</i>
<i>The Commission fails to understand as to why this exercise has not been undertaken yet. This clearly shows that the Petitioner is not taking this directive seriously for improvement of its functioning. The Commission directs the Petitioner to take up the matter with topmost priority and ensure that the process of creation of SLDC be expedited with help from POSOCO and funds from PSDF.</i>

10.1.9. Operational safety and policy for accidents and compensation

Originally Issued in Tariff Order dated 28th March 2018
Commission's Latest Directive in Tariff Order Dated 20th May 2019
<i>The Commission directed the Petitioner to ensure that proper safety manuals are in place and are updated on a regular basis. To check enforcement of established safety procedures, the Petitioner was directed to ensure periodic Safety Audits through independent professional agencies and adequate training of construction supervisory staff.</i>
<i>The Commission also directed the Petitioner to develop a compensation policy for the victims of accidents caused due to the working of the Petitioner.</i>
Petitioner's Response in the Present Tariff Petition
<i>The Electricity Wing of Engineering Department UT, Chandigarh (EWEDC) already following the Workmen's Compensation Act, 1923 framed by Govt. of India and given Compensation as per tins act to the victims of accidents caused.</i>
<i>In case of employee dies due to accident, Ex-Gratia as applicable from time to time is also given to the family of the deceased employee.</i>
<i>Further, the privilege banking through Axis Bank has been initiated by Electricity Wing of Engineering Department UT, Chandigarh (EWEDC) and the employee drawing their monthly salary are covered under insurance scheme of Rs. 31 Lacs in case of accident and permanent disability.</i>
<i>Moreover, a draft petition for seeking approval to implement Group Accident Insurance Policy in Electricity Wing of Engineering Department UT, Chandigarh (EWEDC) is under process of approval with competent authority of Chandigarh Administration and will be filed before the Hon'ble JERC in the near future.</i>
Commission's Response
<i>The Petitioner is hereby directed to secure the necessary approvals from the Chandigarh Administration and submit the Petition for approval before the Commission.</i>

10.1.10. Non-achievement of capitalization target

Originally Issued in Tariff Order dated 28th March 2018
Commission's Latest Directive in Tariff Order Dated 20th May 2019
<i>The Commission observed that the Petitioner was continuously undertaking lower than expected capitalisation through the years. Lower capitalisation signifies that not enough efforts have been undertaken in enhancing the reliability and quality of supply to the consumers. Accordingly, the Commission directed the Petitioner to increase its efforts towards undertaking capital expenditure activities necessary for</i>

Originally Issued in Tariff Order dated 28th March 2018
<i>improving the service quality and targeting 24x7 supply to all consumers. The Petitioner was further directed to ensure that the capitalisation targets approved in this Order are achieved in the upcoming control period as the same have been approved based on its submissions.</i>
Petitioner's Response in the Present Tariff Petition
<i>The Capitalization Target as approved in the Business Plan will be achieved in the upcoming MYT controlled period.</i>
Commission's Response
<i>This Commission looks at this matter with serious concern. The Petitioner in the APR of FY 2019-20 has undertaken a capitalisation of INR 0.44 Cr till September 2019 against INR 69.14 Cr capitalisation approved in the MYT Order. The Petitioner on yearly basis has failed to achieve the capitalisation targets. Lower capitalisation signifies that efforts aren't being taken in enhancing the reliability and quality of supply to the consumers. The Commission directs the Petitioner to increase its efforts towards undertaking capital expenditure activities necessary to improve the service quality and target 24x7 supply to all consumers. Further, the Petitioner is directed to ensure that the capitalisation targets approved in the complete MYT Period as a whole are achieved. In case the Petitioner fails to achieve the target then appropriate penalties shall be imposed at the end of the Control Period.</i>

10.1.11. Monthly Billing for Domestic and Commercial/ Non Residential category consumers

Originally Issued in Tariff Order dated 20th May 2019
Commission's Latest Directive in Tariff Order Dated 20th May 2019
<i>It has been observed that despite of repeated directions of the Commission, the Petitioner has not yet moved to monthly billing from bi-monthly billing for Domestic and Commercial/ Non Residential category consumers. The Commission takes serious note of this and directs the Petitioner to implement monthly billing for all category of consumers (except Agriculture) with immediate effect in accordance with the Supply Code Regulations, 2018 and submit the quarterly progress of the same to the Commission.</i>
Petitioner's Response in the Present Tariff Petition
<i>At present, more than 85% consumers (Domestic & Commercial) are being billed Bi-Monthly.</i>
<i>The conversion of meter reading from Bi-Monthly to Monthly basis will lead to various problems as there is acute shortage of staff. Further, the software is also required to be amended for Monthly billing. Further, the work for installation of smart meters is in progress, which will help for Monthly billing.</i>
Commission's Response
<i>The Petitioner is directed to ensure that monthly billing for all the categories except Agriculture Pumping Supply are implemented in the territory. The Commission suggests that the implementation of monthly billing may be done in a phased manner so that billing of certain number of consumers be shifted to monthly billing cycle every month/quarter. The Petitioner is directed to submit monthly compliance report to the Commission for monitoring.</i>

10.1.12. Determination of Category wise/ Voltage wise Cost of supply

Originally Issued in Tariff Order dated 20th May 2019
Commission's Latest Directive in Tariff Order Dated 20th May 2019
<i>The Petitioner is hereby directed to submit a proposal for category wise cost of supply along with the Tariff Petition for the next year. The Petitioner in this regard is directed to start collecting category wise and</i>

Originally Issued in Tariff Order dated 20th May 2019
<i>voltage wise data on losses, connected load, asset allocation etc. for prudent determination of the cost of supply.</i>
Petitioner's Response in the Present Tariff Petition
<i>The RFP for category wise cost of supply to start collecting category wise and voltage wise data on losses, connected load, assets allocation is under process.</i>
Commission's Response
<i>The Petitioner is directed to expedite the process to float the RFP and ensure that the study/report for the same is submitted along with the next tariff petition.</i>

10.1.13. kVAh based tariff

Originally Issued in Tariff Order dated 20th May 2019
Commission's Latest Directive in Tariff Order Dated 20th May 2019
<i>The Petitioner is directed to submit a proposal for implementation of kVA/kVAh tariff for HT/EHT consumers in the tariff petition for the next year. The Petitioner is also required to submit whether it possesses the requisite infrastructure to implement the same. The Commission in its efforts of making the tariff more cost reflective is looking to implement kVA/kVAh based tariff for HT/EHT consumers for all the utilities under its jurisdiction.</i>
Petitioner's Response in the Present Tariff Petition
<i>A number of mechanical and electro-mechanical meters without kVAh feature are still installed at various consumers premises. Therefore, kVAh based billing/tariff may not be started at this point of time. Further, the pilot project for installation of Smart Meters is under execution and is likely to be completed within this financial year. However, the project for installation of smart meter for whole Chandigarh is under investment approval from the concerned ministry GoI. After, installation of smart meters the kVAh based tariff will be proposed to Hon'ble Commission accordingly.</i>
Commission's Response
<i>The Petitioner is directed to replace all the electro-meters with digital/smart meters enable with kVAh recording feature atleast for consumers connected at HT/EHT voltage. The Petitioner is directed to submit a report consisting of number of consumers still having electro-mechanical meters, roadmap to replace these meters, expenditure to be incurred and the cost benefit analysis of the same to the Commission along with the next tariff petition.</i>

11. Annexures

11.1. Annexure 1: List of Stakeholders who attended the Public hearing held at Chandigarh on 25th February 2020

Table 156: List of Stakeholders

S.No.	Name of Person (Mr./Ms)	Organisation/Address
1	Group Captain R.C. Goyal VSM (Retd.)	Retired from Air Force
2	Gopal Datt Joshi	UT Powermen Union Chandigarh
3	Sukhwinder Abrol	Project Director CREST
4	S.K. Nayar	President, Indian Lifeline Forum
5	Narinder Sharma	Indian Lifeline Forum
6	Ravinder Singh	CREST
7	B.S. Saini	Chandigarh Industrial Area Tenants Association
8	R.S. Gill	H.H.W.A Sector 8, Secretary FOSWAC
9	Kuldeep Sul	Executive Engineer
10	Manoj Shukla	Samasya samadhan
11	Rajesh Kumar Verma	AEE Electricity OP
12	Amarpal Singh	Chamber of Chandigarh Industries
13	P.C. Goel	RIMT World School
14	Wing Commander G.S. Uberoi	163/27-A, Chandigarh
15	Digvinder Mishra	AAJ-SAMAJ
16	Ashwani Seti	CCI

11.2. Annexure 2: Sample calculation for advance and prompt payment rebate

Table 157: Sample calculation of rebate

From	To	Bill issue date	Due date	Total bill amount (INR)	Energy charges + Fixed charges + FPPCA	Bill issue date of previous cycle	Payment date	Payment made (considered under advance payment) (INR)	Payment made (considered under Prompt payment) (INR)	Advance payment rebate (INR)	Prompt payment rebate (INR)	Rest Payment (After adjustment of all dues) (INR)
20/09/2018	20/11/2018	20/12/2018	07/01/2019	2,500	2,000	20/10/2018	19/10/2018	6,000	-	20	-	3,520
20/11/2018	20/01/2019	20/02/2019	07/03/2019	3,000	2,500	20/12/2018	-	-	-	25	-	545
20/01/2019	20/03/2019	20/04/2019	07/05/2019	3,500	3,000	20/02/2019	21/02/2019	-	3,000	-	7.5	-

Notes:

1. Prompt Payment Rebate at 0.25% - If bill amount due is paid prior to 7 days of due date and after/as on bill issue date of previous bill
2. Advance Payment Rebate at 1% - If amount is paid in advance before the bill issue of previous bill
3. Prompt and advance payment shall be given on the bill amount (limited to energy charges+ fixed charges+ FPPCA only)
4. Those consumers having positive arrears shall not be entitled for prompt rebate/advance payment
5. Prompt and advance payment rebate to be given only if the payment made by the consumer is more than bill due amount