

# **ORDER**

ON

# PROVISIONAL TRUE UP FOR THE FY 2017-18, REVIEW FOR THE FY 2018-19 & AGGREGATE REVENUE REQUIREMENT AND TARIFF FOR THE FY 2019-20

For

Energy & Power Department,
Government of Sikkim

May, 2019

Sikkim State Electricity Regulatory Commission Gangtok, Sikkim

# **LIST OF CONTENTS**

<b>-</b>	BACK	GROUND AND BRIEF HISTORY	
1	1	EPDS – Filing of ARR and Tariff Petition	2
1	2	Interaction with the Petitioner	4
1	3	Admission of the Petition	6
1	.4	Public Hearing Process	6
1	5	Notice for Public Hearing	7
1	6	Public Hearing	7
1	7	Compliance of Directives	8
1	8	Layout of the Order	8
1	9	State Advisory Committee Meeting	9
2. 9	SUMN	MARY OF AGGREGATE REVENUE REQUIREMENT FOR FY 2019-20	16
2	2.1	Aggregate Revenue Requirement (ARR)	16
2	2.2	Tariff – Existing vs. Proposed	16
2	2.3	Prayers of EPDS	18
3. F	POWE	R SCENERIO IN SIKKIM – A GLANCE	19
3	3.1	Introduction	19
3	3.2	Development of Hydro Power Projects in Sikkim	20
3	3.3	Transmission and Distribution Network in the State	22
3	3.4	Consumer Profile and Energy Sales	24
3	3.5	Transmission and Distribution (T & D) Losses	24
3	3.6	Demand and Supply Position	25
3	3.7	Power Supply	26
3	8.8	Energy Balance	28
4. P	BRIFF S	SUMMARY OF OBJECTIONS RAISED, RESPONSE OF EPDS AND COMMENTS O	
		SOMMAN OF OBJECTIONS NAISED, NEST ONSE OF ELDS AND COMMENTS O	)F IHE
(	COMN	/IISSION	30
5. P	COMN PROVI	/IISSIONSIONAL TRUE UP FOR THE FY 2017-18	30 55
<b>5. P</b> 5	COMN PROVIS	AISSIONSIONAL TRUE UP FOR THE FY 2017-18Preamble	<b>30</b> <b>55</b> 55
<b>5. P</b> 5	COMN PROVI	AISSION	55 55
<b>5. P</b> 5 5	COMN PROVIS	AISSION	55 55 56
<b>5. P</b> 5 5 5	PROVIS 5.1 5.2 5.3 5.4	AISSION	55565657
<b>5. P</b> 5 5 5 5 5	PROVIS 5.1 5.2 5.3 5.4 5.5	AISSION	55 55 56 56 57
<b>5. P</b> 5 5 5 5 5	PROVIS 5.1 5.2 5.3 5.4	AISSION	55 55 56 56 57
<b>5. P</b> 5 5 5 5 5 5	COMN PROVIS 5.1 5.2 5.3 5.4 5.5 5.6 5.7	AISSION	555656575858
5. P 5 5 5 5 5 5 5	ECOMN PROVIS 5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.8	Alission	55565657585859
<b>5. P</b> 5 5 5 5 5 5 5 5 5 5 5 5 5	COMN PROVIS 5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.8 5.9	Alission	5556565758585960
<b>5. F</b> 5 5 5 5 5 5 5 5 5 5 5 5 5	ECOMN PROVIS 5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.8 5.9 5.10	Alission	555656575858596060
5. F 5 5 5 5 5 5 5 5	COMN PROVIS 5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.8 5.9 5.10 5.11	Alission	5555565657585859606061
<b>5. F</b> 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	COMN PROVIS 5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.8 5.9 5.10 5.11 5.12	Alission  Sional True up for the fy 2017-18  Preamble  Energy Demand (Sales)  Transmission & Distribution Losses (T&D Losses)  Own Generation  Power Purchase  Energy Balance  Fuel Cost  Power Purchase Cost  Employee Cost  Repair and Maintenance Expenses  Administrative and General Expenses  Capital Investment and Capitalisation	
<b>5. P</b> 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	COMN PROVIS 5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.8 5.9 5.10 5.11 5.12 5.13	AISSION. SIONAL TRUE UP FOR THE FY 2017-18.  Preamble	
5. F 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	COMN PROVIS 5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.8 5.9 5.10 5.11 5.12 5.13 5.14	AISSION SIONAL TRUE UP FOR THE FY 2017-18  Preamble Energy Demand (Sales) Transmission & Distribution Losses (T&D Losses) Own Generation Power Purchase Energy Balance Fuel Cost Power Purchase Cost Employee Cost Repair and Maintenance Expenses Administrative and General Expenses Capital Investment and Capitalisation Gross Fixed Assets Depreciation	
<b>5. F</b> 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	COMN PROVIS 5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.8 5.9 5.10 5.11 5.12 5.13 5.14 5.15	Preamble	
<b>5. P</b> 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	COMN PROVIS 5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.8 5.9 5.10 5.11 5.12 5.13 5.14 5.15 5.16	SIONAL TRUE UP FOR THE FY 2017-18  Preamble  Energy Demand (Sales)  Transmission & Distribution Losses (T&D Losses)  Own Generation  Power Purchase  Energy Balance  Fuel Cost  Power Purchase Cost  Employee Cost  Repair and Maintenance Expenses  Administrative and General Expenses  Capital Investment and Capitalisation  Gross Fixed Assets  Depreciation  Interest and Finance Charges  Interest on Working Capital	
5. FF 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	COMN PROVIS 5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.8 5.9 5.10 5.11 5.12 5.13 5.14 5.15 5.16 5.17	Preamble	
5. FF 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	COMN PROVIS 5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.8 5.9 5.10 5.11 5.12 5.13 5.14 5.15 5.16	SIONAL TRUE UP FOR THE FY 2017-18  Preamble  Energy Demand (Sales)  Transmission & Distribution Losses (T&D Losses)  Own Generation  Power Purchase  Energy Balance  Fuel Cost  Power Purchase Cost  Employee Cost  Repair and Maintenance Expenses  Administrative and General Expenses  Capital Investment and Capitalisation  Gross Fixed Assets  Depreciation  Interest and Finance Charges  Interest on Working Capital	

6. REVIE	Aggregate Revenue Requirement (ARR) for the FY 2017-18  W FOR THE FY 2018-19	69
6.1	Preamble	69
6.2	Energy Demand (Sales)	69
6.3	Transmission & Distribution Losses (T&D Losses)	70
6.4	Own Generation	71
6.5	Power Purchase	71
6.6	Energy Balance	72
6.7	Fuel Cost	73
6.8	Cost of Generation	74
6.9	Power Purchase Cost	74
6.10	Intra State Transmission Charges	75
6.11	Employee Cost	75
6.12	Repair and Maintenance Expenses	76
6.13	Administrative and General Expenses	76
6.14	Capital Investment and Capitalisation	77
6.15	Gross Fixed Assets	77
6.16	Depreciation	78
6.17	Interest and Finance Charges	78
6.18	Interest on Working Capital	79
6.19	Return on Equity	80
6.20	Non-Tariff Income	81
6.21	Revenue from tariff for the FY 2018-19	82
c 22		0.3
6.22	Aggregate Revenue Requirement (ARR) for the FY 2018-19	82
	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALY	
7. AGGR	· · · · · · · · · · · · · · · · · · ·	SIS AND
7. AGGR	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALY	/SIS AND 84
7. AGGR DECIS	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALY	<b>/SIS AND</b> <b>84</b> 84
<b>7. AGGR DECIS</b> 7.1	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALY SIONS  Consumer Categories  Growth of Consumers  Category-wise Energy Sales	<b>/SIS AND</b> 84 84 85
<b>7. AGGR DECIS</b> 7.1 7.1.1	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALY SIONS  Consumer Categories  Growth of Consumers	<b>/SIS AND</b> 84 84 85
7. AGGR DECIS 7.1 7.1.1 7.2	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALY SIONS  Consumer Categories  Growth of Consumers  Category-wise Energy Sales	/SIS AND 84 84 85 87
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1	Category-wise Energy Sales Projections by EPDS and the Commission's decision.	/SIS AND 84 84 85 87
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1 7.3	Category-wise Energy Sales Analysis of Energy Sales Category-Wise Energy Sales Category-Wise Energy Sales Category-Wise Energy Sales	/SIS AND 84 84 85 87 95 96
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1 7.3 7.4	Category-wise Energy Sales Analysis of Energy Sales Category-Wise Energy Sales Transmission and Distribution Losses (T&D Losses)	/SIS AND 84 85 87 95 95
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1 7.3 7.4 7.5	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALY IONS	/SIS AND 84 85 87 95 96 97
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1 7.3 7.4 7.5 7.5.1	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALYSIONS	/SIS AND 84 84 85 95 95 96 97
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1 7.3 7.4 7.5 7.5.1 7.5.2	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALY IONS  Consumer Categories	/SIS AND848485959596979797979999
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1 7.3 7.4 7.5 7.5.1 7.5.2 7.6	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALYSIONS	/SIS AND84848595969797979799102103
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1 7.3 7.4 7.5 7.5.1 7.5.2 7.6 7.7	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALYSIONS	/SIS AND848485959697979791
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1 7.3 7.4 7.5 7.5.1 7.5.2 7.6 7.7 7.8	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALY IONS	/SIS AND848485959697979791102103104104
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1 7.3 7.4 7.5 7.5.1 7.5.2 7.6 7.7 7.8 7.9	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALYSIONS  Consumer Categories	/SIS AND8484859596979791102103104104
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1 7.3 7.4 7.5 7.5.1 7.5.2 7.6 7.7 7.8 7.9 7.10	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALY FIONS.  Consumer Categories.  Growth of Consumers.  Category-wise Energy Sales.  Analysis of Energy Sales Projections by EPDS and the Commission's decision.  Category-Wise Energy Sales.  Transmission and Distribution Losses (T&D Losses).  Power Procurement.  Own Generation.  Power purchase from Central Generating Stations.  Energy requirement and availability.  Aggregate Revenue Requirement.  Fuel Cost.  Cost of Generation.  Power Purchase Cost	/SIS AND8484859596979791102103104104105110
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1 7.3 7.4 7.5 7.5.1 7.5.2 7.6 7.7 7.8 7.9 7.10 7.11	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALYSIONS	/SIS AND8484859596979799102103104105110
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1 7.3 7.4 7.5 7.5.1 7.5.2 7.6 7.7 7.8 7.9 7.10 7.11 7.12	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALYSIONS	/SIS AND8484859596979799102103104104105110110
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1 7.3 7.4 7.5 7.5.1 7.5.2 7.6 7.7 7.8 7.9 7.10 7.11 7.12 7.13	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALY  IONS	/SIS AND8484859596979799102103104105110110113114
7. AGGR DECIS 7.1 7.1.1 7.2 7.2.1 7.3 7.4 7.5 7.5.1 7.5.2 7.6 7.7 7.8 7.9 7.10 7.11 7.12 7.13 7.14	EGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALYSIONS  Consumer Categories	/SIS AND8484859596979799102103104105110110111

7.18	Interest and Finance Charges	120	
7.19	Interest on Working Capital	120	
7.20	Return on Equity	122	
7.21	Provision for Bad Debts	122	
7.22	Non-Tariff Income	122	
7.23	Revenue from Existing Tariff	124	
7.24	Aggregate Revenue Requirement (ARR) and Gap	125	
7.25	Revenue Gap for the FY 2019-20	126	
7.26	Recovery of Revenue Gap for the FY 2019-20	128	
8. DIREC	TIVES AND ADVISORIES		<b>131</b>
9. TARIF	F PRINCIPLES AND DESIGN		145
9.1	Background	145	
9.2	Tariff Proposed by the EPDS and Approved by the Commission	147	
10.	WHEELING CHARGES	1	<b>152</b>
10.1	Wheeling Charges	152	
11.	FUEL AND POWER PURCHASE COST ADJUSTMENT		L54

# **LIST OF TABLES**

Table 2.1: Aggregate Revenue Requirement Projected by EPDS16
Table 2.2: Existing Tariffs v/s Proposed Tariffs for the FY 2019-2017
Table 3.1: Consumer profile and Energy Sales during the FY 2017-1824
Table 3.2: T&D Loss calculation approved by the Commission for the FY 2017-1825
Table 3.3: Power Allocation from CGS and other sources26
Table 3.4: EPDS own installed capacity27
Table 3.5: Power Purchase from CGS and other sources during FY 2017-1828
Table 3.6: Energy Balance of EPDS for FY 2017-1829
Table 5.1: Energy Sales approved by Commission for FY 2017-1856
Table 5.2: T&D Loss calculation approved by the Commission for FY 2017-1857
Table 5.3: Own Generation approved by the Commission during FY 2017-1857
Table 5.4: Power Purchase approved by the Commission during FY 2017-1858
Table 5.5: Energy Balance approved by the Commission for FY 2017-1859
Table 5.6: Fuel Cost approved by the Commission for FY 2017-1859
Table 5.7: Power Purchase Cost approved by the Commission for FY 2017-1860
Table 5.8: Employee Cost approved by the Commission for FY 2017-1860
Table 5.9: Repair & Maintenance Expenses approved by the Commission for FY 2017-1861
Table 5.10: A & G Expenses approved by the Commission for FY 2017-1861
Table 5.11: Capital Investment and Capitalisation approved for FY 2017-1862
Table 5.12: Gross Fixed Assets during FY 2017-1862
Table 5.13: Depreciation approved by the Commission for FY 2017-1863
Table 5.14: Interest on Working Capital calculated by the Commission for FY 2017-1865
Table 5.15: Interest on Working Capital now approved by the Commission for FY 2017-1865
Table 5.16: Non-Tariff Income approved by the Commission for FY 2017-1867
Table 5.17: Revenue from Sales approved by Commission for FY 2017-1867
Table 5.18: Aggregate Revenue Requirement approved by Commission for FY 2017-1868
Table 6.1: Energy Sales approved by the Commission for FY 2018-1969
Table 6.2: T&D Loss calculation approved by the Commission for FY 2018-1970
Table 6.3: Own Generation approved by the Commission for FY 2018-1971
Table 6.4: Power Purchase approved by the Commission for FY 2018-1972
Table 6.5: Energy Balance approved by the Commission for FY 2018-1973
Table 6.6: Fuel Cost approved by the Commission for FY 2018-1973
Table 6.7: Cost of Generation approved by the Commission for FY 2018-1974
Table 6.8: Power Purchase Cost approved by the Commission for FY 2018-1974
Table 6.9: Intra State Transmission Charges approved by the Commission for FY 2018-1975
Table 6.10: Employee Cost approved by the Commission for FY 2018-1975
Table 6.11: Repair & Maintenance Expenses approved by the Commission for FY 2018-1976
Table 6.12: A & G Expenses approved by the Commission for FY 2018-1976
Table 6.13: Capital Investment and Capitalization approved for FY 2018-1977
Table 6.14: Gross Fixed Assets furnished by EPDS for FY 2018-1977
Table 6.15: Depreciation approved by the Commission for 2018-1978
Table 6.16: Interest on Working Capital calculated by the Commission for FY 2018-1980
Table 6.16: Interest on Working Capital calculated by the Commission for FY 2018-1980 Table 6.17: Interest on Working Capital approved by the Commission for FY 2018-1980

Table 6.19: Revenue from the Tariff approved by the Commission for FY 2018-19	82
Table 6.20: Aggregate Revenue Requirement and Gap approved for FY 2018-19	83
Table 7.1: Projected of no. of consumers	85
Chart 7.1: No. of consumers projected by EPDS for FY 2019-20	85
Table 7.2: Energy Sales projected by EPDS for the FY 2019-20	86
Chart 7.2: Energy Sales projected by EPDS for FY 2019-20	86
Table 7.3: CAGR of energy sales	87
Table 7.4: Specific monthly consumption/consumer	87
Chart 7.3: Trend of actual consumption – Domestic Category	88
Chart 7.4: Trend of actual consumption – Commercial Category	89
Chart 7.5: Trend of actual consumption – Public Lighting Category	90
Chart 7.6: Trend of actual consumption – Temporary Supply Category	91
Chart 7.7: Trend of actual consumption – HT Industrial Category	92
Chart 7.8: Trend of actual consumption – LT Industrial Category	
Chart 7.9: Trend of actual consumption – Bulk Supply Category	
Chart 7.10: Trend of actual consumption – Sales within the State	
Table 7.5: Category-wise energy sales approved by the Commission	
Chart 7.11: Trend of T & D Losses	
Table 7.6: Energy Requirement approved by the Commission	97
Table 7.7: Installed capacity of own generating stations	98
Table 7.8: Power Allocation	
Chart 7.12: Allocation of Power	99
Table 7.9: Summary of Power Purchase furnished by EPDS	100
Table 7.10: Power Procurement approved by the Commission	101
Table 7.11: Energy Balance projected by EPDS	102
Table 7.12: Energy Balance approved by the Commission	103
Table 7.13: Aggregate Revenue Requirement projected by EPDS	103
Table 7.14: Cost of Generation projected by EPDS	104
Table 7.15: Cost of Generation approved by the Commission	104
Table 7.16: Actual Power Purchase Cost furnished by EPDS for FY 2017-18	105
Table 7.17: Power Purchase Cost projected by EPDS	106
Table 7.18: RPO Compliance furnished by EPDS	108
Table 7.19: RPO Compliance approved by the Commission	108
Table 7.20: Power Purchase Cost approved by the Commission	109
Table 7.21: Intra State Transmission Charges projected by EPDS	110
Table 7.22: Intra State Transmission Charges approved by the Commission	110
Table 7.23: Employee Strength	111
Table 7.24: Employee Productive Parameters	111
Table 7.25: Employee Cost furnished by EPDS	111
Chart 7.13: Number of personnel per 1000 consumers	
Table 7.26: Employee Cost approved by the Commission	
Table 7.27: Administrative and General Expenses Projected by EPDS	
Table 7.28: Administration & Generation Expenses approved by the Commission	
Table 7.29: Repair and Maintenance Expenses projected by EPDS	
Table 7.30: Repair and Maintenance Expenses approved by the Commission	114
Table 7.31: Investment plan projected by EPDS	115
Table 7.32: Works in Progress	115

Table 7.33 Gross Fixed Assets Movement	119
Table 7.34: Depreciation Projected by EPDS	119
Table 7.35: Depreciation approved by the Commission	120
Table 7.36: Interest on Working Capital Projected by EPDS	121
Table 7.37: Interest on Working Capital approved by the Commission	122
Table 7.38: Revenue at Existing Tariff as approved by the Commission for FY 2019-20	124
Table 7.39: Aggregate Revenue Requirement projected by EPDS	125
Table 7.40: Aggregate Revenue Requirement approved by the Commission	126
Table 7.41: Approved Revenue at Existing Tariff & Gap	126
Chart 7.14: Trend of Cost of Supply, Average Revenue & Gap	127
Table 7.42: Revenue from revised Tariff approved by the Commission for FY 2019-20	129
Table 9.1: Existing Tariffs v/s proposed Tariffs for FY 2019-20	148
Table 9.2: Tariffs approved by the Commission for FY 2019-20	150
Table 10.1: Allocation Matrix	152
Table 10.2: Segregation of wires and Retail Supply Costs for FY 2019-20	152
Table 10.3: Wheeling Tariff approved by the Commission	153

# **ABBREVIATIONS**

Alalama, dati am	Description.		
Abbreviation	Description		
A&G	Administration & General		
ARR	Aggregate Revenue Requirement		
ATE	Appellate Tribunal For Electricity		
CAGR	Compounded Annual Growth Rate		
CD	Contract Demand		
CERC	Central Electricity Regulatory Commission		
CGS	Central Generating Stations		
CoS	Cost of Supply		
CPSU	Central Power Sector Undertakings		
Crs	Crore		
D/E	Debt Equity		
E&PDS	Energy & Power Department, Govt. of Sikkim		
EHT	Extra High Tension		
ER	Eastern Region		
FAC	Fuel Adjustment Costs		
FDR	Fixed Deposits Receipts		
FSTPS	Farakka Super Thermal Power Station		
FY	Financial Year		
GFA	Gross Fixed Assets		
HP	Horse Power		
HT	High Tension		
SSERC Sikkim State Electricity Regulatory Commission			
KHSTPS			
KV	Kilovolt		
KVA	Kilo volt Amps		
kWh	kilo Watt hour		
L.T.M.D.	Low Tension Maximum Demand		
LNG	Liquefied Natural Gas		
LT	Low Tension		
LTC	Leave Travel Concession		
MU	Million Units		
MVA	Million volt Amps		
MW	Mega Watt		
NHPC	National Hydroelectric Power Corporation Ltd.		
O&M	Operation & Maintenance		
PGCIL	Power Grid Corporation of India Limited		
PLF	Plant Load Factor		
PLR	Prime Lending Rate		
PTC	Power Trading Corporation of India Ltd.		
R&M	Repairs and Maintenance		
RoR	Rate of Return		
Rs.	Rupees		
₹	Rupees		
S/s	Sub Station		
SBI	State Bank of India		
301	State Bank of India		

SERC	State Electricity Regulatory Commission		
SPV Special Purpose Vehicle			
T&D	Transmission & Distribution		
TSTPS	Talcher Super Thermal Power Station		
UI Unscheduled Interchange			
WBSEDCL	West Bengal State Electricity Distribution Company Ltd.		
MYT	Multi Year Tariff		

# Before the

# Sikkim State Electricity Regulatory Commission for the State of Sikkim, Gangtok

Case No.: MYT/2019-20/P-01/EPDS.

#### In the matter of

Petition for Aggregate Revenue Requirement (ARR) & Tariff for the FY 2019-20, Provisional True Up for the FY 2017-18 and Review for the FY 2018-19 filed by the Energy and Power Department, Government of Sikkim, herein after referred to as 'EPDS'---Petitioner.

#### Coram

Shri N. R. Bhattarai, Chairperson

#### **ORDER**

Date of Order: 29th May, 2019.

#### 1. BACKGROUND AND BRIEF HISTORY

The Sikkim State Electricity Regulatory Commission (hereinafter referred to as the 'Commission') came into existence on 15<sup>th</sup> November, 2003 as a one man Commission. The notification constituting the Commission was issued vide Sikkim Government Extraordinary Gazette Notification No. 28/P/GEN/97/524 dated 15.11.2003. The Commission, although constituted in 2003, became operative only in April, 2011, after the Chairperson was

appointed on 11<sup>th</sup> April, 2011 on the recommendations of the Selection Committee constituted by the State Government vide Home Department Notification No. 34/Home/2011 dated 11.04.2011 in terms of Section 85 of the Electricity Act, 2003, hereinafter referred to as the Act. Thereafter, the Secretary and other officials were appointed and the Commission began its work.

The Section 86 of the Elecrtciity Act, 2003 (36 of 2003) lays down the functions of the State Commission. These functions include: determination of the tariff for generation, transmission, distribution and wheeling of electricity - wholesale, bulk or retail, as the case may be within the state. Further, Section 62 (1) of the Act empowers the State Commission to determine the tariff, both in accordance with the provisions of the Act as also under the Regulations framed by the State Regulatory Commission, for supply of electricity by a generating company to a distribution licensee, for transmission of electricity, for wheeling of electricity and retail sale of electricity within the state.

#### 1.1 EPDS – Filing of ARR and Tariff Petition

The Energy and Power Department, Government of Sikkim (hereinafter referred to as "EPDS"), is a deemed licensee under Section 14 of the Act and is carrying on the business of distribution and retail supply of electricity in the State of Sikkim.

EPDS vide its letter no. 5/P/Rev/NODAL/14-15/410 dated 29<sup>th</sup> November, 2018 filed its petition before the Hon'ble Commission for consideration and approval of the provisional true up for the FY 2017-18 in accordance with the provisions of the Sikkim State Electricity Regulatory Commission (Conduct of Business) Regulations, 2012 and Sikkim State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2012, plus review for the FY 2018-19 and Aggregate Revenue Requirement (ARR) & determination of tariff for the FY 2019-20 in accordance with the provisions of the Sikkim State Electricity Regulatory Commission (Conduct of Business) Regulations, 2012 and Sikkim State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2013, (Multi Year Tariff) (First Amendment) Regulations, 2015 and (Multi Year Tariff) (Second Amendment) Regulations, 2017 (herein after referred

to as MYT Regulations). The petition was received by the Commission on 29<sup>th</sup> November, 2018.

The SSERC had notified the SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2013 vide Gazette Notification No. 204 Dated 21<sup>st</sup> May, 2014 thereby specifying the first 3-year control period as commencing from 1<sup>st</sup> April, 2015 to 31<sup>st</sup> March, 2018 thereby making it mandatory for all Distribution Wire & Retail Supply Business, Transmission Licensees and Generation Company to file petition under the multi year tariff regime from April, 2015.

However, the Commission permitted the EPDS to file petition under single year tariff regime till FY 2017-18 considering the fact that the EPDS was functioning as a State Government Department and further, the Generation, Distribution and Transmission business had not been segregated. An attempt was made by the EPDS to file petition under multi year tariff regime during the FY 2015-16 but the petition was not admitted by the Commission as the EPDS was not in a position to furnish the vital details/data/documents etc. required for processing of the petition under MYT regime. Therefore, the Commission deemed it fit to continue with single year tariff regime till such a time that the EPDS is in a position to furnish the basic/bare necessary data/figures/details required by the Commission.

The Commission carried out necessary amendments in the SSERC (MYT) Regulations, 2013 and issued the SSERC (Multi Year Tariff) (First Amendment) Regulations, 2015 vide Gazette Notification No. 92 Dated 18<sup>th</sup> March, 2015. Further the Commission notified the SSERC (Multi Year Tariff) (Second Amendment) Regulations, 2017 vide Gazette Notification No. 367 Dated 24<sup>th</sup> August, 2017 thereby rescheduling the 3-year control period as from 1<sup>st</sup> April, 2018 to 31<sup>st</sup> March, 2021. The second amendment to the MYT Regulations also set the dateline for filing of Business Plan and Capital Investment Plan for 3-year control period by the Licensees as 1<sup>st</sup> September, 2017. The EPDS filed a petition before the Hon'ble Commission requesting the Commission to permit/allow it to file the Business and Capital Investment Plans along with the MYT petition by 30<sup>th</sup> November, 2017 vide petition dated 28<sup>th</sup> August, 2017. The Commission registered the petition as Case No. MYT/P-01/SSERC/2017-18 and considering the fact that the SSERC (MYT) (Second Amendment)

Regulations, 2017 was notified only on 24<sup>th</sup> August, 2017 very limited time was available to the EPDS for filing of the Business and Capital Investment Plans within the dateline (1<sup>st</sup> September, 2017), therefore the Commission vide its letter No. 315/SSERC/2017-18/309 dated 18<sup>th</sup> September, 2017 permitted the EPDS to file the Business and Capital Investment Plan along with the MYT Petition.

In compliance to the provisions of the SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2013 and SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) (First Amendment) Regulations, 2016 and SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) (Second Amendment Regulations), 2017, the EPDS filed its petition under MYT regime for the FY 2019-20 vide letter No. 5/P/Rev/NODAL/14-15/410 dated 29<sup>th</sup> November, 2018. The petition was received by the Commission on 29<sup>th</sup> November, 2018 and registered as case no. MYT/2019-20/P-01/EPDS and the petition was admitted by the Commission on 3<sup>rd</sup> December, 2018.

#### 1.2 Interaction with the Petitioner

The EPDS had filed its petition before the Hon'ble Commission vide its letter no. 5/P/Rev/NODAL/14-15/410 dated 29<sup>th</sup> November, 2018 for consideration and approval of the provisional true up for the FY 2017-18 in accordance with the provisions of the Sikkim State Electricity Regulatory Commission (Conduct of Business) Regulations, 2012 and Sikkim State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2012, plus review for the FY 2018-19 and Aggregate Revenue Requirement (ARR) & determination of tariff for the FY 2019-20 in accordance with the provisions of the Sikkim State Electricity Regulatory Commission (Conduct of Business) Regulations, 2012 and Sikkim State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2013, (Multi Year Tariff) (First Amendment) Regulations, 2015 and (Multi Year Tariff) (Second Amendment) Regulations, 2017.

The Commission during the scrutiny and examination of the ARR and Tariff Petition, observed that the EPDS had not filed or submitted the required information and data with the Petition and the Commission made several communications to the EPDS through letters and e-mails directing it to furnish the additional information/data and clarifications to the Commission. The details of the communications made by the Commission and the responses/replies given by the EPDS are as given below:

<b>Communications made by the Commission</b>		Response/Replies received from EPDS	
Letter no. / E-mail	Dated	Letter no. / E-mail	Dated
318/SSERC/2017-18/365	07.12.2018	E-mail	30.11.2018
E-mail	19.12.2018	CE(L/R)/E&P/2017-18/04/82	19.12.2018
318/SSERC/2017-18/368	20.12.2018	30/ACE/HQ-II/E&P/2017-18/417	21.01.2019
E-mail	20.12.2018	E-mail	22.01.2019
318/SSERC/2017-18/01	02.01.2019	30/ACE/HQ-II/E&P/2017-18/439	23.02.2019
318/SSERC/2017-18/59	08.02.2019	30/ACE/HQ-II/E&P/2017-18/441	06.03.2019
318/SSERC/2017-18/4	26.02.2019		
318/SSERC/2017-18/73	26.02.2019		

In addition to the aforementioned letters and emails, the Commission also had several discussions with the EPDS over phone and in person whereby the Commission was able to seek the clarifications and informations required for considering and processing the ARR/Tariff Petition of the EPDS. The EPDS furnished the requisite informations and clarifications to the Commission thereby enabling the Commission to take the whole process forward.

The Commission had several round of discussions/meetings/interactions with EPDS regarding the ARR and the tariff proposal for the FY 2019-20 filed before the Commission. The prime objectives of the discussions/meetings/interactions was to discuss the various items of the ARR threadbare and as well as to deliberate on the projections made by the Department. During the said meetings and interactions, the Commission sought clarifications and justifications on the estimations and projections made in the ARR.

The details of the meetings held with the EPDS are as under:

- i. 5<sup>th</sup> December, 2018
- ii. 7<sup>th</sup> February, 2019
- iii. 18<sup>th</sup> February, 2019

#### 1.3 Admission of the Petition

Although the petition was filed by the EPDS on 29<sup>th</sup> November, 2018, the Commission admitted the Petition on 3<sup>rd</sup> December, 2018 after thoroughly going through the details submitted by the EPDS. The Petition was registered as Case no. MYT/2019-20/P-01/EPDS. Thereafter, the Commission directed the EPDS to issue public notice, soliciting objections, views and suggestions from the public by publishing the Public Notice in local newspapers vide letter no. 318/SSERC/2017-18/01 dated 2<sup>nd</sup> January, 2019.

#### 1.4 Public Hearing Process

The EPDS issued "Public Notice" in accordance with Section 64 of the Electricity Act, 2003 incorporating the salient features of its petition and inviting objections, suggestions, comments and views of the members of the public, consumers and stake holders. The EPDS arranged publication of the Public Notice in the following newspapers, requesting submission of the objections, suggestions, comments and views latest by 9<sup>th</sup> February, 2019.

- Samay Dainik (Nepali/Local language) .......on 10<sup>th</sup> January, 2019.
- Sikkim Express (English).....on 10<sup>th</sup> January, 2019.
- Sikkim Herald (English).....on 11<sup>th</sup> January, 2019.

The copies of the Public Notice issued by the EPDS in the above said newspapers are enclosed as Annexure 2A, 2B and 2C to this Tariff Order.

The copies of the Tariff petition were also made available for purchase by interested persons from the Head Office of the petitioner on payment of amount. The petition filed by the EPDS was also uploaded in the official website of the Commission.

Only 1 joint written objections, comments or suggestions were received by the Commission from the consumers and general public in response to the Public Notice issued by the EPDS. Details of the objectors and the responses of the EPDS are briefly narrated in Chapter 4.

#### 1.5 Notice for Public Hearing

The Commission published notice for "Public Hearing" on the ARR/Tariff Petition of the EPDS in the following leading newspapers, giving due intimation to the general public, interested parties, stakeholders and the consumers about the public hearing to be held at Chintan Bhavan, Gangtok on 28<sup>th</sup> February, 2019. Through the Public Notice, the Commission also appealed to the general public and the stake holders to participate in the Public Hearing and express their views will be heard by the Commission. The Public Notice was also uploaded in the official web site of the Commission "www.sserc.in".

- Sikkim Express (English)......31st January, 2019 & 16th February, 2019.
- Samay Dainik (Nepali/Local Language)......16<sup>th</sup> February, 2019 & 7<sup>th</sup> March, 2019.
- Himalaya Darpan (Nepali/Local Language)..31st January, 2019 & 14th February, 2019.

The copies of the Public Notice issued by the Commission in the above said newspapers are enclosed as Annexure 3A, 3B, 3C, 3D, 3E, 3F, 3G and 3H to this Tariff Order.

#### 1.6 Public Hearing

The Public Hearing was held on 28<sup>th</sup> February, 2019, after adopting the due process of publishing of Public Notice sufficiently in advance. The Chairperson of the Commission, other Officials from the Commission as well as the Officials representing the Petitioner (EPDS) were present in full strength at the designated venue and time in order to conduct the Public Hearing.

Inspite of all the publicity given by the Commission and the EPDS, there was hardly any participation by the public/consumers and only a single person participated in the public hearing. However, the Commission decided to proceed with the Public Hearing and the lone participant was given the opportunity of being heard. The participant raised several issues on Compliace of Directives, Distribution Losses, Employee Cost, Energy requirement and Source of power Purchase etc.during the Public Hearing. The EPDS responded to the suggestions, views and objections of the lone participant. The Commission and the EPDS also put forth their views and suggestions during the discussion. The views and suggestions

given by the participant have been taken into consideration while issuing this Tariff Order. The list of officials who attended the Public Hearing and details of the sole objector and the response of the EPDS are briefly narrated in Chapter 4.

#### 1.7 Compliance of Directives

In its previous Tariff Orders, the Commission had issued certain directives to EPDS in the public interest. EPDS has furnished a compliance report on the same. The comments of the Commission on the compliance report, along with fresh directives issued are given in Chapter 10.

#### 1.8 Layout of the Order

This order is divided into Thirteen Chapters, as under:

- First Chapter This provides the background regarding ARR and Tariff proposal and details of the Public Hearing process.
- 2. Second Chapter This contains a summary of ARR and Tariff Proposals and the prayer of the petitioner.
- 3. Third Chapter This provides an overview of the power sector in Sikkim.
- 4. Fourth Chapter This contains a brief summary of the objections raised, response of EPDS and the Commission's comments on the same.
- 5. Fifth Chapter This deals with the provisional true-up for the FY 2017-18.
- 6. Sixth Chapter This deals with the review for the FY 2018-19.
- 7. Seventh Chapter This contains the Annual Revenue Requirement for the FY 2019-20, the Commission's analysis and decisions thereon.
- 8. Eighth Chapter This contains the Annual Revenue Requirement for the FY 2019-20 for Transmission Function, the Commission's analysis and decisions thereon.
- 9. Nineth Chapter This contains the Annual Revenue Requirement for the FY 2019-20 for Generation Function, the Commission's analysis and decisions thereon.
- 10. Tenth Chapter This deals with EPDS' compliance of earlier directives, comments of the Commission and fresh directives to EPDS.
- 11. Eleventh Chapter This discusses the principles of tariff policy and retail supply tariff for the FY 2019-20.

- 12. Twelveth Chapter This deals with the approved Wheeling Charges.
- 13. Thirteenth Chapter This covers the Fuel and Power Purchase Adjustment Mechanism and FPPCA Formula.

#### 1.9 State Advisory Committee Meeting

A Salient Features highlighting the important aspects of the petition filed by the EPDS for Truing up for the FY 2017-18, Review for the FY 2018-19 and ARR & Tariff Petition for the FY 2019-20 was prepared by the Commission and provided to the Members of the State Advisory Committee (SAC) for perusal. A Meeting of the State Advisory Committee chaired by the Hon'ble Chairperson of the Commission was held on 7<sup>th</sup> February, 2019 in the Commission's Office. During the meeting, the Members of the SAC were apprised of the various aspects of the ARR & Tariff Petition. The Members of the SAC discussed each and every aspect of the Tariff Petition and the submissions and projections made by the EPDS were deliberated upon in detail. The Members of the Committee put forth their observations, comments and suggestions on the ARR & Tariff Petition. The summary of the discussions and the views, suggestions and comments of the State Advisory Committee are presented hereunder:

#### Item No. 1: Truing up for FY 2017-18

- The Members of the SAC opined that the Department has to be lauded and appreciated for reducing the overall ARR gap. The Committee members noted that there has been good increase in the revenue both from the sale of power within the State and outside the State.
- The Members of the SAC opined that there has been significant increase (4.5 times of the figure approved by the Commission) in the Administrative and General expenses, which needs thorough scrutiny by the Commission and the Department has to be asked to submit the reasons for the increase in cost alongwith proper documentary support.
- The Members of the SAC observed that the Energy & Power Department has not been submitting the data/documents and other materials in support of the various

figures/facts presented in the Petition at the time of filing of the petition. The Committee members opined that in the present era of "digital technology" and "egovernance" it is expected that all data/information should be readily available in digital form with the Department.

- The Members of the SAC observed that the cost of power purchase has gone up, which indicates that the demand for power is going up in the State. The Committee opined that since Repair and Maintenance costs have gone up, it is natural to expect that the Department's own power generation should have seen improvement but there is no major improvement in own generation.
- The Members of the SAC observed that there is no significant variation in the figures approved by the Commission and the Truing-up figures submitted by the Energy & Power Department and the Department has made good progress towards reduction in the overall ARR gap, which is an indicator that the performance of the Department is improving year by year.
- The Members of the SAC added that the Department has not been un-bundled into separate utilities as envisaged by the Electricity Act, 2003 due to which some of the data/information are not being furnished by the Department in compliance with the standing regulations. Further, they added that the Government of India has been issuing guidelines and directives to be followed by the Licensees but often due to the unique geographical conditions and limited number of consumers in the State, there are hurdles in both complying and implementation of the guidelines and directives issued by the Government of India. They also added that despite of all limitations and difficulties, the Commission has been making best efforts to ensure that the Energy & Power Department brings its performance at par with that of the best in the country. They opined that the reduction in the ARR gap indicates that slowly but steadily the performance of the Department is improving.

#### Item No. 2: Review for FY 2018-19

The Members of the SAC observed that the "intra state transmission charges" seems to one of the major contributor to the ARR and opined that, if there are ways and means to

reduced. They added that a number of hydropower projects have been commissioned in the State and there are also few small hydropower projects in the State yet the Department has to pay huge intra-state transmission charges, which needs justification. They added that laymen don't understand the intricacies and technical aspects involved in power generation, transmission and distribution and therefore tend to question the need for "power purchase" from outside as well as the increase in per unit cost of power. They further added that since the Department implements schemes and works from the budget allotted by the State Government and funding received from the Government of India, charging interest on working capital seems unreasonable. They further observed that since the Department has not borrowed loans, it is not reasonable to charge any kind of interest.

- The Members of the SAC observed that having own transmission lines could considerably reduce the cost payable by the Department towards power transmission. The members opined that the Department should take all possible steps and make efforts to have a sound and reliable transmission network of its own to avoid the huge transmission charges.
- The Members of the SAC observed that the cost of power purchase is showing an increasing trend every financial year, which is an indicator that per capita power consumption is going up, a sign of progress and development. The members opined that in view of commissioning of mega hydropower projects in the State and considerable free power available to the State, the quantum of power purchase should have reduced but it is not so. The members felt that the reasons for the need to purchase power from outside and other technical aspects of power demand and supply should be explained to the general public so that people's doubt regarding power demand and supply scenario are set to rest.
- The Members of the SAC observed that "own power" generation scenario of the Department is not too healthy and is way below the target approved by the Commission for FY 2018-19 and opined that the Department must make tangible efforts for improving its own generation especially in view of the fact that tremendous focus is being given by the Government of India for capacity addition of renewable energy, both small hydro and solar power. The members felt that the

Department must take advantage of the incentives being given by the Government of India for renewable energy and make efforts for improving its own generation capacity vis-a-vis capacity addition by way of setting up new renewable projects like solar roof top and small hydropower.

- The SAC Members expressed their happiness that the Licensee has been able to bring down the overall ARR gap by 46% as per provisional accounts, this, they felt is a clear sign that the Department has been making sincere efforts towards reduction of the losses and improving the revenue realization.
- The SAC members opined that the Licensee in the State being a Government Department is able to absorb the losses so far but even then the Department has to make efforts towards improving its overall efficiency. They further added that being a State Government Department, the Department is yet to function like a Discom in true sense and unless the segregation or un-bundling of the Department takes place, the provisions of the Electricity Act, 2003, can't be fully implemented on the Energy & Power Department. They further added that it is noteworthy that the Department has been able to improve its overall performance, which is reflected in the sizeable reduction in the ARR gap and opined that the efforts of the Department and the intervention of the Commission have surely helped in improvement of the power sector in the State.

#### Item No. 3: ARR for FY 2019-20

- The SAC members observed that there are no major variations are estimated in the ARR for the FY 2019-20. They opined that when the actual figures are submitted by the Department in the near future, the exact position will be understood.
- The SAC members felt that as in the past financial years, the trend for FY 2019-20 also indicates towards increase in power purchase cost and R&M expenses. The members further observed that the current trend indicates reduction in the "employee cost", which is praiseworthy but whether the trend will continue in future as well needs to be observed. The Committee observed that keeping in view the actuals for FY 2017-18 and provisional for FY 2018-19, it is normal to expect that

the Department will be able to reduce the ARR gap for FY 2019-20, when the actual figures of revenue from power sale within and outside the State are available.

#### Item No. 4: Tariff Proposal for FY 2019-20

- The SAC members observed that the Department has submitted for minor hike in the tariff for FY 2019-20 and also introduction of new slabs under "commercial "category consumers. They opined that the Department has proposed for slow and gradual hike in the tariff for domestic consumers to avoid the shock of sudden hike in tariff. They added that keeping in view the increase in prices of all commodities and also the ever increasing inflation in the country, minor hike in tariff with time can't be avoided. They however opined that the power tariff for domestic consumers is one of the lowest in the country and the Commission has not approved for major hike in tariff in the recent years.
- The SAC members observed that minor hike in the tariff in the lower slabs may not have major impact as the average consumption of domestic consumers especially in urban areas always exceeds 100 units. They opined that in rural areas, the Government is giving 100 units free electricity to the consumers and as such no major impact of tariff hike can be expected.
- The SAC members opined that the prices of all commodities and services have seen major increase in the recent years and therefore allowing minor tariff revision is reasonable and justifiable. The Committee also opined that since the Department's performance has been improving, a slight hike in tariff might act as the catalyst and motivate the Department to make further efforts towards improving its efficiency and performance in the future.
- The SAC members while commenting on the proposal of the Department to introduce two new "slabs" under the Commercial category, the Committee members welcomed the proposal. The members felt that it is a welcome step keeping in view the benefits to the small entrepreneurs operating in the rural areas. The members opined that presently many poor local youths are taking advantage of the self employment schemes launched by the Government and are

running/operating a large number of small business like restaurants/cafes, small shops, tea stalls etc., whose power consumption is comparatively less. The introduction of the new slabs will reduce the burden of extra power tariff and will be of immense help to the rural and small entrepreneurs, the members observed.

- The SAC members highlighted that both in rural and urban areas, it is not justifiable to charge "commercial power rate" from the consumers for the entire building or house. They opined that commercial rates should be charged only to the ground floor of the buildings/houses,where normally shops and other commercials units operate. The members felt that the Department must take steps to clearly identify the buildings/houses before charging "commercial rates" to avoid undue burden to the consumers as in most cases, the upper floors of the buildings/houses especially in rural areas are used only for residence purpose and should therefore be billed as per "domestic tariff" rate.
- The SAC members opined that in the recent past, a large number of "home stays" have also come up in the rural areas and villages and therefore, the Department needs to classify or identify such home stays according to their monthly power consumption and realize power bill by placing them under suitable/relevant consumer category.
- The SAC members felt that in rural areas, it may not be reasonable to place the "commercial category "consumers under a single blanket. They opined that some commercial units in rural areas may have high power consumption whereas others may have very small consumption. Therefore, if a system to segregate the rural commercial consumers based on their annual consumption can be introduced, it will avoid undue or over taxing of the small entrepreneurs.
- The SAC members suggested that the Commission has been adopting a very well balanced approach in the past while finalizing the tariff and same approach may be adopted for the present tariff proposal as well.

#### Item No. 5: Other Matters

- The SAC members opined that all possible steps and efforts must be made to restart and complete the abandoned hydropower projects like 500 MW Teesta-VI HEP and 120 MW Rangit-IV HEP.
- The SAC members opined that the stalled projects are causing major revenue loss to the State and also tend to project a negative image of the power sector in the State.
- The SAC members opined that timely completion of power evacuation system/lines for 1200 MW Teesta-III HEP is needed to operate the powerhouse to its full capacity. The revenue loss due to non-availability of evacuation system is a major concern for the State.
- The SAC members opined that the Energy & Power Department being the nodal Department for the hydropower needs to explore all possible means and ways to ensure that stalled projects are completed and any pending power evacuation lines are completed.
- The SAC members opined that the Department needs to take steps for improving its own power generation and also setting up of renewable energy projects like small hydro, solar rooftop etc. to cut down drawal from central Sector Generating Stations.
- The SAC members opined that the EPDS needs explore and ways to surrender "high cost" thermal power and capacity charges being paid for thermal power.
- The SAC members suggested that "educational/field study" tours to various hydropower projects and power installation for the members of the Committee alongwith the concerned officers of the Projects/Department be under taken in the near future so that the members can update themselves about the power scenario of the State.

#### 2. SUMMARY OF AGGREGATE REVENUE REQUIREMENT FOR FY 2019-20

#### 2.1 Aggregate Revenue Requirement (ARR)

The Petitioner has submitted the Aggregate Revenue Requirement for the FY 2019-20 for meeting its expenses and estimated the revenue with the existing tariff. The projected ARR and Revenue gap are shown in the table below:

**Table 2.1: Aggregate Revenue Requirement Projected by EPDS** 

(₹ in Crores)

Sl.	Particulars	FY 2018-19	FY 2019-20
No.	raruculars	(Estimated)	(Projected)
1	2	3	4
1	Cost of Fuel	0.18	0.18
2	Cost of Generation	18.48	18.83
3	Cost of Power Purchase	260.90	273.94
4	Employee Costs	76.95	79.92
5	Repair and Maintanance Expenses	20.42	21.19
6	Administration and General Expenses	3.63	3.73
7	Depreciation	18.60	21.47
8	Interest Charges	0.00	0.00
9	Interest on Working Capital	11.06	11.68
10	Return on NFA/Equity	0.00	0.00
11	Transmission Charges (Intra State)	40.80	42.60
12	Total Revenue Requirement	451.01	473.53
13	Less: Non Tariff Income	1.59	1.62
14	Net Revenue Requirement	449.43	471.92
15	Revenue from Tariff	212.20	228.00
16	Revenue from Outside State Sale	191.72	201.31
17	Gap (14 - 15 - 16)	45.51	42.61
18	Revenue surplus carried over	0.00	0.00
19	Additional revenue from proposed tariff	0.00	7.79
20	Regulatory asset	0.00	0.00
21	Energy sales within states (MUs)	403.92	436.19

#### 2.2 Tariff – Existing vs. Proposed

In its Petition, EPDS has submitted the proposed Tariffs for the FY 2019-20, as detailed in the table below:

Table 2.2: Existing Tariffs v/s Proposed Tariffs for the FY 2019-20

	Sl. Io.	Category of Consumers	Existing Rate Paisa/kWh	Proposed Rate Paisa/kWh
	1	2	3	4
1		Domestic		
	a)	Up to 50 units	110	120
		51 to 100 units	234	240
	c)	101-200 units	365	370
	d)	201 to 400 units	457	460
	e)	401 & above	493	500
2		Commercial		
	a)	Up to 50 units	330	330
	b)	51 to 100 units	560	400
	c)	101 to 200 units	300	560
	d)	201 to 400 units	600	600
	e)	401 & above	640	640
3		Public lighting		
		Rural Areas	300	300
		Urban Areas	500	500
4		Industrial		
1	A	HT		
	a)	HT (AC) above 3.3 KV		
	b)	Upto 100 KVA	350	400
	c)	100 - 250 KVA	400	450
	d)	250- 500 KVA	470	500
		500 KVA & above	510	550
]	В	LT (Rural)		
		Up to 500 units	350	360
	b)	501 - 1000 units	440	440
		1001 & above	580	580
		LT (Urban)		
		Up to 500 units	530	530
		501 - 1000 units	620	620
		1001 & above	715	715
5		Bulk supply		
	a)	LT	650	650
	b)	HT	660	660

#### 2.3 Prayers of EPDS

The EPDS has in its Petition prayed for the following:

- To consider and approve the Provisional True-up of expenses for the FY 2017-18.
- To Review the estimates for the FY 2018-19.
- To admit the Petition and approve the ARR and Tariff for the FY 2019-20.
- To approve category-wise tariff, including fixed/demand charges submitted by EPDS to meet revenue requirement for the FY 2019-20.
- To approve the suggestions regarding the tariff philosophy.
- Pass such orders as the Commission may deem fit and proper, keeping in view the facts and circumstances of the case.

#### 3. POWER SCENERIO IN SIKKIM – A GLANCE

#### 3.1 Introduction

Sikkim is a tiny Himalayan State with a total geographical area 7,096 SqKm and population of 6,10,577 as per 2011 census. Sikkim is one of the smallest and youngest States of India. Sikkim is a landlocked State and shares its boundaries with three countries viz Bhutan,Nepal and China and the neighbouring State of West Bengal. Sikkim is endowed with rich natural resources and bio-diversity. The State is blessed with un-paralleled natural beauty and is among the top tourist destinations in the country. Every year numerous tourists, both domestic and international visit the State to enjoy it pristine natural beauty and rich & varied cultural heritage.

Sikkim is one of the greenest States in the country with more than 50% of its total geographical area under forest cover thereby making it a biodiversity hot spot. The third highest peak of the world **Mount Kangchen Dzenga** is located in the Sikkim, which is perpetually covered in snow and its natural beauty is a feast to the eyes of the visitors. Sikkim has many parks, sanctuaries and reserved forests & biospheres, which provide a safe haven for the highly endangered flora and fauna. The **Kangchen Dzenga National Park** (KNP) has been declared as "UNESCO world heritage site" under mixed category by the United Nations Organization. The KNP is a home to some of the rarest flora and fauna. There are pristine lakes, glaciers, peaks, streams and rivers making the State a favourite destination for nature lovers.

Use and sale of all kinds of chemical fertilizers, insecticides and pesticides in the State is prohibited including sale of inorganic fruits, vegetables and other products. Sikkim is one of the first States in the country to take up organic farming and today it is recognized worldwide as the "First Organic State" in India and world. Due to its unique geographical locations, Sikkim has very limited area available for agriculture and other activities. Despite of all odds, the State has made its global mark in the field of Organic Farming. Sikkim has become the pioneer of Organic farming in the country and has the distinction of being

declared the first "Organic State" in the Country. The major sources of revenue for the State is Eco-Tourism, Hydropower and Organic Farming apart from horticulture and floriculture.

Due to its small population and also due to absence of heavy industries, the requirement of power is also very meagre. A major share of the power demand of the State come from pharmaceutical units, breweries and distilleries. There are numerous small scale industries, hotels, home stays, resorts and food processing units as well but the power demand from this group is very small. Major portion of the consumers as such fall under the Domestic category.

The EPDS is the only deemed licensee in the State entrusted with the responsibility of transmission and distribution of electricity in the State of Sikkim. The EPDS is a deemed licensee under the provisions of Electricity Act, 2003, in the State of Sikkim. The EPDS also owns and operates a number of small hydropower projects and diesel generating stations. So far un-bundling of the EPDS has not been done and the EPDS is functioning and operating purely as a State Government Department. Sikkim Power Development Corporation Limited (SPDCL), A Government of Sikkim Enterprise, is a State owned Corporation and is engaged in the development of small hydropower projects in the State. The SPDCL presently owns and operates 3 (three) small hydropower projects with an installed capacity of 10 MW and another project of 3 MW capacity is under implementation.

#### 3.2 Development of Hydro Power Projects in Sikkim

River Teesta and Rangir are the two main rivers draining the State. These two main rivers are fed by Glacial lakes throughout the year and also numerous other small tributaries and streams. The steep terrain of the State makes these rivers and streams cascade and fall through deep gorges and slopes thereby creating favourable locations for tapping of the water for generation of hydropower.

Central Water Commission (CWC), had assessed the total hydropower potential of the State to be around 8000 MWs. The CWC had undertaken surveys and feasibility studies of various hydropower projects in the State and prepared Pre-Feasibility Reports (PFRs). The PFRs

were submitted to the State Government by the CWC. Based on the PFRs prepared by the CWC, the State Government took the decisions to tap the hydropower potential of the State. Accordingly, the State Government initiated the process for implementation of the projects through NHPC Limited and private power developers on Build,Own and Operate (BOO) and Build, Own, Operate and Transfer (BOOT) modes. The projects are at different stages of development. Some of the projects have already been commissioned, some are at advance stage of construction and others are at survey and investigation stage. As on date, the following projects have been commissioned:

Sl. No.	Name of the Project	Capacity (In MWs)	Owner/developer
1	Teesta Stage - V HEP	510	NHPC Limited
2	Rangit Stage - III HEP	66	NHPC Limited
3	Chuzachen HEP	110	Gati Infrastructure Pvt. Ltd.
4	Jorethang Loop HEP	96	DANS Energy Pvt. Ltd.
5	Teesta Stage – III HEP	1200	Teesta Urja Ltd.
6	Dikchu HEP	96	Sneha Kinetic Power Projects Pvt. Ltd.
7	Tashiding HEP	97	Shiga Energy Pvt. Ltd.

The progress of the project construction has been delayed in most cases due to financial crunch and overall slowdown of pace in the hydro power sector. The construction works of the following projects are under way and the projects are expected to be commissioned soon:

Sl. No.	Name of the Project	Capacity (In MWs)	Owner/developer
1	Rongnichu HEP	96	Madhya Bharat Power Corpn. Ltd.
2	Rangit-II HEP	66	Sikkim Hydropower Ventures Pvt. Ltd.
3	Rangit- IV HEP	120	Jal Power Corporation Ltd.
4	Panam HEP	300	Himagiri Hydro Energy Pvt. Ltd.
5	Bhasmey HEP	51	Gati Infrastructure Pvt. Ltd.

As per the Implementation Agreements signed with the private power developers, the State of Sikkim will receive free power from the various hydropower projects @12% after their commissioning for the first 15 years of their operation and from the 16th year onwards @

15% for the entire duration of the agreement period, which is 35 years. The State will get a substantial quantum of free power once all the projects are commissioned.

#### 3.3 Transmission and Distribution Network in the State

As the deemed licensee for Distribution and Transmission of electricity within the State, the EPDS owns and operates the transmission and distribution network within the State. The details of the Transmission and Distribution network owned and being operated by the EPDS as on 31<sup>st</sup> March, 2014 are as given below:

#### I. Sub-Stations

Sl. No.	Description	No.
1	132/66 KV	2
2	66/11 KV	19

#### II. EHT Lines, HT Lines and LT Lines

Sl. No.	Description	Length
EHT Lin	es	
1	132 KV	14.80 Ckt.Km
HT Lines	5	
2	66 KV D.C.	43.80 Ckt.Km
3	66 KV S.C.	184.50 Ckt.Km
	Total 66 KV Lines	227.30 Ckt.Km
4	11 KV / 3 Phase	242.62 Km
5	11 KV / 2 Phase	44.55 Km
	Total 11 KV Lines	287.17 Km
LT Lines	3	
6	LT / 3 Phase	1301.52 Km
7	LT / Single Phase	3581.37 Km
	Total LT Lines	4882.89 Km

## III. Power Transformers

Sl. No.	Description	Quantity (No.)	Total Capacity (In MVA)
1	20 MVA	1	20.00
2	15 MVA	1	15.00
3	10 MVA	3	30.00
4	7.5 / 7.0 MVA	6	44.50
5	5 MVA	15	75.00
6	2.5 MVA	16	40.00
7	Total	42	224.50

#### **IV.** Distribution Transformers

Sl. No.	Capacity (In KVA)	Quantity (No.)	Total Capacity (In MVA)
1	1600	0	-
2	1500	2	3,000.00
3	1000	2	2,000.00
4	750	10	7,500.00
5	650	2	1,300.00
6	630	0	-
7	615	1	615.00
8	500	58	29,000.00
9	450	1	450.00
10	400	1	400.00
11	375	0	-
12	300	67	20,100.00
13	250	20	5,000.00
14	200	58	11,600.00
15	160	6	960.00
16	150	30	4,500.00
17	125	1	125.00
18	100	155	15,500.00
19	63	359	22,617.00
20	50	10	500.00
21	25	743	18,575.00
22	10	442	4,420.00
23	Total	1968	148,162.00

#### 3.4 Consumer Profile and Energy Sales

The total number of registered consumers in the State as on 31<sup>st</sup> March, 2018 was 1,11,338 with annual consumption of about 343.67 MUs. The Energy Sales outside the State for the FY 2017-18 was 641.68 MUs. The category-wise number of consumers and energy sales during the FY 2017-18 are given in table below.

Table 3.1: Consumer profile and Energy Sales during the FY 2017-18

Sl.	Consumer Category	No. of Consumer		Energy Sales	
No.	Consumer Category	(Nos.)	(%)	(MUs)	(%)
1	Domestic	97,002	87.12%	98.72	28.73%
2	Commercial	11,356	10.20%	38.38	11.17%
3	Public Lighting	36	0.03%	0.17	0.05%
4	Temporary Supply	-	-	3.38	0.98%
5	HT Industrial Consumers	552	0.50%	174.43	50.76%
6	LT Industrial Consumers	576	0.52%	4.43	1.29%
7	Bulk Supply	1,816	1.63%	24.16	7.03%
8	Total	111,338	100.00%	343.67	100.00%

#### 3.5 Transmission and Distribution (T & D) Losses

The total Transmission and Distribution (T&D) losses approved by the Commission are given in Chapter 5 for the FY 2017-18 are 162.40 MUs and percentage loss is 32.09%. The details of T&D losses for the FY 2017-18 are given in the table below.

Table 3.2: T&D Loss calculation approved by the Commission for the FY 2017-18

Sl. No.	Particulars	Unit	FY 2017-18
1	Own generation	MUs	11.25
2	Energy purchased from NTPC	MUs	536.66
3	Energy purchased from WBSEDCL	MUs	23.96
4	Energy purchased from NHPC	MUs	46.78
5	Energy purchased (2+3+4)	MUs	607.40
6	Pool loss	%	2.14
7	Pool loss	MUs	13.00
8	Net energy available (5-7)	MUs	594.40
9	Energy purchased from PTC	MUs	37.29
10	Energy purchased from SPDC	MUs	26.35
11	UI purchased	MUs	21.44
12	Free energy	MUs	457.02
13	Total energy available at state periphery (1+8+9+10+11+12)	MUs	1147.75
14	Outside state sale through UI / Trading	MUs	641.68
15	Net energy available for sale within the state (13-14)	MUs	506.07
16	Energy sales within the state	MUs	343.67
17	T & D loss (15-16)	MUs	162.40
18	T & D loss	%	32.09

The Technical and commercial Losses of the system have not been segregated.

## 3.6 Demand and Supply Position

The allocation from various Central Generating Stations (CGS), Chukka (PTC) and share in Rammam HEP in West Bengal is about 179.38 MWs, as detailed in table below:

Table 3.3: Power Allocation from CGS and other sources

Sl.	Source	Capacity	Allocation		
No.	Source	(In MWs)	(In %)	(In MWs)	
	Central Sector				
1	FSTPP, NTPC	1,600.00	1.63%	26.08	
2	KHSTPP-I, NTPC	840.00	1.55%	13.02	
3	KHSTPP-II, NTPC	1,500.00	0.33%	4.95	
4	BSTPP, NTPC	1,320.00	1.52%	20.06	
5	TSTPP, NTPC	1,000.00	2.40%	24.00	
6	RANGIT-III, NHPC	60.00	13.33%	8.00	
7	TEESTA – V, NHPC	510.00	13.19%	67.27	
	Others				
8	CHUKHA, PTC	270.00	2.22%	5.99	
9	WBSEDCL	50.00	20.00%	10.00	
10	SPDC	10.00	100.00%	10.00	
11	TOTAL	7,150.00		189.38	

#### 3.7 Power Supply

#### (a) Own Generation

EPDS owns twelve (12) hydroelectric power stations, with a total installed capacity of 35.70 MWs and two (2) diesel generation stations, with a total installed capacity of 4.99 MWs. The details of the generation stations owned by the EPDS and their present status are as detailed in table below.

Table 3.4: EPDS own installed capacity

Sl. No.	Name of Projects	Installed Capacity (In MWs)	Remarks
	Hydro		
1	Lower Lhagap Hydel Power (LLHP)	2 x 6.00	Shut down due to 18th September, 2011 Earthquake
2	Jali Power House (JPH)	6 x 0.35	Operational
3	Rimbi-I	3 x 0.20	Shut down
4	Rimbi-II	2 x 0.05	Shut down
5	Rothak	2 x 0.10	Powerhouse abandoned
6	Rongnichu	5 x 0.50	No generation due to failure of water conductor system
7	Chaten	2 x 0.50	Powerhouse abandoned
8	Meyongchu	2 x 2.00	Operational
9	Upper Rongnichu Hydel Project (URHP)	4 x 2.00	No Generation due to failure of water conductor system
10	Kalez	2 x 1.00	Operational
11	Lachung	2 x 0.10	Powerhouse abandoned
12	Rabomchu	2 x 1.50	Operational
	Diesel		
13	Diesel Power House Gangtok	4 x 1.00	Operational
14	DPH LLHP, Ranipool	4 x 0.248	Shut down due to 18th September, 2011 Earthquake
	Total	40.692	

The EPDS thus meets a portion of its energy requirement from its own generation. The rests of its energy requirements are met from its allocation from the Central Generating Stations (CGS) and other sources. In addition to the allocation of power from CGS and other sources, the EPDS also procures energy from the Sikkim Power Development Corporation (hereinafter referred to as SPDC).

SPDC owns three hydro stations, with an installed capacity of 10 MWs, and the small quantum of power generated from these stations is supplied to EPDS.

# (b) Power purchase

The EPDS purchases power from various Central Generating Stations and other sources for meeting its energy requirements. The different sources of power and quantum of power purchased during the FY 2017-18 and the average unit cost of energy purchased is given in table below:

Table 3.5: Power Purchase from CGS and other sources during FY 2017-18

Sl. No.	Stations	Power Purchased (In MUs)	Cost of Power (₹ in Crores)	Average Cost (₹/kWh)
1	NTPC			
	a) FSTPP	133.01	51.97	3.91
	b) KHSTPP-I	77.59	27.40	3.53
	c) KHSTPP-II	36.11	11.45	3.17
	d) BSTPP	123.32	51.80	4.19
	e) TSTPP	166.63	43.03	2.58
2	NHPC			
	a) RANGIT-III	4.38	1.75	4.00
	b) TEESTA-V	42.40	8.65	2.04
3	Other Sources			
	a) PTC	37.29	8.80	2.36
	b) WBSEDCL	23.96	3.07	1.28
	c) SPDC	26.35	10.54	4.00
4	UI/Deviation	21.44	5.98	
5	Free Power	457.02		
6	Transmission & Other Charges		24.30	
7	Rebate/Other Charges		-6.71	
8	Total	1149.52	242.04	

# 3.8 Energy Balance

The supply and demand scenario during the FY 2017-18 approved by the Commission are given in Chapter 5, is given in table below:

Table 3.6: Energy Balance of EPDS for FY 2017-18

Sl. No.	Particulars	Unit	FY 2017-18
A	ENERGY REQUIREMENT	•	•
1	Energy sales within the state	MUs	343.67
2	Outside state sale through UI / Trading	MUs	641.68
3	Total energy sales (1+2)	MUs	985.35
4	Overall T & D losses	%	32.09
5	Overall T & D losses	MUs	162.40
6	Total energy requirement (3+5)	MUs	1147.75
В	ENERGY AVAILABILITY	•	
1	Own generation	MUs	11.25
2	Power purchased from CGS/UI etc.	MUs	692.48
3	Free Power	MUs	457.02
4	Overall pool loss	%	2.14
5	Overall pool loss	MUs	13.00
6	Total energy availability (1+2+3-5)	MUs	1147.75
C	ENERGY SURPLUS/(GAP)	MUs	0.00

# 4. BRIEF SUMMARY OF OBJECTIONS RAISED, RESPONSE OF EPDS AND COMMENTS OF THE COMMISSION

This Chapter deals with the Objection received/raised against the proposed ARR and Tariff Petition, comments/suggestions given by the stake holders and the response of the Petitioner (EPDS) to the objections/comments/suggestions and also the comments of the Commission on the objection/comments/suggestions and the responses.

The Commission as well as the Petitioner (Energy & Power Department, Govt. of Sikkim) gave wide publicity on the Tariff Petition for the FY 2019-20. Public notices were issued by the Petitioner in local newspapers soliciting views, comments, objections and suggestions from the general public and stake holder. The Commission also issued "Public Notice" in several local newspapers requesting interested parties, individuals and stake holders to participate in the Public Hearing held on 28<sup>th</sup> February, 2019 at Chintan Bhawan, Gangtok, Sikkim. In spite of all the notices, only one joint written suggestions/objections or comments were received.

in spite of wide publicity for attending the Public Hearing, there was hardly any participation by the general public or stake holders in the Public Hearing held on 28<sup>th</sup> February, 2019 at Chintan Bhawan except for a lone local consumer Shri. K. B. Gurung.

The detail submissions & written suggestions made by the representatives and the gist of the views expressed, submissions made and concerns raised by the lone public participant, response of the EPDS and comments of the Commission are given hereunder:

In response to the Public Notice issued by the Energy & Power Department soliciting comments/suggestions/objections on the ARR and Tariff proposal for FY 2019-20, written petition was jointly submitted by the following three persons:

- 1. Shri K.B.Gurung, Upper Sichey, Gangtok, East Sikkim
- 2. Shri Ganden Lachungpa, Sichey Busty, Gangtok, East Sikkim
- 3. Shri Arun Upreti, Deorali Bazar, Gangtok, East Sikkim

The written comments/suggestions/objections submitted by the abovementioned persons are reproduced herein below:

The Hon'ble Commission has given numerous directives to the Energy and Power Department. The directives given by the Commission from the year 2013-14 onwards that have not been fulfilled or complied by the Energy and Power Department is presented as follows:

1. The directive issued by the Hon'ble Commission in its Tariff order No. TR-3/2013-14 dated 30/03/2013 regarding the ARR & Tariff for the year 2013-2014.

The directive issued by the Hon'ble Commission in its Tariff order No. TR-1/2014-15 dated 15.004.2014 regarding the ARR & Tariff for the year 2014-2015.

The directive issued by the Hon'ble Commission in its Tariff order No. TR-1/2015-16 dated 31.03.2015 regarding the ARR & Tariff for the year 2015-16.

The directive issued by the Hon'ble Commission in its Tariff order No. TR- 1/2017-18 dated 21.02.2017 regarding the ARR & Tariff for the year 2017-18.

#### Directive 3:

"The EPDS is called upon to institute effective and conscious measures to mitigate revenue shortfalls attributable to T & D Losses. In this regard, the concerned deemed licensee is advised to address critical areas Viz. Institutionalizing an in- built energy auditing mechanism, introduction of pre-paid billing system, unbundling of generation, transmission and distribution as distinct segments, etc. The EPDS is also advised to undertake installation of Remote Sensing Meters in all Bulk load consuming units such as Industrial Units, Star Category Hotels, etc. In order to facilitate effective and efficient monitoring and billing of energy consumption. These administrative measures are underlined with the view to bringing about a tangible improvement in the overall performance of the licensees.

In spite of regular directives of the Commission the E& PD continues to defy all norms.

The T&D Losses of the Department continues to remain abnormally high and no measures have been taken so far to institutionalise the energy auditing mechanism, unbundling of Generation, Transmission and Distribution, Etc. The E&PD continues to mix up the functions of Trading of power and SLDC functions without proper accountability in contravention of the The Electricity Act at Section 31 Clearly Stipulates that no SLDC shall engaged in the business of trading in electricity. Further Section 39 of the act states that State Transmission Utility shall not engage in the business of trading in electricity. Reform in the power sector is the core issue of the Electricity Act, 2003. The Government Departments and Boards running the generation, transmission, distribution, SLDC and trading of electricity should be mandatorily unbundled and handled by different Companies. The unbundling will bring in efficiency in all facets of the power sector. But it is unfortunate to note that 12 years after the enactment of the electricity Act, 20003 the Energy and Power Department, Sikkim (EPDS) defies all provisions of the Act and all past directives of the Hon'ble Commission and MOUs signed with the Government of India and continues to function in violation of the Act. It is a matter of grave concern that the E&PD continues to defy all acts and the directives of the Hon'ble Commission and deprive the people of Sikkim of the benefits of the Act.

### Directive 4:

"In the area of energy auditing, the EPDS has reportedly undertaken a pilot project for Gangtok to address issues impacting technical and commercial losses. While appreciating the initiative taken by the EPDS in this regard, it is suggested that appropriate steps be also taken to install meters covering all Feeder 132 KV, 66KV and 11KV transmission lines including the distribution Transformer points to facilitate effective monitoring of distribution and consumption of energy load. These measures would contribute to containing the Transmission and Distribution losses."

In spite of such directives the E&PD has not completed the metering of all the feeder transmission and distribution transmission points.

#### Directive 5:

"The need for instituting a mechanism for monitoring of all licensees involved in the energy generation and distribution chain vis-a-vis the parameters as envisaged in the respective Project implementation Agreements needs to be addressed to obviate any omissions and commissions which would be detrimental to the interest of the Govt. as well the consumers."

The E&PD has given free run to all the licensees to do their own will and no monitoring is being done. The terms of the agreement and MOU has been violated time and again by the licensee.

#### Directive 8:

"On the request of the EPDS, the Commission has agreed to permit extension of the time for submission of all the prescribed documents and schedules relating to the Annual Accounts and the Balance Sheets along with the Profit and Loss Accounts as required under the Electricity (Supply/Annual Accounts) Rules 1985 and submit the same to the Commission by the 30<sup>th</sup> Sept. 2013 after having the same duly audited."

No such auditing has been carried out by E&PD till date.

The Hon'ble commission has issues numerous such directives to the E&PD but it has failed to comply to any such directives. The E&PD has been taking the Hon'ble Commission very lightly and not obeying the orders.

#### 5.1.4 Distribution Losses:

The T&D losses shown in high and has not been improving. There is no theft of power in Sikkim like the other states. The loss must be due to non-metering of consumers especially industrial consumers in connivance with the employees of the department. This must be stopped.

# 5.1.5 Energy requirement and Source of power Purchase

The EPDS simply mentions Free Power as 360.56 MU but does not give details of the source of Free Power. There are two NHPC projects Teesta V and Rangit III which is giving this free power 396.78 MU. Free power from Teesta III, Gati Chujachen, Jorethang Loop which is estimated to about 700 MU is not accounted for. Where is this free power going? Why is this not accounted?

The small hydropower projects of the E& PD with an installed capacity of 40MW is not generating any power. In 2017-18 it is shown only 12MU. The renovation of 12MW LLHP has not been completed yet after paying huge amount about Rs. 40 Cr to Contractor for the 8 years. The Hon'ble Commission is requested order an enquiry into the delay in renovation works.

#### 5.3.2.2 Power Purchase

The EPDS envisages to spend Rs. 254 Cr. In 2019-20 on power purchase. The E&PD must be getting about 360 MU from NHPC and 700MU from IPPS a total of 1060 MU of free power. For a Utility which gets 1097 MU of free power and distributes about 393.22 MU, why spend another 254 CR on purchase of power? It is necessary to account Trading of Power in a separate manner and give a clear picture of how the free power is being utilized. Further since the estimation of free power and own generation is not correct the cost of power purchase is also bound to be wrongly estimated.

# 6.4.1 Employee Cost

The EPDS projects the cost of employee at Rs. 83.37 Cr for handling 393.22 MU of power. This works out to Rs. 2.12 per Kwh whereas the industry average is about Rs. 0.80/Kwh. Even when the E&PD has such huge manpower it continues to appoint unnecessary manpower. The Hon'ble Commission may deem fit to issue stricture to the E&PD.

#### Other Submissions:

- 1. The EPDS at present is a deemed licensee for Generation, Transmission, Distribution, Trading and State Load Dispatch Centre. This has created a situation where no accountability can be fixed at any level as it is evident from the AAR petition. The Electricity Act at section 31 clearly stipulates that SLDC shall not engage in the business of trading in electricity. Further Section 39 of the act states that State Transmission Utility shall not engage in the business of trading in electricity. These provisions are made in order to avoid any unethical conduct in the system. Now when the EPDS is a deemed licensee for everything in the State there is bound to abuse of power. It is a matter of grave urgency to unbundle and assign the functions of Generation, Transmission, Distribution, trading and State load Dispatch Centre to distinct entities. This will bring about accountability in the entire power sector.
- 2. The people of Sikkim have made huge sacrifices on allowing implementation of Hydro Power Projects in the State with a hope of being self reliant. If revenue from sale of free power is allowed to be grossly mismanaged in the way it is being done today we as citizens will be doing grave injustice to the future generation of the State. As responsible citizens must ask legitimate questions.

#### PRAYERS TO THE HON'BLE COMMISSION:

In view of the above, the respondent respectfully prays that Hon.ble Commission may:

- 1. Implements all the reforms as mandated in the Electricity Act, 2003.
- 2. Urgently takes steps to separate SLDC, Transmission Utility and Trading of Power as per provisions of section 31 and 39 of the Act and further creates separate entities for Generation, Transmission, Distribution, Trading of Power and SLDC.
- 3. Completes the metering of all the feeders at different voltage levels and submits a detail energy audit report to the Hon'ble Commission and for public notice in a time bound manner and takes concrete steps to curb losses at all levels.
- 4. Discloses the sources of free power with past history of availability with certified documents of total power generated from different Private and Central Government Generation Utilities and create an separate Generation Utility with proper expertise to manage and run all the 40 MW power houses under it.
- 5. Discloses all its sources of power available and detail costs involved including free power and detailed separate account of Trading of power is submitted to the Hon'ble Commission and public notice.
- 6. Stop purchase of power from outside State and make use of free power available within the State.
- 7. Rationalizes its employee cost to the levels of industry average.

I on behalf of the people of Sikkim pray the Commission to take a very strict view of the prevailing situation and take necessary steps to stop the drain of public money.

The Commission forwarded the comments/suggestions/objections received from the three persons to the Energy & Power Department, Government of Sikkim vide letter no. 318/SSERC/2017-18/59 dated 08.02.2019 with the directives to furnish their responses/replies within the stipulated time frame.

The Energy & Power Department furnished their responses/replies to the comments/suggestions/objections vide letter no. 30/ACE/HQ-II/E&P/2017-18/439 dated 23.02.2019 to the Commission alongwith copies to the applicants.

The replies/responses of the Energy & Power Department on the observations/comments/suggestions/objections of Shri Ganden Lachungpa & others are as below:

1. Energy Metering is a priority work of any power organization. It is also true for Energy & Power Department and the same are reflected from the schemes under flag ship programme that are under execution namely DDUJGY & IPDS schemes. The metering works are on-going processes and all efforts are being put in place to cover maximum consumers. The Department is introducing pre-paid metering in urban areas for the first time in Sikkim through IPDS schemes and the same in under implementation phase. Here, it become pertinent to mention that two towns namely Gangtok & Tadong were selected for R-APDRP schemes which had provision for metering at various voltage levels, digitisation, e-payment etc. This scheme has been successfully implemented and as of now the consumers are benefiting from ease of online payment, online checking of accounts etc. Also in the last financial year revenue activities have been digitised in three electrical circles of East-II, Tophakhani & Jorthang. Now consumers falling under these electrical circles are issued computerised energy bills, payment of electricity bills can be done online etc. Most of the high value consumers falling under HTS category have been metered with AMR/remote meters whose billing is done from Gangtok and the account of such consumers are integrated in the software module provided under R-APDRP to Gangotk & Tadong Town. This includes star hotels. The remaining HTS consumers will also be covered under remote metering in due course of time.

The observation raised in respect to functioning of SLDC & Transmission wing which is a part of Energy & Power Department in not correct as trading of energy is being done by a committee constituted vide notification 251/Adm dated 30/10/2015 and is assisted by a cell whose officials are not part of SLDC & Transmission wings. The notification is annexed as

"A". Therefore, the IE Act 2003 has not been violated in any way as mentioned in the observations.

The State Government has constituted a committee vide notification 22/Home/2017 dated 03/05/2017 for unbundling of power sector in the State of Sikkim. The notification is annexed as "B".

- 2. Most of the feeders have been metered and as it is a continuous process any left out feeder metering will be covered by IPDS & State plan. Also, as most of the improvement & infrastructure works under power sector is funded by central agency; considerable time lag exists form the submission of proposal & actual implementation. Most of time, the Department is forced to go for phasing of schemes as funding is done in tranches by the central agency.
- 3. A cell exists in the Department to monitor the implementation of power projects by independent Power Producers (IPPs) and in view of this the Department is not in concurrence to the observations submitted.
- 4. Energy & Power being a Government Department comes under the auditing purview of the Auditor General Sikkim's office. The AG officials are auditing the activities of the Department as per their schedule.
- 5. The AT&C (Aggregate Technical & commercial Loss) which was 73.86% in year 2010-2011 has been reduce drastically and as of 2017-2018 stands at 32.56%. The reduction of AT&C loss shows improvement of metering, billing and collection of revenue by the Department in last eight years or so. The matter related to metering of HTS consumers have been detailed at SI No 1.
- 6. The details of free share for 2017-2018 are annexed as "C". The free share of power from 110 MW Chuchachen HEP & Teesta Stage-III HEP are being credited to Sikkim Power Investment Corporation Limited (SPICL).
- 7. The details of power purchase of 2017-2018, 2018-2019 & 2019-2020 are annexed as "D". The figures for 2017-2018 are actual while for the other years are anticipated or estimated. The Energy & Power Department had signed Power Purchase Agreement with Central &

other utilities many years back for allocation of power as per Central Govt norms. The annexed sheets indicate the power allocation station wise, power purchased from the respective stations, wheeling charges etc. It is only now with the commissioning of some of the IPP projects the hydro power availability in the State has improved and the same was not the case earlier. Also a point to be noted is that Hydro power is seasonal with drastic capacity reduction during winter months. It is during these times that the power demand of the State is maximum necessitating for thermal power in the portfolio. For any State, energy security is a very important and as such it is advisable to have power from various sources in the energy mix.

8. The Department is contemplating man power planning like post identification, requirement etc. The Department in addition to the Tariff petition has to submit clarifications, supplementary details, power purchase reconciliations statements etc as and when directed by the Hon'ble Commission. Also, all efforts are made to comply with the directives of the Hon'ble Commission which are part of the annual tariff order. The directives cover all aspects of power sectors including interest of the consumers. Consumer Redressal mechanism as mandated by IE ACT 2003 & subsequent regulations are in place. The reduction of AT&C loss, quality power supply for all are priority areas for the department and expects further improvements in coming years with implementation of IPDS, DDUJGY & other schemes. In the fiscal year 2017-2018, revenue collection against electricity consumption inside in the State was 194.70 Crores while the AT&C loss is 32.56%. In the fiscal 2010-2011, the AT&C loss was 73.86% while revenue collection was meagre Rs. 53.75 Crores. The urban areas will be covered with pre-paid meters under IPDs scheme. Unmetered houses in rural areas will be metered under DDUGJY scheme. Some more billing centres are in the pipeline for digitization, facility of e-payment etc. Most of the HTS (Bulk Consumers) are being billed through remote meters. Programmes under implementation and data stated above contradicts the observation of the party who have filed an application in response to ARR 2019-2020 of the Department.

Shr K.B.Gurung filed a rejoinder to the responses received from the Energy & Power Department, Government of Sikkim before the Honb'le Commission on 26.02.2019. The rejoinder filed by Shri Gurung is re-produced hereunder:

1. The EPDS submits that efforts are being made to meter all consumers and at all voltage levels. They also that the flagship programs like DDUJGY and IPDS are under implementation. The attention is drawn to the Annual Report of the E&PD of 2008-09 which gives the status of metering of different voltage levels.

#### SYSTEM METERING STATUS OF SIKKIM

Туре	Nos.	Meter Installed	% Metering
66KV Feeders	13	13	100
11KV Feeders	115	115	100
3.3 KV Feeders	4	4	100
D.T.s	1370	531	38.76
Total	2988	663	84.69

When the 85% metering of the feeders at different voltage levels were completed in 2008-09 itself why this is kept incomplete even after 10 years. There seems to be deliberate attempt to stall the progress of metering for reasons best known to the EPDS. In other States the physical theft of power in rampant but such theft of power in negligible in Sikkim. The lengths of transmission lines are also short as compared to sparsely populated areas of other parts of India. It can be easily concluded that the losses are due to some other reasons. Since the different voltage levels are metered we request the Hon'ble commission to direct the EPDS to provide the actual losses at different voltage levels at different feeder stations with authentic data of metering.

In reply to the separation of SLDC and Trading functions the EPDS resorts to a notification of formation of a committee. The notification states that the Chairman and other members of the committee are Secretary and other officers of the EPDS. This seems to be an eyewash just to create a smoke screen so that the EPDS can continue to violate the section 31 and section 39 of the Act. The Secretary of the EPDS who is the all-powerful head of the department for all the employees of the Department, The employees of SLDC, the Trading Committee, EHV, etc all report to him so the notification does not stand the scrutiny of the objective with which section 31 and 39 are provided in the Act. Further PCE (EHV is a member of the committee but the section 39 of the Act says that State transmission utility shall not engage in the business of trading of electricity. PCE (EHV) is the head of the transmission wing of the EPDS and is a powerful member of the trading committee. This also does not go well with the spirit of section of the Act. We request the Hon'ble Commission to

direct GOS to disband such useless committee and create a separate Department/Company as per requirement of provisions of the Electricity Act.

Reform in the power sector is the core issue of the Electricity Act, 2003. The Government Departments and Boards running the generation, transmission, distribution, SLDC and trading of electricity should be mandatorily unbundled and handled by different Companies. The unbundling will bring in efficiency in all facets of the power sector. The GOS has constituted a committee comprising of four members in 2017 after 14 years of commencement of the Electricity Act. Out of the four members three seem to have already retired a year back and the GOS has not bothered to reconstitute the committee. Although the committee members are constituted by name they have been nominated based on their position as Principal Secretaries to GOS for different Department. We would like to request the Hon'ble Commission to direct the Committee to provide the minutes of the meeting held far by the committee and recommendations made by the committee for unbundling as reforms in power sector. It is also our humble request to the Hon'ble Commission and direct EPDS to take the reforms as mandated by the Electricity Act seriously and initiate immediate measures as deemed necessary in public interest.

- 2. The EPDS states that most of the feeder have been metered which is a vague term. As stated above 85% of feeders at different voltage levels were metered in 2008-09 itself as per their Annual Report, 2008-09 submitted the Sikkim Legislative Assembly. After 10 years the EPDS gives a vague reply that most of the feeders are metered. We request the Hon'ble Commission to direct the EPDS to provide status of metered and non-metered different voltage feeders station and sub-station wise.
- 3. The EPDS states that a cell exists for monitoring of the IPPS. WE request the Hon'ble Commission to direct the EPDS to provide the IPP wise status of the projects completed or abandoned. Statement of power generated by different IPPS and the share of free power provided to the State Government.
- 4. The mere fact that the EPDS comes under the purview of AG Sikkim mean that EPDS cannot institute commercial auditing. The section 61 of the Electricity act clearly stipulated that the Commission shall specify the terms and condition for determination of tariff and in doing so shall be guided by among many other conditions "the generation, transmission, distribution and supply of electricity are conducted in commercial principle." The directive issued by the

Hon'ble Commission in its Tariff order NO. TR-3/2013-14 dated 30/03/2013 regarding the ARR & Tariff for the Year 2013-14 and reiterated ever since "On the request of the EPDS, the Commission has agreed to permit extension of the time for submission of all prescribed documents and schedules relating to the Annual Accounts and the Balance Sheets along with the Profit and Loss Accounts are required under the Electricity (Supply/Annual Accounts) Rules 1985 and submit the same to the Commission by the 30<sup>th</sup> Sep. 2013 after having the same duly audited."

In view of the non-compliance of the directives of the Hon'ble Commission even after 6 years Hon'ble Commission is requested to reject all the submissions of AAR and True-up petition submitted by the EPDS.

5. The EPDS says that the AT&C losses which was 73.86 % in 2010-11 has improved to 32.56% in 2017-18 but their own Annual Report 2008-09 submitted to the Sikkim Legislative Assembly gives the following figures:-

AT & C Losses Reduction in the State of Sikkim:

Year	AT & C	% age
rear	Loss%	Reduction
2001-02	57.18	
2002-03	53.46	3.72
2003.04	53.07	0.39
2004.05	43.63	9.44
2005.06	41.00	2.63
2006.07	40.00	1.00
2007-08	39.50	0.50
2008-09	39.00	0.50

It is alarming to note that when the AT&C losses which was 39% in 2008-09 has become 73.86 % in 2010-11. We don't want to jump to conclusions but it is apparent that the EPDS has been fudging figures to get schemes sanctioned from GOI. This anomalies in reporting warrants commercial and forensic auditing of the accounts of the EPDS.

- 6. The EPDS in its submission Part II(A) in gage number 31 gives a figure of Free Power 360.56 MU and now they provide a figure of 457.02 MU in the annexure provided. Since the figures of availability of power changes such drastically all the calculations made in the AAR becomes completely wrong. So the Hon'ble Commission may like to direct the EPDS to resubmit the entire petition.
  - Regarding free power from 110 MW Chuchachen and 1200 MW Teesta III HEP it is very worrying to know that the entire free power that should be accruing to the GOS through the EPDS is going to a Company SPICL which is not in the interest of the people of Sikkim. As per agreement the 13 % free power should come to the EPDS. The State Government is losing 700 MU of energy annually. The EPDS envisages to collect Rs. 196.89 Cr from sale of 369.36 MU of energy which works out to Rs. 5.33 per unit. So at this rate the total loss to the Government is Rs.373 Cr. The Hon'ble Commission may like to direct the EPDS to submit a report on then circumstances and approval of the competent authorities which has warranted the diversion of such valuable resource to a Company solely formed to benefit IPP Teesta Urja Ltd and Gati Infrastructure Ltd.
- 7. It is a known fact that long term PPAs are signed between generating Companies and Distribution utilities. Every agreement has some exit clause. It is not necessary to remain in a PPA when the State Government is losing valuable revenue to maintain such outdated agreement. The free Energy available within the State even if firm power generated is only considered is sufficient to cater to the needs of the State. EPDS is unnecessarily procuring power from outside State and SPDC which is now a Private Company taken over by Athena. The EPDS is procuring energy from SPDC at Rs. 4 per unit and selling its own free power available at less than Rs. 0.70 per unit. All this is bad economics.
- 8. On the one hand the EPDS says the Department is contemplating manpower planning and on the other it is employing unskilled people on ad-hoc and giving extensions to retired people. The Hon'ble Commission is requested to direct the EPDS to provide a statement of all the employments made in the last five years with proper job description.
- 9. The EPDS states that in the FY 2017-18 the revenue collection against electricity consumption inside the State was Rs. 194.70 Cr while AT&C loss is 32.56%. In the FY 2010-11 the AT&C loss was 73.86% and the Revenue was 53.75%. The figures provided seems wrong as the audited actual revenue receipts for the year 2010-11 is Rs. 87.82 Cr by selling 163 MU within the State. The RE revenue of 2017-18 is Rs. 194.91 Cr only by selling 1150 MU of energy within and outside State. It is very important to note that by year 2017-18 the

revenue sub head 03-Receipt from Trading of Surplus Energy (ARM) has been abolished. It may be further noted that during the FY 2009-10 the EPDS had earned a revenue of Rs. 286 Cr when the available energy was far less and the tariff was also lower. A comparison of the energy available for sale, Tariff and the revenue realized between 2009-10 and 2017-18 it is clear that although there was a 50% increase in energy available for sale, 25 % increase in Tariff by the revenue reduced by 32%. Based on the increased energy available and Tariff the revenue from sale of power should have been Rs. 663 Cr in 2017-18. Huge loss has accrued to the GOS for reasons best known to the EPDS.

Subsequently with the commissioning of private power projects the revenue from trading of power kept reducing and finally the revenue account head itself was abolished. It is necessary to ascertain where this revenue is actually going. By 2018-19 the energy available for sale and trading was 1913 MU of which free power alone constituted 1216 MU including Teesta III and Chuchachen. It is very surprising to note that when the revenue was Rs. 286 Cr when the available energy was only about 800 MU now when the energy available if 1913 MU the revenue from sale is only Rs. 194.91 Cr. This calls for a thorough investigation into the trading of power and revenue realization thereof. The Hon'ble Commission is requested to intervene and order a thorough investigation by an independent agency.

We would like to make the following added submissions:-

- 1. In the petition for True Up for the FY 2016-17 the Revenue for sales in table 1.14 is shown as Rs. 259.75 Cr in the column "provisional as per accounts" whereas the actual revenue as per the Revenue Budget passed in the SLA is only 170 Cr. The Hon'ble Commission may like to direct the EPDS to revise the entire petition for approval of True Up for 2016-17 as per the actual figures passed by the SLA.
- 2. In the petition at table 7.43 Revenue at existing tariff as approved by the commission for FY 2018-19 the average rate for sale of power within State is shown as Rs. 5.17 per unit and the rate for sales outside State is Rs. 2.66 per unit. In the table Power Purchase Cost for the Year 2018-19 provided along with the reply furnished by EPDS it is seen that average cost purchase cost is Rs. 3.65 per unit for Thermal. The EPDS purchases additional Hydro power from NHPC Rangit III and Teesta V at Rs. 4.21 per unit and Rs. 2.14 per unit. It also purchase Hydro power from SPDC which is a company owned by Athena at Rs. 4.20 per unit. It is not understood why purchase additional Hydro Power when so much excess free power is available. After purchasing so much additional power at such high costs it sells at Rs. 2.66 per unit only. While making huge losses from sale of

power outside by purchasing at higher cost and selling at lower costs the EPDS charges as average of Rs. 5.17 per unit from consumers within the State. So the consumers within the State are taxed heavily by the EPDS to sustain its business outside State and to cover all inefficiencies in operation within the State. The economics behind such arrangement is not understood and it raises doubt as to who are benefiting from such decisions of the EPDS. This calls for a through enquiry into the matter.

In view of the above we request the Hon'ble Commission to keep the process for fixation of Tariff in abeyance and order an enquiry into the trading of power and auditing of the EPDS by an independent agency appointed and monitored by the Hon'ble Commission.

The Hon'ble Commission once again forwarded the rejoinder received from Shri K.B.Gurung to the Energy & Power Department vide letter No. 318/SSERC/2017-18/74 Dated 26.02.2019 with the directive to give their responses/clarifications on the rejoinder to the applicant during the Public Hearing to be held on 28<sup>th</sup> February 2019. The Commission also requested the applicant to attend the public hearing.

Shri K.B.Gurung, who filed the rejoinder attended the Public Hearing held on 28th February 2019 at Chintan Bhawan, Gangtok. During the Public Hearing, Shri K.B.Gurung submitted his views/comments/objections/suggestions on the ARR and Tariff proposal for FY 2019-20 of the Energy & Power Department before the Hon'ble Commission. In addition to submissions made by him and his friends in their petition and his rejoinder, Shri Gurung also gave his views/comments on several other issues pertaining to the power sector in the State. Shri Gurung also placed several suggestions and requests before Hon'ble Commission for consideration. the The gist views/comments/objections/suggestions submitted Shri Gurung during the Public Hearing vis-a-vis the clarifications/replies/responses furnished by the Energy & Power Department is presented hereunder:

# Views/Comments/Objections/Suggestions/Submissions made by Shri K.B.Gurung:

 The EPDS ought to furnished their responses/replies to the rejoinder filed by him but it was not done so by the EPDS.

- The EPDS have merely replied that a High Powered Committee was constituted by the State Government for un-bundling of the Energy & Power Department but details of the 'minutes of meeting' or proceedings of the Committee and the report/recommendations made by the Committee are not available in Public domain. That some of the members of the Committee have already retired and no tangible actions have been taken for taking forward the un-bundling process.
- Sikkim receives huge quantum of free power from the hydropower projects whereas the consumption within the State is little over 500 MUs.As such, he opined that 50% of free power is sufficient to meet the power demand of the State.
- Sikkim receives huge quantum of free power, the EPDS is buying thermal power
  at high cost and also that the EPDS is buying power at high rate and selling
  outside the State at cheaper rates. He submitted and requested that in the
  interest of the people, the EPDS should stop purchase of power.
- The Transmission and Distribution loss is not improving inspite of investment of huge funds and infrastructural development, due to which the loss is being passed onto the consumers and taxing the consumers.
- Proper up-keep of records and inventory of sale, purchase or auction of transformers and other machines/equipments has to be done by the EPDS.
- Metering of high end consumers like pharmaceutical companies including system to check their power consumption has to be put in place.
- Section 31 and 39 of the Electricity Act, 2003 prohibits the State Load Despatch
   Centre and the State transmission Utility for engaging in the business of trading
   in electricity and therefore the EPDS should ensure that electricity trading

business is not handled by the Officers or Engineers of the EPDS to ensure transparency in buying and selling of electricity in the State.

- Power Generation from the EPDS's own powerhouses has not improved. The EPDS needs to take necessary action to improves its own generation not only to off-set import of costly power but also for financial sustenance of the Department vis-a-vis generation of work and employment for locals.
- Any PPA execution by the EPDS for buying of thermal power must be done only after considering the pros and cons and keeping the interest of the consumers paramount.
- The EPDS must look for setting up of workshop for repair/renovation of transformers including fabrication of lattice structures by the Engineers and staffs of the EPDS. The EPDS should make full use of the manpower available as well as the new manpower engaged under 'one family one job' job recently.
- The vast natural resources of the State have been used for development of hydropower projects and therefore every citizen of the State has the right on the 'Free Power' being received from various hydropower projects.
- Electricity has to be provided 'free of cost' to all rural consumers and the tariff of commercial consumers have to be reduced by 50% in the F.Y 2019-20 considering the huge quantity of free power available to the State. Electricity tariff should be brought down and hike in tariff should not be done.
- Committee comprising of independent members should be constituted to check quality of various infrastructure works being taken up by the EPDS. The Committee should conduct surprise visits and checks to ensure strict quality control of works being done by the EPDS.

# Responses/Clarifications/ Replies furnished by the Energy & Power Department during the Public Hearing:

- The EPDS submitted that it could not furnish its response/replies to the rejoinder filed by Shri K.B.Gurung due to limited time as the rejoinder was received only two days before the Public Hearing and EPDS is ready to give its clarifications/responses on the issues raised by the applicant.
- The first meeting of the High Powered Committee constituted to study the unbundling process has been already convened and the EPDS has already initiated the proposal to ensure that timely decision is taken on the un-bundling process. The proceedings of the Committee will be made available in the public domain.
- Power Demand and Supply being a dynamic subject, it needs to be viewed beyond the boundaries of 'power supply' and 'consumption'. Although, consumption of power within the State is less the EPDS has to ensure energy security as any blackout will lead to collapsing of all systems and works. Therefore, while planning for power procurement, the EPDS has to keep the overall demand of the State and not only the consumption. The terms and conditions of the PPAs signed by the EPDS for purchase of thermal power are as per the norms/guidelines of the Government of India. The PPAs were signed when Sikkim had not planned or undertaken development of hydropower and the validity of the PPAs are for 20 to 25 years. Further the PPAs don't have exit clause due to which it is not easy for the EPDS to withdraw from the PPAs. As per existing terms of the PPAs and standing norms of the Government of India, EPDS is bound to pay the demand charges even if no power is drawn from the thermal power stations.
- Some new thermal power houses are coming up in the future and Sikkim will be allocated power from those thermal power stations as well. As of now, the tariff or rate of power from those power stations are not fixed and it is also not clear when those projects will be commissioned. EPDS is considering not taking power from these upcoming thermal power stations. Accordingly, the EPDS will take up the matter with the Government of India in the near future.
- ➤ While planning for power procurement, the EPDS has to consider the fact that during the lean season, the power generation from hydropower projects goes down drastically and sufficient backup thermal power is available to meet the ever growing power demand in the State. Although sizeable quantity of free power is available from the various private power projects and NHPC projects, the free power from such projects is not available uniformly throughout the year. Only peaking

generation is done by projects like 510 MW Teseta-V HEP and 96 MW Dikchu HEP during the lean season and they operate for only 3 to 4 hours in the evening (as peaking station). Therefore, the EPDS has to have sufficient thermal power backup for energy security of the State.

- ➤ EPDS has already taken necessary steps and have made requests to the concerned agencies/department in Government of India for surrendering the high cost thermal power. However, so far no positive response has been received by the EPDS.
- The power demand of the State is expected to hit 650 MUs in the near future whereas the total thermal power allocation is only 90 MW and State's own hydro generation capacity is around 28.00 MW only. As such, the power demand and supply doesn't match. The revenue from free power from 1200 MW Teesta-III HEP and 110 MW Chuzachen HEP goes for repayment of the loan towards equity infused in the project by the State and as such the free power from these two projects will not come to the EPDS in the near future.
- ➤ The EPDS has made all possible efforts towards providing un-interrupted power supply to it consumers. The EPDS has not resorted to 'load shedding' since last 15 years in the State, which indicates that there is no problem from the supply side. If all thermal power is surrendered as suggested by the public, the State will face tremendous power shortage.
- ➤ Power being a market driven item , it is incorrect to say that the EPDS is buying power at high rate and selling it at low rate. Few years ago, the power rate available in the market was good and it was possible to earn profitable revenue from sale of thermal power but today the power rates have gone down drastically.
- ➤ EPDS is buying power from SPDC Limited (A Govt. Of Sikkim Enterprise) as per the PPAs signed with the Corporation and as per rates agreed upon in the PPAs. SPDC being a Government Corporation and the only buyer being the EPDS, the PPAs for 20 years were executed between the SPDC and the EPDS. The EPDS is purchasing power from SPDC Limited at rates agreed to by the State Government and the SPDC Limited as per the PPAs executed prior to disinvestment of SPDC Limited.
- Metering of consumers and feeders is a continuous process due to the fact that the number of new consumers are going up every year. EPDS is taking up metering under various schemes like IPDS, APDRP etc. EPDS has already introduced remote metering in high end consumers like pharmaceuticals. Further, the EPDS is in the

process of covering towns and cities under pre-paid metering. These measures are taken to bring down the AT & C losses. The revenue realization from energy sales within the State has gone up significantly in the recent years, which is also a good indicator of reduction in AT&C losses achieved by the EPDS.

- ➤ The EPDS is calculating the losses as per the loss calculation formula & guidelines issued by the Central Electricity Authority and the guidelines and formula for loss calculations gets modified/amended by the Central Authorities from time to time and such changes/amendments in the loss calculations formula tend to bring variations in the loss calculations.
- The power tariff in the State is one of the lowest in the country and the tariff for domestic consumers has not been hiked significantly since last many years. In addition, 100 units free power is being given to rural consumers as per State Government policy. Unlike Distribution Companies, the EPDS being a State Government Department, it is functioning more like a welfare department. EPDS has been recovering only a meagre percentage of the total revenue gap for the past many years through the tariff revision/hike approved by the Hon'ble Commission. The revenue gap and losses are not being passed unto the consumers but the State Government has been absorbing the gap/losses.
- ➤ EPDS being a State Government Department, auditing of the accounts of the Department is being done by the Accountant General Office (CAG), Sikkim and also by the internal audit of the Finance ,Revenue & Expenditure Department, Government of Sikkim. Had there been any financial miss management involved in trading of power or procurement of power, the CAG would have taken cognizance of the same but it is not so.

As per the Hon'ble Commission's directives, the EPDS furnished its replies to the rejoinder submitted by Shri K.B.Gurung. The replies to the rejoinder submitted by the EPDS is reproduced below.

#### Replies of the EPDS to Shri K.B.Gurung's rejoinder:

1. As explained in the reply forwarded earlier, metering is an ongoing process as new feeders are added to the power network with every passing year. Also, existing meters and the associated equipments do get damaged/faulty and require replacement. However all effects will be made to complete the feeder metering subject to availability of fund.

The SLDC cell & EHV circle as stated earlier are not involved with the trading aspect. The trading is done by a committee and is assisted by a cell in the Department. The clause (1) of section 39 of IE Act 2003, says "The State Government may notify the Board or a Government company as the State Transmission Utility:

Provided that the State Transmission Utility shall not engage in the business of Trading"

Here, it becomes pertinent to mention that "May" does not imply mandatory or obligatory. The choice or the power to do so has been left to the State Government. Till date, the State Government has not issued notification in this regard. Therefore, the observation raised in relation to section 39 has no relevance and requires no clarification. However, once again it is reiterated that the trading is done by a committee notified by the Government and assisted by a cell which is not involved with the SLDC or Transmission activities.

As submitted earlier, the matter of Unbundling is being dealt by a committee constituted by the State Government. The Record of Discussion of the first meeting is enclosed and Annexed as "A".

- 2. The matter has been explained at SL No 1. The details will be submitted in due course of time after compilation of the latest status.
- 3. The Details are annexed as "B" & "C" till 2017-2018.
- 4. As stated earlier, EPDS being a Government organization, the audit comes under the purview of Accountant General Sikkim's office.
- 5. The EPDS while calculating the losses has to follow the guidelines and use formulae provided by Central Government (CEA). The formula for loss calculation does get modified/ amended by Central authorities for time to time. The Department is bound to do loss calculation as per the formula supplied by them. Such changes in formula bring variation in the loss calculations. To support or clarification the changes in the formula adopted and effective from 2017-2018 and earlier formula which was effective form 2010-2011 is annexed as "D".
- 6. As stated earlier, the free share of 1200 MW Teesta State-III &110 MW Chuchachen HEPs are credited to Sikkim Power Investment Corporation Limited (SPICL) which is SPV or a

company wholly owned by the State Government created for availing loan to fund Hydro Projects etc. The receivables of free share are used for servicing of debt/loan.

- 7. The Department had given its clarification on this in the reply submitted earlier. It would only like to add the following
  - a. The Power Purchase Agreements are long term with effective years being 20-25 years.
  - b. With every passing years, requirement & usage of Energy increases. Almost everything in our daily life is dependent on Energy. In such a scenario, the concept of Energy Security becomes paramount, necessitating the Department to plan on long term basis. Also, every aspect of demand, on day to day basis, month to month basis and year to year basis has to be considered.
- 8. The Department does not wish to add anything further as the reply was provided earlier.
- 9. All details have been provided in the tariff petition submitted. However, it should be noted that the pricing of sale of power is dynamic and market driven. Implying the cost of unit of power depends on supply & demand of power in the country. It is true that in the earlier years 2009-2010 till 2011-2012 the rate for unit of power sold outside the State by the Department was considerable higher than what it is now. There has been decrease in the recent years. This as stated above is purely market driven phenomenon.

As explained earlier in the reply submitted and also at SL No 6 of this reply, other than above two IPP HEPs, the free share of other operational IPP HEPs have been shown in the tariff petition submitted. Other observation raised have also been clarified in the earlier reply submitted, public hearing of 28<sup>th</sup> Feb 2019 & also in replies above.

Therefore, once again it is to bring to the notice of the Hon'ble Commission that Department is putting all efforts to bring in efficiency, improvement in the functioning. Many of which are amplified by the annual parameters shown in the tariff petition submitted. Many of the earlier directive have also been dropped partially or wholly by the Hon'ble Commission indicating that there has been compliance and improvement. Also, the tariff hike proposed for 2019-2020 is minimal and even with that the some of the tariff category is the amongst the lowest in the Country.

#### Remarks/Comments of the Commission:

The Hon'ble Commission has given patient hearing to the submissions made by the applicant in the open Public Hearing and also given due consideration to the views/suggestions/comments/objections and requests made by the applicants including the rejoinder. The Commission has also given due consideration to the responses/replies furnished by the EPDS as well as the clarifications given to the applicant during the Public Hearing held on 28<sup>th</sup> February,2019 and subsequent reply to the rejoinder by the EPDS. The Commission has noted the views/suggestions/objections of the objectors as well as the responses and clarifications given by the EPDS.

The views, observations and remarks of the Commission are given hereunder:

- The Commission observes that some of the issues raised by the applicants in their petition as well as submissions made during the Public Hearing need tangible actions and efforts from the EPDS.
- The Electricity Act, 2003 is primarily is intended to bring in reforms in the power sector by bringing in transparency in the electricity generation, supply & distribution and transmission business. The EPDS being a State Government Department has its limitations and therefore it can't function like a Distribution, Generation or Transmission Utility fully. The Commission is of the view that although the Electricity Act, 2003 envisages un-bundling of the power sector, the decision is left to the State Government. Therefore, the EPDS has to constantly follow up the matter to ensure that suitable decision on the matter is taken by the State Government duly considering the feasibility of having separate utilities in the State.
- The Commission through its various directives and also during interactive meetings with the EPDS has highlighted the need for reduction in AT&C losses. The AT&C losses in the State has been reducing slowly but steadily. Nonetheless, the EPDS must make continued effort and take tangible measures to bring down the losses to the national average.
- The Commission had been issuing directives in the past to the EPDS for carrying out energy audit to get an accurate picture of the AT&C losses in the State so that well targeted measures could be taken for reducing the losses. The Commission once again directs the EPDS to formulate a mechanism to carry out energy auditing. In this regard, the EPDS may seek the views of the Accountant General Office (Sikkim) with the approval of the State Government.

- The Commission is well aware of the fact that electricity demand and supply is a dynamic subject and that rates of electricity being traded is market dependant. The electricity consumption and demand in the State is growing day by day and therefore the EPDS needs to make proper power purchase planning considering all factors. For purchase of backup power during the lean season, the EPDS is advised to consider resorting to 'competitive bidding' based power purchase to obtain the most competitive price.
- The Commission has issued several directives and also regularly emphasized to the EPDS on the urgent need for metering of all consumers and feeders including remote metering of high end consumers. The Commission has also stressed upon the need for metering of distribution transformers, pre-paid metering etc. The EPDS is directed make vigorous efforts towards metering, which will go a long way in reduction of the losses.
- The Commission feels that the EPDS should take steps for review of the terms and conditions of the PPAs signed for purchase of thermal power. The EPDS is directed to explore the possibilities of surrendering high cost thermal power. In this regard, the Commission has advised many times in the past to the EPDS to approach the Government of India at the highest level so that only the cheap thermal power is retained as back up for meeting the power demand in the lean season vis-a-vis energy security.
- In the era of digital technology and e-governance, the EPDS can't keep itself aloof. EPDS must take steps to ensure that proper records/data are maintained of its assets and other details.

The Commission has carried out due prudence check of various components of the ARR and examined the assumptions and proposals made by the EPDS. While finalizing the ARR and Tariff for F.Y 2019-20 as well as the truing up for F.Y 2016-17 and Review fro F.Y 2018-19, the Hon'ble Commission has given due consideration views/comments/suggestions and objections received as well as the views and suggestions of the members of the State Advisory Committee. The Commission has also issued fresh directives to the EPDS, which are incorporated under the 'Directives' chapter of this order. While finalizing the ARR and Tariff Order, the Commission has been guided by the provisions of the Electricity Act, 2003 as well as the National Electricity Policy, National Electricity Plan and Tariff Policy.

The Commission, while approving the ARR and finalizing the Tariff order, has ensured that the consumer's interests are safeguarded and at the same time, recovery of the cost of electricity in a reasonable manner.

<u>List of Participants in the Public Hearing Held on 28<sup>th</sup> February, 2019 at Gangtok, East Sikkim</u>

SI.	Name	Designation	Chintan Bhawan,G Department or Organisation	Address	Signature
		CHAIRPERSON	SSERC	DEORALI	The ox
2	BHATTARAI Kaome Tennying	Secuty.	CSERC.	_do_	lef
3	KB Kan	- 11	PCE-Cu. Secy	Sonam Tshering may	1 731
4	Agua Daya	D16(4)	SSERC	Devedi Goog	J11)-
5	PEHAKTHA	Dir(TSI)	SSERC	Devoli your Folk	Kghapk
6 /	GENA A. GHANSAPA	AG (E)	SSEC	" "	Myst
7	A. B. Rai	pe	Energy & forms	Gangton	1 28/2/
8	R. Phapo		Durgy & Pour	Response Col	J. Bulgar
9	,	Dir (Accts		Mague	Aliga
10	P. M. Sha	1	ESP Regeld	Gart	€ P
11	D.N.Khati	una CE	EBP DOM.	Emyton	Dungo
12	D. Produce	CE (Mea	EK 1 Dep4	Gaugthe	dugge
13	Tilip Elian	A ACE GOA	) Exporpu.	Georg Wite	1 Can
14	Kay Prochan			Ganghul	Ch-20316
15	S. R. Bhutu	L ACE (HO-TI	EZP Dupte	Canglele	28 2 1
16		alcal AD (Rea		- Gaugtok.	flux 28.2.
17	Signedha Prod	han A.E (Trad)	E & P Dept .	Gangtok.	Chan
18	Kichagan	u cecey	) Ex Pack	agon to C	Licaro
19	T.T. lepel	e CE(HE)	ENP Rept.	Gangha.	OF0
20	Kounk	m LE(N)	ECPD	Gangton	All
21	K.B. G.	of Prebla	is SEM (Party		Gai
22	M BLotlare	i Albert	. SSERC_	Garthe	0

# 5. PROVISIONAL TRUE UP FOR THE FY 2017-18

#### 5.1 Preamble

The Commission had approved the ARR and Tariff for the FY 2017-18 vide its Order dated 21.03.2017, based on the projected data submitted by the EPDS. Now, the EPDS has submitted proposals for provisional True up for the FY 2017-18, duly furnishing the actuals for the FY 2017-18, stating that these are as per the provisional accounts prepared by them.

"Regulation 14 (1) & (2) of the SSERC (Terms and Conditions for Determination of Tariff)
Regulations 2012, contains the following provisions:

- (a) The Commission shall undertake a Review of the expenses and revenues approved by the Commission in the Tariff Order. While doing so, the Commission shall consider the variation between approvals and revised estimates/pre actuals of sale of electricity, income and expenditure for the relevant year and permit necessary adjustments/changes in case such variations are for adequate and justifiable reasons. Such an exercise shall be called a 'Review'.
- (b) After the audited accounts of a year are made available, the Commission shall undertake a similar exercise as above with reference to the final actual figures as per the audited accounts. This exercise, with reference to the audited accounts, shall be called 'Truing up'. The Truing up for any year will ordinarily not be considered after more than one year after 'Review'."

The EPDS has not submitted the audited accounts for the FY 2017-18. Therefore, true up cannot be done. EPDS has stated that though the accounts are not audited, the data furnished for the FY 2017-18 are the actuals and Provisional True up may be done with regard to the actuals. This is discussed in the succeeding paragraphs.

# 5.2 Energy Demand (Sales)

The energy sales approved by the Commission, vide its Tariff Order for the FY 2017-18, the actual sales given by EPDS, as per provisional accounts with the ARR & Tariff Petition for the FY 2019-20 and now approved by the Commission, are summarised in the table below.

Table 5.1: Energy Sales approved by Commission for FY 2017-18

(In MUs)

Sl. No.	Category	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
1	Domestic	101.58	98.72	98.72
2	Commercial	40.47	38.38	38.38
3	Public Lighting	0.27	0.17	0.17
4	Temporary Supply	1.50	3.38	3.38
5	HT Industrial	171.78	174.43	174.43
6	LT Industrial	1.32	4.43	4.43
7	Bulk Supply	27.72	24.16	24.16
8	Total	344.64	343.67	343.67

The Commission now approves energy sales for the FY 2017-18 at 343.67 MUs, as per the actuals furnished by EPDS.

# 5.3 Transmission & Distribution Losses (T&D Losses)

The Commission in its revised order for the FY 2017-18, had fixed the target of T&D Losses at 27.11% for the FY 2017-18. The EPDS in its ARR & Tariff Petition for the FY 2019-20, has stated that the actual T&D losses during the FY 2017-18 is 32.48% as per provisional accounts.

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

The inter-state transmission loss (pool loss) for the FY 2017-18 has been considered at 2.14% and T&D Loss, when recalculated, is as shown in table below.

Table 5.2: T&D Loss calculation approved by the Commission for FY 2017-18

Sl. No.	Particulars	Unit	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
1	Own generation	MUs	12.00	11.25	11.25
2	Energy purchased from NTPC	MUs	382.74	536.66	536.66
3	Energy purchased from WBSEDCL	MUs	52.65	23.96	23.96
4	Energy purchased from NHPC	MUs	36.21	46.78	46.78
5	Energy purchased (2+3+4)	MUs	471.60	607.40	607.40
6	Pool loss	%	2.14	1.66	2.14
7	Pool loss	MUs	10.09	10.09	13.00
8	Net energy available (5-7)	MUs	461.51	597.31	594.40
9	Energy purchased from PTC	MUs	45.62	37.29	37.29
10	Energy purchased from SPDC	MUs	27.09	26.35	26.35
11	UI purchased	MUs	40.02	21.44	21.44
12	Free energy	MUs	360.56	457.02	457.02
13	Total energy available at state periphery (1+8+9+10+11+12)	MUs	946.80	1150.66	1147.75
14	Outside state sale through UI / Trading	MUs	473.98	641.68	641.68
15	Net energy available for sale within the state (13-14)	MUs	472.82	508.98	506.07
16	Energy sales within the state	MUs	344.64	343.67	343.67
17	T & D loss (15-16)	MUs	128.18	165.31	162.40
18	T & D loss	%	27.11	32.48	32.09

The Commission now approves T&D Loss at 32.09% for the FY 2017-18.

# 5.4 Own Generation

The Commission in its Tariff Order dated 28.03.2018 had approved Own Generation for the EPDS at 12.00 MUs for the FY 2017-18. Now, the EPDS has furnished actual own generation was 11.25 MUs during the FY 2017-18, as detailed in the table below.

Table 5.3: Own Generation approved by the Commission during FY 2017-18

(In MUs)

Sl. No.	Stations	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
1	Total Generation	12.00	11.25	11.25
2	Total	12.00	11.25	11.25

The Commission now approves Own Generation of EPDS during the FY 2017-18 at 11.25 MUs, as per actuals furnished by EPDS.

#### **5.5** Power Purchase

The Commission in its Tariff Order dated 28.03.2018 had approved the power purchase quantity of 944.91 Mus including free power quantity of 360.56 MUs. Now, the EPDS has furnished actuals for the FY 2017-18 at 1149.49 MUs including free power of 457.02 MUs in the ARR and Tariff Petition for the FY 2019-20, as detailed in table below.

Table 5.4: Power Purchase approved by the Commission during FY 2017-18

(In MUs)

Sl. No.	Stations	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
1	NTPC			
	a) FSTPP	113.07	133.01	133.01
	b) KHSTPP-I	63.97	77.59	77.59
	c) KHSTPP-II	21.63	36.11	36.11
	d) BSTPP	30.18	123.32	123.32
	e) TSTPP	153.89	166.63	166.63
2	NHPC			
	a) RANGIT-III	4.34	4.38	4.38
	b) TEESTA-V	31.87	42.40	42.40
3	Other Sources			
	a) PTC	45.62	37.29	37.29
	b) WBSEDCL	52.65	23.96	23.96
	c) SPDC	27.09	26.35	26.35
4	UI Purchase	40.02	21.44	21.44
5	Free Power	360.56	457.02	457.02
6	Total	944.91	1149.49	1149.49

The Commission now approves power purchase of 1149.49 MUs, including free power of 457.02 MUs during the FY 2017-18, as per the actuals furnished by EPDS.

# 5.6 Energy Balance

The details of energy requirement and availability approved by the Commission in its Tariff Order dated 28.03.2018 for the FY 2017-18 and the actuals furnished by the EPDS, and now approved by the Commission, are presented in table below:

Table 5.5: Energy Balance approved by the Commission for FY 2017-18

Sl. No.	Particulars	Unit	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
A	ENERGY REQUIREMENT	_			
1	Energy sales within the state	MUs	344.64	343.67	343.67
2	Outside state sale through UI / Trading	MUs	473.98	641.68	641.68
3	Total energy sales (1+2)	MUs	818.62	985.35	985.35
4	Overall T & D losses	%	27.11	32.48	32.09
5	Overall T & D losses	MUs	128.18	165.31	162.40
6	Total energy requirement (3+5)	MUs	946.80	1150.66	1147.75
В	ENERGY AVAILABILITY				
1	Own generation	MUs	12.00	11.25	11.25
2	Power purchased from CGS/UI etc.	MUs	584.33	692.48	692.48
3	Free Power	MUs	360.56	457.02	457.02
4	Overall pool loss	%	2.14	1.66	2.14
5	Overall pool loss	MUs	10.09	10.09	13.00
6	Total energy availability (1+2+3-5)	MUs	946.80	1150.66	1147.75
C	ENERGY SURPLUS/(GAP)	MUs	0.00	0.00	0.00

#### 5.7 Fuel Cost

EPDS is having 12 hydro generating stations, with a total installed capacity of 35.70 MWs and 2 diesel-generating stations, with a total installed capacity of 4.99 MWs. The fuel cost approved by the Commission in its Tariff Order dated 28.03.2018, actuals furnished by EPDS and the cost now approved by the Commission are given in table below.

Table 5.6: Fuel Cost approved by the Commission for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
1	Cost of fuel	0.18	0.12	0.12
2	Total	0.18	0.12	0.12

The Commission now approves the fuel cost of ₹ 0.12 Crores for the FY 2017-18, as per actuals furnished by EPDS.

#### 5.8 Power Purchase Cost

The Power Purchase Cost approved by the Commission in the Tariff Order for the FY 2017-18, actuals furnished by EPDS and the cost now approved by the Commission are given in table below.

Table 5.7: Power Purchase Cost approved by the Commission for FY 2017-18

(₹ in Crores)

Sl. No	Particulars .	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
1	Power Purchase Cost	226.25	242.04	242.04
2	Total	226.25	242.04	242.04

The Commission now approves power purchase cost of ₹ 242.04 Crores for the FY 2017-18, as per actuals furnished by EPDS.

# 5.9 Employee Cost

The Commission vide its Order dated 28.03.2018, had approved employee cost at ₹ 106.19 Crores for the FY 2017-18. The EPDS has furnished actuals at ₹ 94.86 Crores for the FY 2017-18 and the cost now approved by the Commission are given in table below.

Table 5.8: Employee Cost approved by the Commission for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
1	Employee Cost	106.19	94.86	94.86
2	Total	106.19	94.86	94.86

The Commission, accordingly, now approves ₹ 94.86 Crores towards employee cost for the FY 2017-18, as per actuals furnished by EPDS.

# 5.10 Repair and Maintenance Expenses

The Commission vide its Order dated 28.03.2018 had approved Repair & Maintenance Expenses of ₹ 21.80 Crores for the FY 2017-18. The EPDS has furnished actual Repair & Maintenance Expenses at ₹ 28.03 Crores for the FY 2017-18 and the cost now approved by the Commission are given in table below.

Table 5.9: Repair & Maintenance Expenses approved by the Commission for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
	Repair & Maintenance Expenses	21.80	28.03	28.03
2	Total	21.80	28.03	28.03

The Commission, accordingly, now approves ₹ 28.03 Crores towards Repair & Maintenance Expenses for the FY 2017-18, as per actuals furnished by EPDS.

# **5.11** Administrative and General Expenses

The Commission vide its Order dated 28.03.2018 had approved ₹ 1.14 Crores towards Administrative and General Expenses for the FY 2017-18. The EPDS has furnished actuals at ₹ 5.19 Crores for the FY 2017-18 and the cost now approved by the Commission are given in table below.

Table 5.10: A & G Expenses approved by the Commission for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
1	Administrative & General Expenses	1.14	5.19	5.19
2	Total	1.14	5.19	5.19

The Commission now approves ₹ 5.19 Crores towards Administrative & General Expenses for the FY 2017-18, as per actuals furnished by EPDS.

# 5.12 Capital Investment and Capitalisation

Capital investment and capitalisation during the FY 2017-18 approved by the Commission, vide its Order dated 28.03.2018 and actuals furnished by EPDS and now approved by the Commission are furnished in table below.

Table 5.11: Capital Investment and Capitalisation approved for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
1	Opening balance of CWIP	68.95	39.25	68.95
2	Capital Investment during the year	104.23	74.32	74.32
3	Total (1+2)	173.18	113.57	143.27
4	Capitalisation during the year	104.23	69.13	6.32
5	Closing balance of CWIP (3-4)	68.95	44.44	136.95

The Commission now approves the capital investment of ₹ 74.32 Crores and capitalisation of ₹ 6.32 Crores during the FY 2017-18.

#### 5.13 Gross Fixed Assets

In the absence of valid information regarding gross fixed assets, the Commission in its Tariff Order dated 28.03.2018, had not approved the value of gross fixed assets. The EPDS in its ARR and Tariff Petition for the FY 2019-20, EPDS has stated that the values of gross fixed assets are taken from the Asset Registers, as detailed in table below:

Table 5.12: Gross Fixed Assets during FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	Amount
1	Opening balance	971.12
2	Additions during the year	6.32
3	Closing balance (1+2)	977.44

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

In the absence of audited annual accounts, the information furnished by EPDS cannot be taken as authentic. As such, depreciation cannot be allowed on the opening GFA as furnished by the EPDS.

# 5.14 Depreciation

The EPDS in its ARR and Tariff Petition for the FY 2019-20, has furnished actuals at ₹ 26.93 Crores for the FY 2017-18.

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

The Commission in its Tariff Order dated 28.03.2018 had approved a depreciation of ₹ 21.76 Crores for the FY 2017-18 on the average GFA of ₹ 412.13 Crores at the rate of 5.28%. Now, the EPDS has stated that ₹ 6.32 Crores were capitalised during the FY 2017-18. The depreciation calculated by EPDS of ₹ 26.93 Crores. Now the Commission calculated Depreciation, is shown in the table below:

Table 5.13: Depreciation approved by the Commission for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	Amount
1	Opening balance GFA as on 01.04.2017	360.01
2	Additions during the year	6.32
3	Closing balance to end of 31.03.2017 (1+2)	366.33
4	Average GFA	363.17
5	Rate of depreciation	5.28%
6	Depreciation	19.18

The Commission accordingly now approves a depreciation of ₹ 19.18 Crores for the FY 2017-18.

## 5.15 Interest and Finance Charges

The EPDS in its ARR and Tariff Petition for the FY 2019-20, has not furnished interest and finance charges during the FY 2017-18.

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

The Commission in its Tariff Order dated 28.03.2018 had not approved any interest and finance charges. EPDS has not shown any loans and interest. No interest is allowed in Tariff Order for the FY 2017-18. **The Commission therefore, does not consider any interest.** 

## 5.16 Interest on Working Capital

The EPDS in its ARR and Tariff Petition for the FY 2019-20, has furnished Interest on Working Capital at ₹ 11.01 Crores during the FY 2017-18.

## **Commission's Analysis:**

As per Regulations 113 of SSERC (Terms and Conditions for Determination of Tariff), Regulations, 2012, interest on working capital shall be calculated on normative basis, notwithstanding that the licensee has not taken working capital loan from any outside agency.

- 1. The Working Capital consists of:
  - (a) Operation & maintenance expenses for one month.
  - (b) Budget for maintenance spares, at the rate of 1% of the historical cost of GFA, escalated at the rate of 6% PA from the date of commercial operation.
  - (c) Receivables equivalent to 2 months on fixed and variable charges of sale of energy.
- 2. Rate of interest on working capital shall be equal to the short term prime lending rate of SBI, as on 1<sup>st</sup> April of the relevant year.

Accordingly, the Commission has arrived at the interest on working capital as shown in the Table below.

Table 5.14: Interest on Working Capital calculated by the Commission for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	Total Cost	Working Capital & Interest
1	O & M Expenses		
a)	Emoployee Cost	94.86	7.91
b)	Repair & Maintenance Expenses	28.03	2.34
c)	Administrative & General Expenses	5.19	0.43
2	Maintenance of Spares		
3	Receivables	377.55	62.93
4	Total		73.60
5	SBI PLR as on 01.04.2017		13.85%
6	Interest on Working capital		10.19

Table 5.15: Interest on Working Capital now approved by the Commission for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
1	Interest on Working Capital	7.74	11.01	10.19
2	Total	7.74	11.01	10.19

The Commission now approves interest on working capital at ₹ 10.19 Crores for the FY 2017-18 as against the ₹ 11.01 Crores furnished by EPDS.

## 5.17 Return on Equity

EPDS has not claimed any amount towards Return on Equity for the FY 2017-18.

## **Commission's Analysis:**

Regulation 110 of SSERC (Terms and Conditions for determination of Tariff) Regulations, 2012, provides for return on equity at 14% PA on the equity amount appearing in the audited balance sheet of the annual accounts.

The EPDS has not produced audited annual accounts. In addition, since it is a State Government Department, the expenses are funded by the Government. As such, no separate return is to be allowed as return on equity.

#### 5.18 Non-Tariff Income

EPDS has projected a non-tariff income at ₹ 1.42 Crores during the FY 2017-18.

## **Commission's Analysis:**

As per Regulation 117 of SSERC (Terms and Conditions for Determination of Tariff) Regulations, 2012, non-tariff income comprises of:

- Meter / metering equipment / service line rentals
- Service charges
- Customer charges
- Revenue from late payment surcharge
- Recoveries on account of theft and pilferage of energy
- Miscellaneous receipts.
- Interest on staff loans and advances
- Interest on advances to suppliers
- Income from other business
- Income from staff welfare activities
- Excess found on physical verification of stores
- Interest on investments fixed and call deposits and bank balances
- Prior period Income.

Keeping in view the above types of income the Commission had approved a non-tariff income of ₹ 1.55 Crores in its Tariff Order dated 28.03.2018. EPDS now submits a non-tariff Income of ₹ 1.42 Crores as the actuals.

Table 5.16: Non-Tariff Income approved by the Commission for FY 2017-18

(₹ in Crores)

	Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
	1	Non Tariff Income	1.55	1.42	1.42
Ī	2	Total	1.55	1.42	1.42

The Commission therefore considers ₹ 1.42 Crores towards Non-Tariff Income for the FY 2017-18, as per the actuals furnished by EPDS.

## 5.19 Revenue from Existing Tariffs for the FY 2017-18

Revenue from existing tariffs approved by the Commission for the FY 2017-18 in the Tariff Order dated 28.03.2018, and actuals furnished by the EPDS and now approved by the Commission are furnished in the table below.

Table 5.17: Revenue from Sales approved by Commission for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
1	Domestic	26.21	25.42	25.42
2	Commercial	22.71	22.31	22.31
3	Public Lighting	0.11	0.11	0.11
4	Temporary Supply	2.00	2.95	2.95
5	HT Industrial Consumers	110.83	123.72	123.72
6	LT Industrial Consumers	0.78	1.19	1.19
7	Bulk Supply	16.93	19.26	19.26
8	Outside State	86.46	182.59	182.59
9	Total	266.03	377.55	377.55

The Commission now approves revenue from existing tariff at ₹ 377.55 Crores including revenue from outside sales at ₹ 182.59 Crores for the FY 2017-18, as per the actuals furnished by EPDS.

# 5.20 Aggregate Revenue Requirement (ARR) for the FY 2017-18

The ARR for the FY 2017-18 approved by the Commission in its Tariff Order dated 28.03.2018, actuals furnished by the EPDS and now approved by the Commission are furnished in the table below.

Table 5.18: Aggregate Revenue Requirement approved by Commission for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Actuals as per Provisional Accounts	Now approved by the Commission
1	Cost of Fuel	0.18	0.12	0.12
2	Cost of Power Purchase	226.25	242.04	242.04
3	Employee Costs	106.19	94.86	94.86
4	Repair & Maintenance Expenses	21.80	28.03	28.03
5	Administrative & General Expenses	1.14	5.19	5.19
6	Depreciation	21.76	26.93	19.18
7	Interest Charges	0.00	0.00	0.00
8	Interest on Working Capital	7.74	11.01	10.19
9	Return on NFA/Equity	0.00	0.00	0.00
10	Total Revenue Requirement	385.06	408.18	399.61
11	Less: Non Tariff Income	1.55	1.42	1.42
12	Net Revenue Requirement	383.51	406.76	398.19
13	Revenue from Tariff	179.57	194.95	194.96
14	Revenue from Outside State Sale	86.46	182.59	182.59
15	Gap (12 - 13 - 14)	117.48	29.21	20.64

Provisional True up for the FY 2017-18 indicates that the revenue gap has been decreased to ₹ 20.64 Crores, as against ₹ 117.48 Crores approved by the Hon'ble Commission in the Tariff Order dated 28.03.2018.

# 6. REVIEW FOR THE FY 2018-19

#### 6.1 Preamble

The Commission had approved the ARR and Tariffs for the FY 2018-19 in its order dated 28.03.2018 based on the projected data furnished by the EPDS. Now the EPDS has submitted proposals for review of the FY 2018-19 duly furnishing data based on the revised estimates for the FY 2018-19.

# 6.2 Energy Demand (Sales)

Vide its Tariff Order dated 28.03.2018, the Commission had approved energy sales of 385.20 MUs within the state for the FY 2018-19, as against 369.36 MUs projected by EPDS. The EPDS in its Review Petition for the FY 2018-19 has submitted the estimated sales considering actual for a certain period and estimate for the balance period.

Accordingly comparative statements of category-wise energy sales approved by the Commission for the FY 2018-19, estimate by EPDS and approved by the Commission are shown in table below:

Table 6.1: Energy Sales approved by the Commission for FY 2018-19

(In MUs)

Sl. No.	Category	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
1	Domestic	111.74	106.85	106.85
2	Commercial	42.90	40.33	40.33
3	Public Lighting	0.28	0.28	0.28
4	Temporary Supply	1.60	1.60	1.60
5	HT Industrial	196.20	192.78	192.78
6	LT Industrial	1.43	8.79	4.65
7	Bulk Supply	31.05	25.00	25.00
8	Total	385.20	375.63	371.49

The Commission now approves energy sales for the FY 2018-19 at 371.49 MUs against 375.63 MUs projected by the EPDS.

# 6.3 Transmission & Distribution Losses (T&D Losses)

The Commission in its order of the FY 2018-19 had fixed the target of T&D Losses at 24.00%. EPDS in its Review Petition for the FY 2018-19, has stated that the estimated T&D Losses during the FY 2018-19 is at 28.28%.

# **Commission's Analysis:**

The pool loss for the FY 2018-19 is considered at 2.14% and T&D Loss is shown as detailed in table below:

Table 6.2: T&D Loss calculation approved by the Commission for FY 2018-19

Sl. No.	Particulars	Unit	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
1	Own generation	MUs	40.00	12.00	12.00
2	Energy purchased from NTPC	MUs	382.74	552.42	552.42
3	Energy purchased from WBSEDCL	MUs	52.65	23.96	23.96
4	Energy purchased from NHPC	MUs	36.21	46.78	46.78
5	Energy purchased (2+3+4)	MUs	471.60	623.16	623.16
6	Pool loss	%	2.14	1.62	2.14
7	Pool loss	MUs	10.09	10.09	13.34
8	Net energy available (5-7)	MUs	461.51	613.07	609.82
9	Energy purchased from PTC	MUs	45.62	37.29	37.29
10	Energy purchased from SPDC	MUs	27.09	26.35	26.35
11	UI purchased	MUs	0.00	21.44	21.44
12	Free energy	MUs	360.56	457.02	457.02
13	Total energy available at state periphery (1+8+9+10+11+12)	MUs	934.78	1167.17	1163.92
14	Outside state sale through UI / Trading	MUs	427.94	645.92	675.12
15	Net energy available for sale within the state (13-14)	MUs	506.84	521.25	488.80
16	Energy sales within the state	MUs	385.20	375.63	371.49
17	T & D loss (15-16)	MUs	121.64	145.62	117.31
18	T & D loss	%	24.00	28.28	24.00

The Commission now approves T&D Loss for the FY 2018-19 at 24.00%.

#### 6.4 Own Generation

At present, EPDS is having 12 small Hydro generating stations with a total installed capacity of 35.70 MWs and 2 diesel generating stations with a total installed capacity of 4.99 MWs. The Commission in its Tariff Order for the FY 2018-19 had approved own generation at 40.00 MUs. The EPDS has revised for the FY 2018-19 and approved by the Commission are shown in table below.

Table 6.3: Own Generation approved by the Commission for FY 2018-19

(In MUs)

Sl. No.	Stations	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
1	Total Generation	40.00	12.00	12.00
2	Total	40.00	12.00	12.00

The Commission now approves Own Generation during the FY 2018-19 at 12 MUs, as per RE furnished by the EPDS.

## **6.5** Power Purchase

The Commission in its Tariff Order dated 28.03.2018 had approved power purchase quantity at 904.87 Mus including free power quantity at 360.56 MUs. The EPDS has furnished RE for the FY 2018-19 at 1165.26 MUs including free power of 457.02 MUs in Review Petition for the FY 2018-19 as detailed in table below:

Table 6.4: Power Purchase approved by the Commission for FY 2018-19

(In MUs)

Sl. No.	Stations	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
1	NTPC			
	a) FSTPP	113.07	133.01	133.01
	b) KHSTPP-I	63.97	77.59	77.59
	c) KHSTPP-II	21.63	36.11	36.11
	d) BSTPP	30.18	123.32	123.32
	e) TSTPP	153.89	166.63	166.63
	f) KBUNL	0.00	15.76	15.76
2	NHPC			
	a) RANGIT-III	4.34	4.38	4.38
	b) TEESTA-V	31.87	42.40	42.40
3	Other Sources			
	a) PTC	45.62	37.29	37.29
	b) WBSEDCL	52.65	23.96	23.96
	c) SPDC	27.09	26.35	26.35
4	UI/Deviation	0.00	21.44	21.44
5	Free Power	360.56	457.02	457.02
6	Total	904.87	1165.26	1165.26

The Commission now approves power purchase of 1165.26 MUs including free power of 457.02 MUs during the FY 2018-19.

# 6.6 Energy Balance

The details of energy requirement and availability projected by the EPDS and approved by the Commission for the FY 2018-19 and now approved by the Commission are furnished in table below.

Table 6.5: Energy Balance approved by the Commission for FY 2018-19

Sl. No.	Particulars	Unit	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
A	ENERGY REQUIREMENT				
1	Energy sales within the state	MUs	385.20	375.63	371.49
2	Outside state sale through UI / Trading	MUs	427.94	645.92	675.12
3	Total energy sales (1+2)	MUs	813.14	1021.55	1046.61
4	Overall T & D losses	%	24.00	28.28	24.00
5	Overall T & D losses	MUs	121.64	145.62	117.31
6	Total energy requirement (3+5)	MUs	934.78	1167.17	1163.92
В	ENERGY AVAILABILITY				
1	Own generation	MUs	40.00	12.00	12.00
2	Power purchased from CGS/UI etc.	MUs	544.31	708.24	708.24
3	Free Power	MUs	360.56	457.02	457.02
4	Overall pool loss	%	2.14	1.62	2.14
5	Overall pool loss	MUs	10.09	10.09	13.34
6	Total energy availability (1+2+3-5)	MUs	934.78	1167.17	1163.92
C	ENERGY SURPLUS/(GAP)	MUs	0.00	0.00	0.00

## 6.7 Fuel Cost

The fuel cost approved by the Commission in Tariff Order for the FY 2018-19, RE furnished by EPDS and now approved by the Commission are furnished in table below.

Table 6.6: Fuel Cost approved by the Commission for FY 2018-19

(₹ in Crores)

S		Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	he Commission Review In Tariff Order Estimate	
1		Cost of fuel	0.18	0.18	0.18
2	}	Total	0.18	0.18	0.18

The Commission now approves fuel cost of ₹ 0.18 Crores for the FY 2018-19 same as approved for the FY 2018-19 in the Tariff order dated 28.03.2018, against the same projected in RE by EPDS.

## 6.8 Cost of Generation

The cost of generation approved by the Commission in Tariff Order for the FY 2018-19, RE furnished by EPDS and now approved by the Commission are furnished in table below.

Table 6.7: Cost of Generation approved by the Commission for FY 2018-19

(₹ in Crores)

	Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
	1	Cost of Generation	18.48	18.48	18.48
Ī	2	Total	18.48	18.48	18.48

The Commission now approves cost of generation of ₹ 18.48 Crores for the FY 2018-19 same as approved for the FY 2018-19 in the Tariff order dated 28.03.2018, against the same projected in RE by EPDS.

#### 6.9 Power Purchase Cost

The Power Purchase Cost approved by the Commission for the FY 2018-19, RE furnished by the EPDS and now approved by the Commission are furnished in table below.

Table 6.8: Power Purchase Cost approved by the Commission for FY 2018-19

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
1	Power Purchase Cost	222.89	260.90	260.90
2	Total	222.89	260.90	260.90

The Commission now approves the power purchase cost of ₹ 260.90 Crores for the FY 2018-19, as per RE furnished by EPDS.

# **6.10** Intra State Transmission Charges

The Intra State Transmission Charges approved by the Commission in Tariff Order for the FY 2018-19, RE furnished by EPDS and now approved by the Commission are furnished in table below.

Table 6.9: Intra State Transmission Charges approved by the Commission for FY 2018-19

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
1	Intra State Transmission Charges	40.80	40.80	40.80
2	Total	40.80	40.80	40.80

The Commission now approves Intra State Transmission Charges of ₹ 40.80 Crores for the FY 2018-19 same as approved for the FY 2018-19 in the Tariff order dated 28.03.2018, against the same projected in RE by EPDS.

## 6.11 Employee Cost

The Commission in its Order dated 28.03.2018 had approved employee cost at ₹ 78.78 Crores for the FY 2018-19 only for distribution function. The EPDS has furnished RE at ₹ 76.95 Crores for the FY 2018-19. The details shown in the table below:

Table 6.10: Employee Cost approved by the Commission for FY 2018-19

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
1	Employee Cost	78.78	76.95	76.95
2	Total	78.78	76.95	76.95

The Commission now approves the employee cost of ₹ 76.95 Crores for the FY 2018-19, as per RE furnished by EPDS.

## **6.12** Repair and Maintenance Expenses

The Commission in its Order dated 28.03.2018 had approved Repair & Maintenance Expenses at ₹ 13.95 Crores for the FY 2018-19. The EPDS has estimated at ₹ 20.42 Crores for the FY 2018-19 and now approved by the Commission are furnished in table below.

Table 6.11: Repair & Maintenance Expenses approved by the Commission for FY 2018-19

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
1	Repair & Maintenance Expenses	13.95	20.42	20.42
2	Total	13.95	20.42	20.42

The Commission now approves ₹ 20.42 Crores towards Repair & Maintenance Expenses for the FY 2018-19, as per RE furnished by EPDS.

# **6.13** Administrative and General Expenses

The Commission in its Order dated 28.03.2018, had approved ₹ 0.85 Crores towards Administrative and General Expenses for the FY 2018-19. The EPDS has furnished RE at ₹ 3.63 Crores for the FY 2018-19 and now approved by the Commission are furnished in table below.

Table 6.12: A & G Expenses approved by the Commission for FY 2018-19

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
1	Administrative & General Expenses	0.85	3.63	3.63
2	Total	0.85	3.63	3.63

The Commission now approves ₹ 3.63 Crores towards Administrative & General Expenses for the FY 2018-19 as per RE furnished by EPDS.

# 6.14 Capital Investment and Capitalisation

Capital investment and capitalisation during the FY 2018-19 approved by the Commission in its Order dated 28.03.2018 and RE furnished by EPDS and now approved by the Commission are furnished in table below.

Table 6.13: Capital Investment and Capitalization approved for FY 2018-19

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
1	Opening balance of CWIP	52.82	44.44	136.95
2	Capital Investment during the year	47.54	76.12	47.54
3	Total (1+2)	100.36	120.56	184.49
4	Capitalisation during the year	61.09	73.38	61.09
5	Closing balance of CWIP (3-4)	39.27	47.18	123.40

The Commission now approves the capital investment of ₹ 47.54 Crores and capitalisation of ₹ 61.09 Crores during the FY 2018-19.

#### 6.15 Gross Fixed Assets

In the absence of valid information regarding gross fixed assets, the Commission in its Tariff Order dated 28.03.2018, had not approved the value of gross fixed assets. The EPDS in its review petition for the FY 2018-19 has stated that the values of gross fixed assets have been taken from the asset registers, as detailed in table below.

Table 6.14: Gross Fixed Assets furnished by EPDS for FY 2018-19

(₹ in Crores)

Sl. No.	Particulars	Amount
1	Opening balance	977.44
2	Additions during the year	73.38
3	Closing balance (1+2)	1050.82

## **Commission Analysis:**

In the absence of audited annual accounts the information furnished by EPDS cannot be taken as authentic. As such, depreciation cannot be allowed on the opening GFA furnished by the EPDS.

## 6.16 Depreciation

The EPDS in its review petition has furnished depreciation of ₹ 18.60 Crores for the FY 2018-19.

## **Commission's Analysis:**

The EPDS has not furnished the calculation at which the amount of depreciation was arrived at. The Commission in its Tariff Order dated 28.03.2018 had approved depreciation of ₹ 16.41 Crores for the FY 2018-19 on the average GFA of ₹ 310.75 Crores at the rate of 5.28%. As such the depreciation has been worked out accordingly as detailed in table below.

Table 6.15: Depreciation approved by the Commission for 2018-19

(₹ in Crores)

Sl. No.	Particulars	Amount
1	Opening balance GFA as on 01.04.2018	280.20
2	Additions during the year	61.09
3	Closing balance to end of 31.03.2019 (1+2)	341.29
4	Average GFA	310.75
5	Rate of depreciation	5.28%
6	Depreciation	16.41

The Commission accordingly approves depreciation at ₹ 16.41 Crores for the FY 2018-19.

# **6.17** Interest and Finance Charges

The EPDS has not projected interest and finance charges during the FY 2018-19.

## **Commission's Analysis:**

The Commission in its Tariff Order dated 28.03.2018 had not approved any interest and

finance charges for the FY 2018-19. EPDS has not shown any loans and interest. **As such the Commission has not considered interest and finance charges during the FY 2018-19.** 

## 6.18 Interest on Working Capital

The EPDS has furnished interest on working capital at ₹ 11.06 Crores during the FY 2018-19.

## **Commission's Analysis:**

As per Regulations, 32.3 of SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) (Second Amendment Regulations), 2017, interest on working capital shall be calculated on normative basis notwithstanding that the Licensee has not taken working capital loan from any outside agency.

- (a) 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:
  - (i) Operation and maintenance expenses for one month; plus
  - (ii) Maintenance spares at one (1) per cent of the historical cost escalated at 6% from the date of commercial operation; plus
  - (iii) Receivables equivalent to two (2) months of the expected revenue from charges for use of Distribution Wires at the prevailing tariffs; minus
  - (iv) 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.
- (b) Interest shall be allowed at a rate equal to the State Bank Advance Rate (SBAR) as on1st April of the financial year in which the Petition is filed.

Accordingly, the interest on working capital works out to ₹ 6.68 Crores, as detailed in table below:

Table 6.16: Interest on Working Capital calculated by the Commission for FY 2018-19

(₹ in Crores)

Sl. No.	Particulars	Total Cost	Working Capital & Interest
1	O & M Expenses		
a)	Employee Cost	76.95	6.41
b)	Repair & Maintenance Expenses	20.42	1.70
c)	Administrative & General Expenses	3.63	0.30
2	Maintenance of Spares		
3	Receivables	410.44	68.41
4	Total		76.82
5	SBAR as on 01.04.2018		8.70%
6	Interest on Working capital		6.68

Table 6.17: Interest on Working Capital approved by the Commission for FY 2018-19

(₹ in Crores)

SI. Vo.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
1	Interest on Working Capital	7.68	11.06	6.68
2	Total	7.68	11.06	6.68

The Commission now approves interest on working capital at ₹ 6.68 Crores for the FY 2018-19 against the RE furnished by EPDS at ₹ 11.06 Crores.

## 6.19 Return on Equity

The EPDS has not projected return on equity for the FY 2018-19.

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

Regulation 29 of SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) (Second Amendment Regulations), 2017, provides for return on equity at 14% PA on the equity amount appearing in the audited balance sheet of the annual accounts.

The EPDS has not produced audited annual accounts. In addition since it is a State Government Department, the expenses are funded by the Government. As such, no separate return is to be allowed for return on equity.

## 6.20 Non-Tariff Income

The EPDS has furnished non-tariff income at ₹ 1.59 Crores during the FY 2018-19, the same as approved in the Tariff Order dated 28.03.2018.

## **Commission's Analysis:**

As per Regulation 69 of SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) (Second Amendment Regulations), 2017, non-tariff income comprises of:

- Meter / metering equipment / service line rentals
- Service charges
- Customer charges
- Revenue from late payment surcharge
- Recovery on account of theft and pilferage of energy
- Miscellaneous receipts.
- Interest on staff loans and advances
- Interest on advances to suppliers
- Income from other business
- Income from staff welfare activities
- Excess found on physical verification of stores
- Interest on fixed investments and call deposits and bank balances
- Prior period Income.

Table 6.18: Non-Tariff Income approved by the Commission for FY 2018-19

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
1	Non Tariff Income	1.59	1.59	1.59
2	Total	1.59	1.59	1.59

The Commission now approves Non-Tariff Income as same as approved in the Tariff Order dated 28.03.2018 at ₹ 1.59 Crores for the FY 2018-19, as per the RE furnished by EPDS.

## 6.21 Revenue from tariff for the FY 2018-19

Revenue from the tariff approved by the Commission for the FY 2018-19 in its Tariff Order dated 28.03.2018 and revised estimates furnished by the EPDS and now approved by the Commission are shown in table below.

Table 6.19: Revenue from the Tariff approved by the Commission for FY 2018-19

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
1	Domestic	28.83	28.03	28.03
2	Commercial	24.22	22.87	22.87
3	Public Lighting	0.12	0.12	0.12
4	Temporary Supply	1.21	2.50	2.50
5	HT Industrial Consumers	126.55	134.07	134.07
6	LT Industrial Consumers	0.99	4.56	2.41
7	Bulk Supply	20.51	20.05	20.05
8	Outside state	114.04	191.72	200.39
9	Total	316.47	403.92	410.44

The Commission approves the Revenue from Tariff at ₹ 410.44 Crores including Revenue from outside sales at ₹ 200.39 Crores for the FY 2018-19.

## 6.22 Aggregate Revenue Requirement (ARR) for the FY 2018-19

The ARR for the FY 2018-19 approved by the Commission in its Tariff Order dated 28.03.2018, Revised Estimate furnished by the EPDS and now approved by the Commission are furnished in table below.

Table 6.20: Aggregate Revenue Requirement and Gap approved for FY 2018-19

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 28.03.2018	Review Estimate	Now approved by the Commission
1	Cost of Fuel	0.18	0.18	0.18
2	Cost of Generation	18.48	18.48	18.48
3	Cost of Power Purchase	222.89	260.90	260.90
4	Intra State Transmission Charges	40.80	40.80	40.80
5	Employee Costs	78.78	76.95	76.95
6	Repair & Maintenance Expenses	13.95	20.42	20.42
7	Administrative & General Expenses	0.85	3.63	3.63
8	Depreciation	16.41	18.60	16.41
9	Interest charges	0.00	0.00	0.00
10	Interest on Working Capital	7.68	11.06	6.68
11	Return on NFA /Equity	0.00	0.00	0.00
12	Total Revenue Requirement	400.01	451.01	444.45
13	Less: Non Tariff Income	1.59	1.59	1.59
14	Net Revenue Requirement	398.42	449.43	442.86
15	Revenue from Tariff	202.43	212.20	210.05
16	Revenue from Outside State Sale	114.04	191.72	200.39
17	Gap (14 - 15 - 16)	81.95	45.51	32.42

Review for the FY 2018-19 indicates that the revenue gap has decreased to ₹ 32.42 Crores as against at ₹ 81.95 Crores approved in the Tariff Order for the FY 2018-19.

# 7. AGGREGATE REVENUE REQUIREMENT FOR THE FY 2019-20, COMMISSION'S ANALYSIS AND DECISIONS

## 7.1 Consumer Categories

The EPDS was serving 1,11,338 consumers as on 31.03.2018 in its area of operation. The consumers could be broadly categorised as under:

LT Category

- Domestic Rural, Urban
- Commercial Rural, Urban
- Public Lighting
- Industrial Rural, Urban
- Temporary Supply

**HT Category** 

Industrial

LT & HT Category

Bulk Supply

The EPDS serves the consumers at 250 V, 440 V and 11 kV levels. It is reported that, except public lighting, most of the consumers are metered. However the unmetered consumers are being provided with meters in a phased manner.

#### 7.1.1 Growth of Consumers

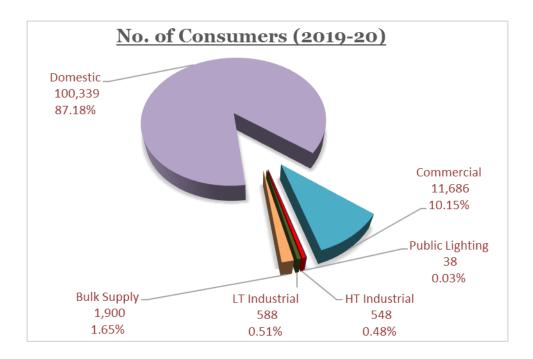
Details of the category-wise growth of consumers over the actuals during the FY 2017-18, the estimated figures for the FY 2018-19 and the projections for the FY 2019-20 are furnished in table below:

Table 7.1: Projected of no. of consumers

(In No.)

Sl.		2017-18	2018-19	2019-20
No.	Category	(Actual)	(Estimated)	(Projected)
1	Domestic	97,002	98,942	100,339
2	Commercial	11,356	11,583	11,686
3	Public Lighting	36	37	38
4	Temporary Supply	0	0	0
5	HT Industrial	552	534	548
6	LT Industrial	576	582	588
7	Bulk Supply	1,816	1,852	1,900
8	Total	111,338	113,531	115,099

Chart 7.1: No. of consumers projected by EPDS for FY 2019-20



# 7.2 Category-wise Energy Sales

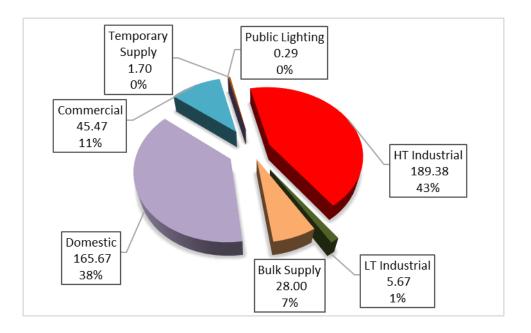
Category-wise energy sales approved by the Commission for the FY 2019-20 vide Tariff Order dated 28.03.2018 and the projected energy sales to various categories of consumer for the FY 2019-20 as given in table below:

Table 7.2: Energy Sales projected by EPDS for the FY 2019-20

(In MUs)

Sl. No.	Category	As approved by the Commission in Tariff Order dated 28.03.2018	Projected by EPDS
1	Domestic	120.67	165.67
2	Commercial	45.47	45.47
3	Public Lighting	0.29	0.29
4	Temporary Supply	1.70	1.70
5	HT Industrial	224.09	189.38
6	LT Industrial	1.54	5.67
7	Bulk Supply	34.15	28.00
8	Total	427.91	436.19

Chart 7.2: Energy Sales projected by EPDS for FY 2019-20



The EPDS has projected the category-wise energy sales for the FY 2019-20 based on the actual past sales and growth rate and new developments on account of Government policies, socio-economic changes, industrial growth etc., which would affect consumption across various categories of consumers. In addition to this, the growth trend in number of consumers have been taken as guiding factors in arriving at the requirement of demand and energy.

# 7.2.1 Analysis of Energy Sales Projections by EPDS and the Commission's decision

Reasonable projection of category-wise energy sales is essential for determining the energy required to be purchased and likely revenue by sale of electricity. Sales forecast using the CAGR as the basis for projections is a tried and tested method and is used extensively across the states and accepted by the Regulators.

The CAGR of the past energy sales from the FY 2013-14 to FY 2017-18 is worked out and shown in table below:

Table 7.3: CAGR of energy sales

S1. No.	Category	2013-14 (Actual)	2014-15 (Actual)		2016-17 (Actual)		CAGR for 4 years from FY 2013-14 to FY 2017-18	CAGR for 3 years from FY 2014-15 to FY 2017-18	to FY	CAGR for YOY from FY 2016-17 to FY 2017-18	
				(In MUs)	MUs)			( <b>In</b> %)			
1	Domestic	83.98	78.93	74.96	96.74	98.72	4.13	7.74	14.76	2.05	
2	Commercial	35.43	35.33	37.43	39.68	38.38	2.02	2.80	1.26	-3.28	
3	Public Lighting	0.35	0.29	0.15	0.26	0.17	-16.52	-16.31	6.46	-34.62	
4	Temporary Supply	1.61	1.36	1.16	2.92	3.38	20.37	35.45	70.70	15.75	
5	HT Industrial	97.11	110.49	126.30	156.16	174.43	15.77	16.44	17.52	11.70	
6	LT Industrial	1.15	1.37	1.34	1.31	4.43	40.10	47.78	81.82	238.17	
7	Bulk Supply	17.74	20.98	23.37	26.40	24.16	8.03	4.82	1.68	-8.48	
8	Total	237.37	248.75	264.71	323.47	343.67					

Table 7.4: Specific monthly consumption/consumer

(In kWh)

Sl.	Category	2015-16	2016-17	2017-18
No.	Category	(Actual)	(Actual)	(Actual)
1	Domestic	69	85	85
2	Commercial	286	292	282
3	HT Industrial	24,591	28,290	26,333
4	LT Industrial	235	444	641
5	Bulk Supply	1,406	1,453	1,109

The consumption of each category of consumers is discussed below, so as to arrive at a reasonable projection of energy sales for the FY 2019-20.

#### **Domestic**

The EPDS has projected energy sales to this category at 165.67 MUs for the FY 2019-20. The trend of the actual consumption in the category for the FY 2013-14 to FY 2017-18 & RE for the FY 2018-19 is shown in the chart below:

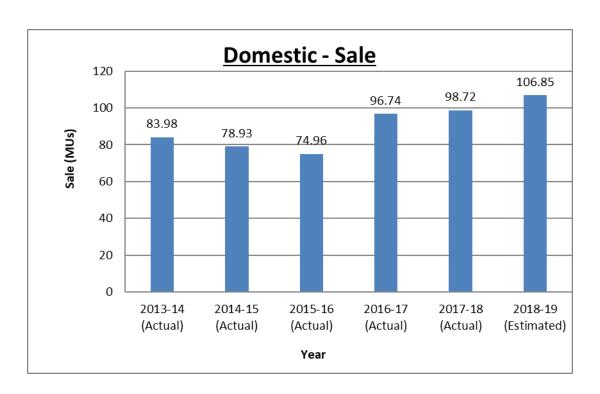


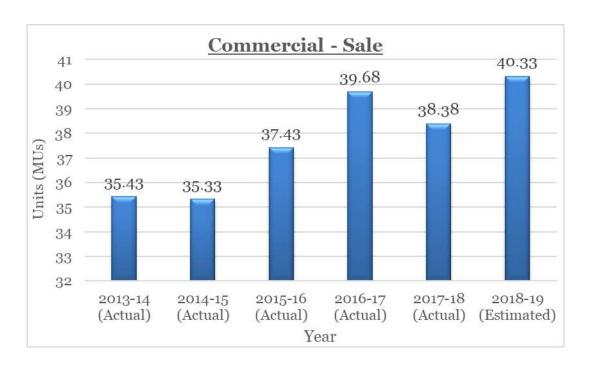
Chart 7.3: Trend of actual consumption – Domestic Category

On analysis of the above trend and CAGR over different periods it is seen that the 4 years CAGR (FY 2013-14 to FY 2017-18) is 4.13%, the 3 years CAGR (FY 2014-15 to FY 2017-18) is 7.74%, 2 years CAGR (FY 2015-16 to FY 2017-18) is 14.76% and the YoY growth (FY 2016-17 to FY 2017-18) is 2.05%. The actual specific consumption during the FY 2017-18 is 85 Kwh. On analysis of the above trend, the CAGR for 4 years of 4.13% is considered reasonable & consumption work out to 111.26 MUs for the FY 2019-20.

The Commission approves energy sales at 111.26 MUs against 165.67 MUs projected by EPDS for the FY 2019-20.

## **Commercial**

The EPDS has projected energy sales to this category at 45.47 MUs for the FY 2019-20. In this category negative growth is observed during the FY 2017-18 over the previous year's sale and EPDS has not furnished reasons for such negative growth. The trend of the actual consumption in the category for the FY 2013-14 to FY 2017-18 & RE for the FY 2018-19 is shown in the chart below:



**Chart 7.4: Trend of actual consumption – Commercial Category** 

On analysis of the above trend and CAGR over different periods it is seen that the 4 years CAGR (FY 2013-14 to FY 2017-18) is 2.02%, the 3 years CAGR (FY 2014-15 to FY 2017-18) is 2.80%, 2 years CAGR (FY 2015-16 to FY 2017-18) is 1.26% and the YoY growth (FY 2016-17 to FY 2017-18) is (-) 3.28%. The actual specific consumption during the FY 2017-18 is 282 Kwh. On analysis of the above trend, the CAGR for 4 years of 2.02% is considered reasonable & consumption work out to 41.14 MUs for the FY 2019-20.

The Commission approves energy sales at 41.14 MUs against 45.47 MUs projected by EPDS for the FY 2019-20.

## **Public Lighting**

The EPDS has projected energy sales to this category at 0.29 MUs for the FY 2019-20. This is an unmetered category and negative growth is observed during the FY 2014-15, FY 2015-16 & FY 2017-18 over the previous year's sale and EPDS has not furnished reasons for such negative growth. The trend of the actual consumption in the category for the FY 2013-14 to FY 2017-18 & RE for the FY 2018-19 is shown in the chart below:

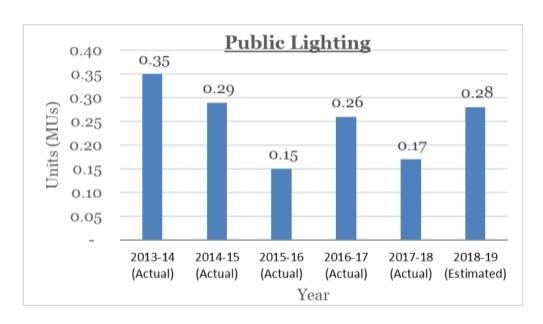


Chart 7.5: Trend of actual consumption – Public Lighting Category

On analysis of the above trend and CAGR over different periods it is seen that the 4 years CAGR (FY 2013-14 to FY 2017-18) is (-) 16.52%, the 3 years CAGR (FY 2014-15 to FY 2017-18) is (-) 16.31%, 2 years CAGR (FY 2015-16 to FY 2017-18) is 6.46% and the YoY growth (FY 2016-17 to FY 2017-18) is (-) 34.62%. On analysis of the above trend, CAGR over different periods and actual consumption of 0.17 MUs in the FY 2017-18, the projected consumption of 0.29 MUs for the FY 2019-20 is considered reasonable.

The Commission approves energy sales at 0.29 MUs for the FY 2019-20 as projected by EPDS.

#### **Temporary Supply**

The EPDS has projected energy sales to this category at 1.70 MUs for the FY 2019-20. The trend of the actual consumption in the category for the FY 2013-14 to FY 2017-18 & RE for the FY 2018-19 is shown in the chart below:



Chart 7.6: Trend of actual consumption – Temporary Supply Category

On analysis of the above trend and CAGR over different periods it is seen that the 4 years CAGR (FY 2013-14 to FY 2017-18) is 20.37%, the 3 years CAGR (FY 2014-15 to FY 2017-18) is 35.45%, 2 years CAGR (FY 2015-16 to FY 2017-18) is 70.70% and the YoY growth (FY 2016-17 to FY 2017-18) is 15.75%. On analysis of the above trend, CAGR over different periods and actual consumption of 3.38 MUs in the FY 2017-18, the consumption work out to 3.38 MUs for the FY 2019-20 as same as estimated for the FY 2018-19.

The Commission approves energy sales at 3.38 MUs against 1.70 MUs projected by EPDS for the FY 2019-20.

# **HT Industrial**

The EPDS has projected energy sales to this category at 189.38 MUs for the FY 2019-20. The trend of the actual consumption in the category for the FY 2013-14 to FY 2017-18 & RE for the FY 2018-19 is shown in the chart below:

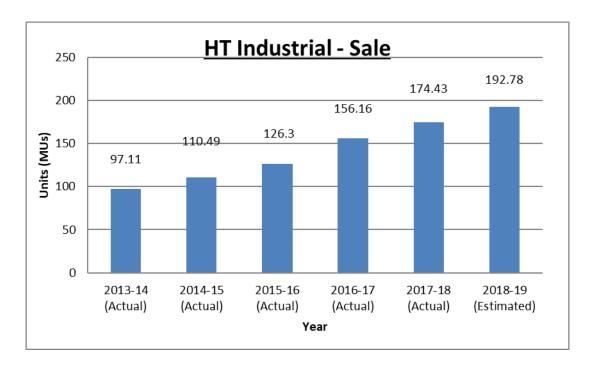


Chart 7.7: Trend of actual consumption – HT Industrial Category

On analysis of the above trend and CAGR over different periods it is seen that the 4 years CAGR (FY 2013-14 to FY 2017-18) is 15.77%, the 3 years CAGR (FY 2014-15 to FY 2017-18) is 16.44%, 2 years CAGR (FY 2015-16 to FY 2017-18) is 17.52% and the YoY growth (FY 2016-17 to FY 2017-18) is 11.70%. The actual specific consumption during the FY 2017-18 is 26,333 kWh. On analysis of the above trend, the CAGR for YoY growth of 11.70% is considered reasonable and consumption works out to 215.33 MUs for the FY 2019-20.

The Commission approves energy sales at 215.33 MUs against 189.38 MUs projected by EPDS for the FY 2019-20.

# **LT Industrial**

The EPDS has projected energy sales to this category at 5.67 MUs for the FY 2019-20. The trend of the actual consumption in the category for the FY 2013-14 to FY 2017-18 & RE for the FY 2018-19 is shown in the chart below:



Chart 7.8: Trend of actual consumption – LT Industrial Category

On analysis of the above trend and CAGR over different periods it is seen that the 4 years CAGR (FY 2013-14 to FY 2017-18) is 40.10%, the 3 years CAGR (FY 2014-15 to FY 2017-18) is 47.78%, 2 years CAGR (FY 2015-16 to FY 2017-18) is 81.82% and the YoY growth (FY 2016-17 to FY 2017-18) is 238.17%. The actual specific consumption during the FY 2017-18 is 641 kWh. On analysis of the above trend, CAGR over different periods and actual consumption of 4.43 MUs in the FY 2017-18, the projected consumption of 5.67 MUs for the FY 2019-20 is considered reasonable.

The Commission approves energy sales at 5.67 MUs for the FY 2019-20 as projected by EPDS.

#### **Bulk Supply**

The EPDS has projected energy sales to this category at 28.00 MUs for the FY 2019-20. In this category negative growth is observed during the FY 2017-18 over the previous year's sale and EPDS has not furnished reasons for such negative growth. The trend of the actual consumption in the category for the FY 2013-14 to FY 2017-18 & RE for the FY 2018-19 is shown in the chart below:

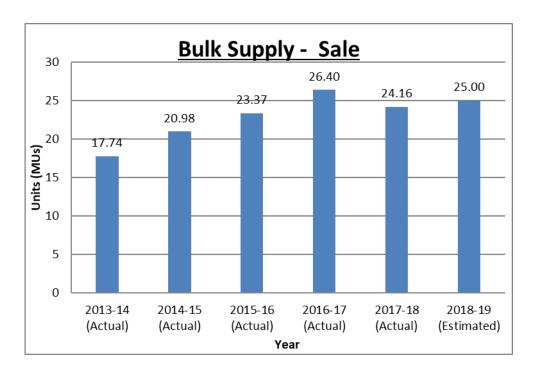


Chart 7.9: Trend of actual consumption – Bulk Supply Category

On analysis of the above trend and CAGR over different periods it is seen that the 4 years CAGR (FY 2013-14 to FY 2017-18) is 8.03%, the 3 years CAGR (FY 2014-15 to FY 2017-18) is 4.82%, 2 years CAGR (FY 2015-16 to FY 2017-18) is 1.68% and the YoY growth (FY 2016-17 to FY 2017-18) is (-) 8.48%. The actual specific consumption during the FY 2017-18 is 1,109 kWh. On analysis of the above trend, CAGR over different periods and actual consumption of 24.16 MUs in the FY 2017-18, the projected consumption of 28.00 MUs for the FY 2019-20 is considered reasonable.

The Commission approves energy sales at 28.00 MUs for the FY 2019-20 as projected by EPDS.

# **Total sales**

The trend of the actual consumption within the state of Sikkim for the FY 2013-14 to FY 2017-18 & RE for the FY 2018-19 is shown in the chart below:

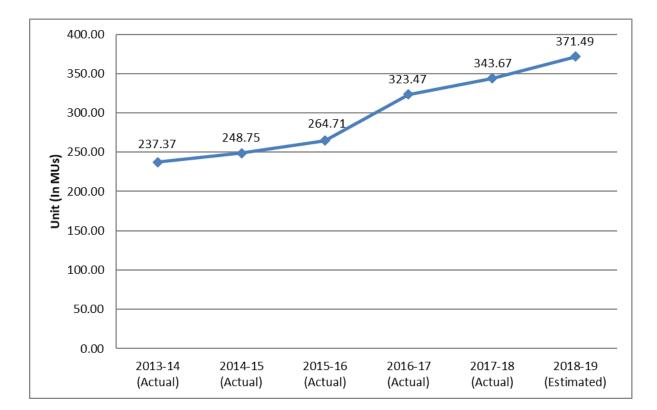


Chart 7.10: Trend of actual consumption – Sales within the State

# 7.3 Category-Wise Energy Sales

The category-wise energy sales approved by the Commission for the FY 2019-20 is given in table below:

Table 7.5: Category-wise energy sales approved by the Commission

(In MUs)

Sl. No.	Category	FY 2019-20
1	Domestic	111.26
2	Commercial	41.14
3	Public Lighting	0.29
4	Temporary Supply	3.38
5	HT Industrial	215.33
6	LT Industrial	5.67
7	Bulk Supply	28.00
8	Total	405.08

The Commission approves total energy sales within the state at 405.08 MUs for the FY 2019-20.

# 7.4 Transmission and Distribution Losses (T&D Losses)

EPDS has submitted that it had achieved reduction in T&D losses over the past years owing to improvement works executed every year. However, the reduction of the distribution losses may not be possible beyond a certain level due to topographical conditions and technical limitations. EPDS stated that in the past year the range of distribution losses have been in the range of 30% to 41%. EPDS projected T&D Losses at 24.67% for the FY 2019-20.

# **Commission's Analysis:**

The chart below depicts the trend of actual T&D losses for the FY 2013-14 to FY 2017-18, R.E. of T&D loss for the FY 2018-19 & projected T&D losses for the FY 2019-20.

T & D Loss (%) 41.00 35.34 32.09 30.84 30.10 24.67 24.00 2013-14 2014-15 2015-16 2016-17 2017-18 2018-19 2019-20 (ACTUAL) (ACTUAL) (ACTUAL) (ACTUAL) (ACTUAL) (APPROVED (PROJECTED) R.E.)

Chart 7.11: Trend of T & D Losses

During the FY 2017-18, the actual T&D Losses works out to 32.09%, while in the FY 2018-19 the T&D Losses are approved at 24.00%, as discussed in the review of the respective years. In the Tariff Order for the FY 2018-19, the T&D Losses were fixed and as per the trajectory the Commission has fixed the T&D losses at 24.00%, 22.00% & 20.00% for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. However, EPDS has projected T&D losses at 24.67% for the FY 2019-20. So, trajectory loss % target is considered as reasonable. EPDS should take steps to keep the T&D losses as projected for the FY 2019-20.

The Commission accordingly approves T&D Losses at 22.00% for the FY 2019-20. The EPDS shall make all efforts for reduction of losses in the system.

#### **Energy Requirement**

The energy requirement of EPDS to meet the demand would be the sum of energy sales to consumers within the State and T&D Losses, as worked out in table below:

Table 7.6: Energy Requirement approved by the Commission

Sl. No.	Particulars Particulars	Unit	FY 2019-20
1	Energy sales approved	MUs	405.08
2	T & D Losses approved	%	22.00
3	T & D Losses approved	MUs	114.25
4	Energy requirement	MUs	519.33

#### 7.5 Power Procurement

#### 7.5.1 Own Generation

The EPDS owns 12 mini hydroelectric power stations, with a total installed capacity of 35.70 MWs, and 2 diesel generation stations, with a total installed capacity of 4.99 MWs, totaling 40.69 MWs, as detailed in table below:

Table 7.7: Installed capacity of own generating stations

Sl. No.	Name of Projects	Installed Capacity (In MWs)	Remarks
	Hydro		
1	Lower Lhagap Hydel Power (LLHP)	2 x 6.00	Shut down due to 18th September, 2011 Earthquake
2	Jali Power House (JPH)	6 x 0.35	Operational
3	Rimbi-I	3 x 0.20	Shut down
4	Rimbi-II	2 x 0.05	Shut down
5	Rothak	2 x 0.10	Powerhouse abandoned
6	Rongnichu	5 x 0.50	No generation due to failure of water conductor system
7	Chaten	2 x 0.50	Powerhouse abandoned
8	Meyongchu	2 x 2.00	Operational
9	Upper Rongnichu Hydel Project (URHP)	4 x 2.00	No Generation due to failure of water conductor system
10	Kalez	2 x 1.00	Operational
11	Lachung	2 x 0.10	Powerhouse abandoned
12	Rabomchu	2 x 1.50	Operational
	Diesel		
13	Diesel Power House Gangtok	4 x 1.00	Operational
14	DPH LLHP, Ranipool	4 x 0.248	Shut down due to 18th September, 2011 Earthquake
	Total	40.69	

The EPDS has projected a generation of 30.00 MUs for the FY 2019-20 from its own generating stations. As per EPDS data the net total own generation for the period of 01.04.2018 to 30.09.2018 is 5.80 MUs. The EPDS has stated that some projects will start functioning from the FY 2019-20 onwards.

The Commission accordingly approves net own generation at 30 MUs from its own generating stations as projected by EPDS for the FY 2019-20.

# 7.5.2 Power purchase from Central Generating Stations

The balance energy requirement of EPDS is mainly met from allocation of power from Central Stations of NTPC, NHPC and other sources such as PTC, SPDC and WBSEDCL, as detailed in table below:

**Table 7.8: Power Allocation** 

Sl.	Correco	Capacity	Alloc	ation	
No.	Source	(In MWs)	(In %)	(In MWs)	
	Central Sector				
1	FSTPP, NTPC	1,600.00	1.63%	26.08	
2	KHSTPP-I, NTPC	840.00	1.55%	13.02	
3	KHSTPP-II, NTPC	1,500.00	0.33%	4.95	
4	BSTPP, NTPC	1,320.00	1.52%	20.06	
5	TSTPP, NTPC	1,000.00	2.40%	24.00	
6	KBUNL, NTPC	195.00	0.55%	1.07	
7	RANGIT-III, NHPC	60.00	13.33%	8.00	
8	TEESTA – V, NHPC	510.00	13.19%	67.27	
	Others				
9	CHUKHA, PTC	270.00	2.22%	5.99	
10	WBSEDCL	50.00	20.00%	10.00	
11	SPDC	10.00	100.00%	10.00	
12	TOTAL	7,355.00		190.45	

The chart below depicts the allocation of power from various sources:

ESTPP, NTPC 26.08 KHSTPP-I, NTPC 14% SPDC 13.02 10.00 5% WBSEDCL KHSTPP-II, NTPC 10.00 4.95 596 3% CHUKHA, PTC 5.99 BSTPP, NTPC 3% 20.06 10% TSTPP, NTPC RANGIT-III, NHPC 24.00 13% 4% TEESTA - V, NHPC 67.27 KBUNL, NTPC 35% 1% (Allocation in MWs)

**Chart 7.12: Allocation of Power** 

The EPDS has based the power purchase projections at the Merit Order Dispatch Principles while determining power purchase from various generating stations. However, in a power deficit scenario, these principles do not play a significant role as the utilities will try and purchase all the power that is available at their disposal. Accordingly, EPDS has considered purchase of the entire power available from all the possible sources during the financial year to meet the demand to the extent possible.

Besides the above, the EPDS is also entitled for free power of 12% from some hydropower stations.

The actual power procurement projected for the FY 2019-20 is furnished in table below:

Table 7.9: Summary of Power Purchase furnished by EPDS

(In MUs)

Sl. No.	Source	FY 2019-20 (As approved by the Commission in MYT Order dated 28.03.2018)	FY 2019-20 (Projected)
	Central Sector		
1	FSTPP, NTPC	113.07	133.01
2	BSTPP, NTPC	30.18	123.32
3	KHSTPP-I, NTPC	63.97	77.59
4	KHSTPP-II, NTPC	21.63	36.11
5	TSTPP, NTPC	153.89	166.63
6	KBUNL, NTPC	0.00	15.76
7	RANGIT-III, NHPC	4.34	4.38
8	TEESTA-V, NHPC	31.87	42.40
	Others		
9	CHUKHA, PTC	45.62	37.29
10	WBSEDCL	52.65	23.96
11	SPDC	27.09	26.35
12	UI/Deviation	0.00	21.44
13	Free Power	360.56	457.02
14	TOTAL	904.87	1165.25

## **Commission's Analysis:**

As seen from the power procurement projection, the EPDS has projected the power drawal during the financial year at the same level of actual drawal during the FY 2017-18 and estimated of the FY 2018-19 except KBUNL project.

The Commission has considered the power procurement projected by EPDS during the financial year. If any contingency arises to procure power apart from allocated sources, the same will be considered at the time of true up & review. Power procurement approved by the Commission is shown in the table below:

Table 7.10: Power Procurement approved by the Commission

(In MUs)

Sl.	Source	FY 2019-20
No.	Source	11201720
	Central Sector	
1	FSTPP, NTPC	133.01
2	BSTPP, NTPC	123.32
3	KHSTPP-I, NTPC	77.59
4	KHSTPP-II, NTPC	36.11
5	TSTPP, NTPC	166.63
6	KBUNL, NTPC	15.76
7	RANGIT-III, NHPC	4.38
8	TEESTA-V, NHPC	42.40
	Others	
9	CHUKHA, PTC	37.29
10	WBSEDCL	23.96
11	SPDC	26.35
12	UI/Deviation	0.00
13	Free Power	457.02
14	TOTAL	1143.82

The Commission approves power procurement of 1143.82 MUs including free power of 457.02 MUs for the FY 2019-20.

# 7.6 Energy requirement and availability

The energy requirement and availability projected for the FY 2019-20 are furnished by the EPDS in the table below:

Table 7.11: Energy Balance projected by EPDS

Sl. No.	Source	FY 2019-20 (As approved by the Commission in MYT Order dated 28.03.2018)	FY 2019-20 (Projected)
A	ENERGY REQUIREMENT		
1	Energy Sales within State	427.91	436.19
2	Sales Outside State	388.18	620.19
3	Total Energy Sales	816.08	1056.37
4	Overall T & D Losses %	22.00	24.67
5	Overall T & D Losses (MUs)	120.69	128.78
6	Total Energy Requirement	936.78	1185.16
В	ENERGY AVAILABILITY		
7	Power Purchase from CGS/UI etc.	544.31	708.24
8	Free Power	360.56	457.02
9	Less: Overall Pool Loss	10.09	10.09
10	Generation	42.00	30.00
11	Total Energy Availability	936.78	1185.16
C	ENERGY SURPLUS/(GAP)	0.00	0.00

# **Commission's Analysis:**

Considering the inter-state transmission loss at 2.14%, the energy balance is worked out as detailed in table below:

Table 7.12: Energy Balance approved by the Commission

Sl. No.	Particulars Particulars	Unit	FY 2019-20
A	ENERGY REQUIREMENT		
1	Energy sales within the state	MUs	405.08
2	Overall T & D losses	%	22.00
3	Overall T & D losses	MUs	114.25
4	Total energy requirement (1+3)	MUs	519.33
В	ENERGY AVAILABILITY		
1	Own generation	MUs	30.00
2	Power purchased from CGS/UI etc.	MUs	686.80
3	Free Power	MUs	457.02
4	Overall pool loss	%	2.14
5	Overall pool loss	MUs	13.34
6	Total energy availability (1+2+3-5)	MUs	1160.48
C	ENERGY SURPLUS/(GAP)	MUs	641.16

The energy balance approved for a surplus energy of 641.16 MUs for the FY 2019-20.

# 7.7 Aggregate Revenue Requirement

The EPDS has projected Aggregate Revenue Requirement at ₹ 471.92 Crores for the FY 2019-20, as detailed in table below:

Table 7.13: Aggregate Revenue Requirement projected by EPDS

Sl. No.	Particulars	FY 2019-20 (As approved by the Commission in MYT Order dated 28.03.2018)	FY 2019-20 (Projected)
1	Cost of Fuel	0.18	0.18
2	Cost of Power Purchase	236.22	273.94
3	Cost of Generation	18.83	18.83
4	Transmisssion Charges (Intra State)	42.60	42.60
5	Employee Costs	83.51	79.92
6	Repair and Maintanance Expenses	14.78	21.19
7	Administration and General Expenses	0.90	3.73
8	Depreciation	19.28	21.47
9	Interest Charges	-	-
10	Interest on Working Capital	7.91	11.68
11	Return on NFA/Equity	1	-
12	Income Tax	-	-
13	<b>Total Revenue Requirement</b>	424.21	473.53
14	Less: Non Tariff Income	1.62	1.62
15	Net Revenue Requirement	422.59	471.92

The expenses projected by EPDS and the Commission's analysis are discussed hereunder.

## 7.8 Fuel Cost

The EPDS has projected fuel cost at ₹ 0.18 Crores for the FY 2019-20.

The Commission approves fuel cost at ₹ 0.18 Crores for the FY 2019-20, as projected by EPDS.

## 7.9 Cost of Generation

The EPDS has projected Cost of Generation at ₹ 18.83 Crores for the FY 2019-20 as approved in the MYT Order dated 28.03.2018. The details of expenses projected by the EPDS are furnished in table below:

Table 7.14: Cost of Generation projected by EPDS

 Sl. No.
 Particulars
 2019-20 (Projected)

 1 Cost of Generation
 18.83

# **Commission's Analysis:**

The Commission approved the Cost of Generation for the FY 2019-20, as detailed in table below.

Table 7.15: Cost of Generation approved by the Commission

Sl. No.	Particulars	FY 2019-20
1	Cost of Generation	18.83

The Commission therefore approves the Cost of Generation at ₹ 18.83 Crores for the FY 2019-20.

## 7.10 Power Purchase Cost

EPDS has furnished actual power purchase cost including inter State Transmission charges, as shown in table below:

Table 7.16: Actual Power Purchase Cost furnished by EPDS for FY 2017-18

Sl.	Source	Energy received	Variable Cost	Total Variable	Total Fixed	Others	Total Cost i/c supplementary	Unit Cost
No.	Source	(MUs)	(Ps./Unit)	Cost	Cost	Others	bills	(₹ / Kwh)
1	NTPC	, ,	,					
	a) FSTPP	133.01		32.08	15.26	4.63	51.97	3.91
	b)BSTPP	123.32		28.73	24.47	-1.40	51.80	4.20
	b) KHSTPP-I	77.59		18.65	9.09	-0.34	27.40	3.53
	c)KHSTPP-II	36.11		7.82	3.84	-0.21	11.45	3.17
	d)TSTPP	166.63		25.66	15.75	1.62	43.03	2.58
	TOTAL	536.67		112.95	68.41	4.30	185.66	
2	NHPC							
	a) RANGIT-III	4.38		0.80	0.89	0.06	1.75	4.01
	b)TEESTA -V	42.40		3.68	4.08	0.89	8.65	2.04
	TOTAL	46.78		4.48	4.96	0.96	10.41	
3	Other sources							
	a) PTC	37.29					8.80	2.36
	b)WBSEDCL	23.96					3.07	1.28
	c) SPDC	26.35					10.54	4.00
4	Other Charges							
	a) Transmission							
	& Other						24.30	0.24
	Charges							
5	UI Purchase	21.44					5.98	2.79
6	Free Power	457.02					-	-
7	Rebate/ Other						-6.71	
	Charges						-0.71	
8	Total	1,149.49					242.04	

# Power Purchase Cost projected for the FY 2019-20

The EPDS has projected a power purchase cost at ₹ 273.94 Crores including interstate transmission charges of ₹ 26.44 Crores for the FY 2019-20. Free power is projected at 457.02 MUs and UI purchase is projected at the cost of ₹ 6.59 Crores for the FY 2019-20. The details are furnished in the table below:

Table 7.17: Power Purchase Cost projected by EPDS

Sl. No.	Source	Energy received (MUs)	Unit Cost (₹ / Kwh)	Total Cost i/c supplementary bills (₹ in Crores)
1	NTPC			
	FSTPP	133.01	4.31	57.30
	BSTPP	123.32	4.63	57.11
	KHSTPP-I	77.59	3.89	30.21
	KHSTPP-II	36.11	3.49	12.62
	TSTPP	166.63	2.85	47.44
	KBUNL	15.76	4.50	7.09
2	NHPC			
	RANGIT-III	4.38	4.42	1.93
	TEESTA -V	42.40	2.25	9.54
3	PTC			
	CHUKHA	37.29	2.60	9.70
4	Other sources			
	WBSEDCL	23.96	1.41	3.38
	SPDC	26.35	4.41	11.62
	UI Purchase	21.44	3.07	6.59
5	Total Energy Purchase	708.24		254.54
6	Rebate/Other Charges			-7.05
7	Transmission Charges			26.44
8	Net Power Purchase Expenses (Excl. Free Power)	708.24		273.94

# **Commission Analysis:**

As seen from the above, the EPDS has claimed the power purchase cost for the FY 2019-20 at the escalation of 5.00% year over year where the base rate as actually paid during the FY 2017-18 & H1 of FY 2018-19. The Commission has considered the power purchase cost at the escalation of 5.00% year over year where the base rate as the station-wise average rate on the basis of the bill for the month of September, 2018 to compute the power purchase cost for the FY 2019-20. Accordingly, the power purchase cost for the FY 2019-20 is worked out, as detailed in table below.

The EPDS has projected cost of ₹ 6.59 Crores under UI/deviation. The Commission has not considered the same as there is surplus power. The Commission has not considered ₹ (-) 7.05 Crores for the FY 2019-20 under Rebate/Other Charges as projected by EPDS. If there is need for such, the same would be considered at the time of True up.

As per the SSERC (Renewable Energy Purchase Obligation and Its Compliance) (First Amendment) Regulations, 2017, the applicable RPO levels for the FY 2019-20 is 10.25% for Non Solar and 6.75% for Solar. The RPO Regulation requires the procurement from hydro sources to be excluded from consumption (total consumption of its consumer including T&D losses) for arriving at the energy quantum for calculation of RPO. If any further amendment issued by the CERC/Commission, the same shall be applicable for determination of RPO.

The EPDS had claimed that the RPO obligation compiled as per calculation, i.e. no need to purchase power/REC Certificate regarding RPO. The details are furnished in the table below:

Table 7.18: RPO Compliance furnished by EPDS

(In MUs)

Sl. No.	Source	FY 2019-20
1	RANGIT-III, NHPC	4.38
2	TEESTA -V, NHPC	42.40
3	CHUKHA, PTC	37.29
4	RAMMAM, WBSEDCL	23.96
5	SPDC	26.35
6	EPDS	30.00
7	FREE POWER	457.02
8	Total Hydro Generation available (including Free Power)	621.40
9	Total Consumption including T&D Loss	564.97
10	Excess Hydro Generation available (including Free Power)	56.43

The Commission has also worked out the same on the basis of the approved energy sales & purchases quantity. The details are furnished in the table below:

Table 7.19: RPO Compliance approved by the Commission

(In MUs)

Sl.	Source	FY 2019-20
No.	200200	111012
1	RANGIT-III, NHPC	4.38
2	TEESTA -V, NHPC	42.40
3	CHUKHA, PTC	37.29
4	RAMMAM, WBSEDCL	23.96
5	SPDC	26.35
6	EPDS	30.00
7	FREE POWER	457.02
8	Total Hydro Generation available (including Free Power)	621.40
9	Total Consumption including T&D Loss	519.33
10	Excess Hydro Generation available (including Free Power)	102.07

The table also shows that the EPDS is compling the RPO requirement for the FY 2019-20. However, The power procurement projection for the FY 2019-20 shows that there is no provision for procurement of power from solar sources. Further, EPDS is directed to make

efforts for developing solar sources & procuring power from solar sources. The detail of Power Purchase quantum and cost approved by the Commission is given in the Table below:

Table 7.20: Power Purchase Cost approved by the Commission

Sl. No.	Source	Energy received (MUs)	Unit Cost (₹ / Kwh)	Total Cost i/c supplementary bills (₹ in Crores)
1	NTPC			
	FSTPP	133.01	3.39	45.07
	BSTPP	123.32	4.34	53.57
	KHSTPP-I	77.59	3.45	26.75
	KHSTPP-II	36.11	3.54	12.77
	TSTPP	166.63	2.69	44.88
	KBUNL	15.76	5.31	8.36
2	NHPC			
	RANGIT-III	4.38	4.39	1.92
	TEESTA - V	42.40	2.25	9.54
3	PTC			
	СНИКНА	37.29	2.60	9.70
4	Other sources			
	WBSEDCL	23.96	1.41	3.38
	SPDC	26.35	4.41	11.62
	UI Purchase	0.00	0.00	0.00
5	Total Energy Purchase	686.80		227.56
6	Rebate/Other Charges			-
7	Transmission Charges			27.51
8	Free Power	457.02		-
9	REC Purchase			-
10	Net Power Purchase Expenses	1,143.82		255.07

The Commission approves the power purchase cost at ₹ 255.07 Crores including transmission charges at ₹ 27.51 Crores for purchase of 686.80 MUs & Free Power of 457.02 MUs for the FY 2019-20 against the total cost ₹ 273.94 Crores as projected by the EPDS.

# 7.11 Intra State Transmission Charges

The EPDS has projected Intra State Transmission Charges at ₹ 42.60 Crores as approved by the Commission in the MYT Order dated 28.03.2018 for the FY 2019-20. The details of expenses projected by the EPDS are furnished in the table below:

Table 7.21: Intra State Transmission Charges projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2019-20 (Projected)
1	Intra State Transmission Charges	42.60

# **Commission's Analysis:**

The Commission approved the Intra State Transmission Charges for the FY 2019-20, as detailed in table below.

Table 7.22: Intra State Transmission Charges approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2019-20
1	Intra State Transmission Charges	42.60

The Commission therefore approves the Intra State Transmission Charges at ₹ 42.60 Crores for the FY 2019-20.

# 7.12 Employee Cost

EPDS has furnished the total strength of employees in the table below:

**Table 7.23: Employee Strength** 

Sl. No.	Particulars	2017-18 (Actuals)	2018-19 (Estimated)	2019-20 (Projected)
1	Number of employees as on 1st April	3002	2958	2984
2	Number of employees on deputation/ foreign service as on 1st April	0	0	0
3	Total Number of employees (1+2)	3002	2958	2984
4	Number of employees retired / retiring during the year	44	38	52
5	Number of appointments during the year	0	64	64
6	Number of employees at the end of the year (3-4+5)	2958	2984	2996

Employee productive parameters as shown below:

**Table 7.24: Employee Productive Parameters** 

Sl.	Particulars	2017-18	2018-19	2019-20
No.	raruculars	(Actuals)	(Estimated)	(Projected)
1	Number of Consumers	111338	113520	115060
2	Number of Employees	3493	3493	3493
3	Energy sold within state in MU	343.67	375.62	436.19
4	Employees per MU of energy sold	10.16	9.30	8.01
5	Employees for 1000 consumers	31.37	30.77	30.36

EPDS has projected employee cost for the FY 2019-20 as shown in the table below:

**Table 7.25: Employee Cost furnished by EPDS** 

(₹ in Crores)

Sl.	Particulars	2019-20
No.		(Projected)
1	Employee Expenses	79.92

EPDS has stated that employee cost include salaries, allowances, Bonus, Leave Travel Cocession (LTC) & Honorarium etc. Employee Cost have been estimated based on the actuals of the FY 2017-18. Employee Cost for the FY 2019-20 is projected by escalating the cost of the H1 of FY 2018-19 considering all factors affecting the employee costs.

## **Commission's Analysis:**

EPDS has furnished actuals for the FY 2017-18 in the Format prescribed. The employee's productivity parameters over last few years are provided below:

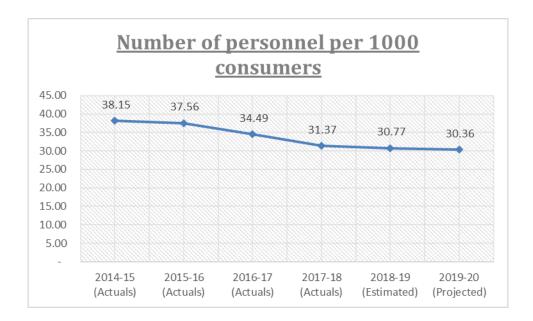


Chart 7.13: Number of personnel per 1000 consumers

It is observed that EPDS has projected to reduce the number of personnel per 1000 consumers during the end of the FY 2019-20. Further, the EPDS should take steps for rationalization & effective utilization of its manpower.

The Commission has considered all the factors, the employee cost are approved by the Commission for the FY 2019-20 as shown in table below. Further, the Commission directs EPDS to furnish the details of Employee Cost at the time of Review & True-up.

Table 7.26: Employee Cost approved by the Commission

Sl. No.	Particulars	FY 2019-20
1	Employee Expenses	79.92

The Commission therefore approves the employee cost at ₹ 79.92 Crores as projected by the EPDS for the FY 2019-20. The above Employee Expenses are approved only for Distribution Function.

# 7.13 Administrative and General Expenses

The EPDS has projected Administrative and General Expenses at ₹ 3.73 Crores for the FY 2019-20. The Administrative and General Expenses include Computerization, Communication, Rent, Rates and Taxes, Travelling & Conveyance expenses, Insurance, Telephone and Postage expenses, Electricity and Water charges, Technical and Consultancy fee, freight and notional related expenses etc. The details of expenses projected by the EPDS are furnished in the table below:

Table 7.27: Administrative and General Expenses Projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2019-20 (Projected)
1	Administration & General Expenses	3.73

# **Commission's Analysis:**

The Commission has considered all the factors, the A&G expenses are approved by the Commission for the FY 2019-20 as shown in table below. Further, the Commission directs EPDS to furnish the details of A&G expenses at the time of Review & True-up.

Table 7.28: Administration & Generation Expenses approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2019-20
1	Administration & General Expenses	3.73

The Commission therefore approves the Administrative and General Expenses at ₹ 3.73 Crores as projected by the EPDS for the FY 2019-20. The above Administrative and General Expenses are approved only for Distribution Function.

## 7.14 Repairs and Maintenance Expenses

The EPDS has projected at ₹ 21.19 Crores for the 2019-20 towards Repair and Maintenance Expenses which includes expenses towards operation and maintenance of electrical equipment, plant & machinery, vehicles, furniture and fixtures, office equipment and buildings. The details of expenses projected by EPDS are furnished in the table below:

Table 7.29: Repair and Maintenance Expenses projected by EPDS

(₹ in Crores)

		(VIII Clotes)
Sl.	Particulars	2019-20
No.	raruculais	(Projected)
1	Repair & Maintenance Expenses	21.19

## **Commission's Analysis:**

The Commission has considered all the factors, the Repair and Maintenance Expenses are approved by the Commission for the FY 2019-20 as shown in table below. Further, the Commission directs EPDS to furnish the details of Repair and Maintenance Expenses at the time of Review & True-up.

Table 7.30: Repair and Maintenance Expenses approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2019-20
1	Repair & Maintenance Expenses	21.19

The Commission therefore approves the Repair and Maintenance Expenses at ₹ 21.19 Crores for the FY 2019-20. The above Repair and Maintenance Expenses are approved only for Distribution Function.

## 7.15 Capital Investment

The EPDS has proposed a Capital Investment of ₹ 47.87 Crores during the FY 2019-20. The Capital Investment had projected by the EPDS for the FY 2019-20, is furnished in the table below:

Table 7.31: Investment plan projected by EPDS

(₹ in Crores)

Sl.	Particulars	2019-20
No.	Particulars	(Projected)
1	Schemes sanctioned under MDs	3.00
2	Building/Upgradation of Transformers	2.00
3	APDRP	0.00
4	NEC Schemes	3.43
5	NLCPR Schemes	6.65
6	State Share of NEC/NLCPR Schemes	0.34
7	CSS Schemes	0.00
8	RGGVY	0.00
9	Deendayal Upadhaya Gram Jyoti Yojana (DDUGJY)	24.85
10	Integrated power Dev. Scheme (IPDS)	7.60
11	Land compensation	0.00
12	Others	0.00
13	Grand Total	47.87

Progress in completion of works and their capitalisation is furnished in table below:

**Table 7.32: Works in Progress** 

(₹ in Crores)

		(threfoles)
Sl.	Doutionloss	2019-20
No.	Particulars Particulars	(Projected)
1	Opening Balance	47.17
2	Add: New Investments	47.87
3	Total (1+2)	95.04
4	Less: Investment Capitalised	57.85
5	Closing Balance (3-4)	37.19

## **Commission's Analysis:**

As seen from the above, the EPDS has projected a capital investment of ₹ 47.87 Crores for the FY 2019-20. Further, the EPDS has projected a capitalisation of ₹ 57.85 Crores for the FY 2019-20. It is showing that the Petitioner has not submitted the detailed investment plan and cost benefit analysis of the schemes envisaged during the period. Regulation 25 & 26 of SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2013, provides as follows:

#### "Capital Cost

- 1 Capital cost to be allowed by the Commission for the purpose of determination of tariff for Generating Company, Transmission Licensee and Distribution Licensee for their respective businesses will be based on the capital investment plan prepared by the Generating Company, Transmission Licensee or Distribution Licensee.
- 2 Capital cost for a project shall include:
  - (a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange rate variation on the loan during construction up to the date of commercial operation of the project, as admitted by the Commission after prudence check;
  - (b) capitalized initial spares subject to the ceiling rates specified in these Regulations; and
  - (c) additional capitalization determined under Regulation 26:

Provided that the assets forming part of the project but not put to use or not in use, shall be taken out of the capital cost.

- 3 The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:
  - Provided that prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.
- 4 The approved Capital Cost shall be considered for determination of tariff and if sufficient justification is provided for any escalation in the Capital Cost, the same may be considered by the Commission subject to the prudence check:
  - Provided that in case the actual capital cost is lower than the approved capital cost, then the actual capital cost will be considered for determination of tariff of the Generating Company or Transmission Licensee or Distribution Licensee.
- The actual capital expenditure on date of completion, for the original scope of work based on audited accounts of the Company, limited to original cost, may be considered subject to the prudence check by the Commission.

Where the power purchase agreement or bulk power transmission agreement provides for a ceiling of capital cost, the capital cost to be considered shall not exceed such ceiling.

7 The capital cost may include capitalized initial spares:

(a) Upto 2.5% of original capital cost in case of coal based/lignite fired generating stations:

(b) Upto 4.0% of original capital cost in case of gas turbine/combined cycle generating stations;

(c) Upto 1.5% of original capital cost in case of hydro-generating stations; and

(d) Upto 1.5% of original capital cost in case of Transmission Licensee and Distribution Licensee.

The amount of any contribution or deposit made by the consumers and Government grant, towards works for connection to the distribution system or transmission system of the Distribution Licensee or Transmission Licensee, shall be deducted from the original cost of the project for the purpose of calculating the amount under debt and equity under Regulation, 28.

Any expenditure on replacement, renovation and modernization or extension of life of old fixed assets, as applicable to Generating Company, Transmission Licensee and Distribution Licensee, shall be considered after writing off the net value of such replaced assets from the original capital cost and will be calculated as follows:

Net Value of Replaced Assets = OCFA - AD - CC;

Where;

OCFA : Original Capital Cost of Replaced Assets;

AD : Accumulated depreciation pertaining to the Replaced Assets;

CC : Total Consumer Contribution pertaining to the Replaced Assets.

## Additional Capitalization

The following capital expenditure, actually incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to the prudence check:

- (a) Due to Un-discharged liabilities within the original scope of work;
- (b) On works within the original scope of work, deferred for execution;
- (c) To meet award of arbitration and compliance of final and unappeasable order or decree of a court arising out of original scope of works;
- (d) On account of change in law;
- (e) On procurement of initial spares included in the original project costs subject to the ceiling norm laid down in Regulation 25.7;
- (f) Any additional works/services, which have become necessary for efficient and successful operation of a generating station or a transmission system or a distribution system but not included in the original capital cost:

Provided that original scope of work along with estimates of expenditure shall be submitted as a part of Business Plan:

Provided further that a list of the deferred liabilities and works deferred for execution shall be submitted along with the application for final tariff after the date of commercial operation of the generating Unit/Station or transmission system or distribution system.

Provided further that the assets forming part of the project but not put to use shall not be considered.

2 Impact of additional capitalization on tariff, as the case may be, shall be considered during Truing Up of each financial year of the Control Period."

As required above the petitioner is directed to provide the scheme wise details as required along with cost benefit analysis and approvals with future filings. Further, the petitioner has not submitted the basis of the capex and capitalization considered for the FY 2019-20. The petitioner is directed to submit the same & scheme wise detailed breakup for the ensuing year as well as for the past FY with next filings.

In view of the above the Commission provisionally approves the capital investment of ₹ 39.10 Crores against ₹ 47.87 Crores projected by the EPDS for the FY 2019-20 and capitalisation of ₹ 47.71 Crores against ₹ 57.85 Crores projected by the EPDS for the FY 2019-20.

## 7.16 Gross Fixed Assets (GFA)

The EPDS has stated that the opening GFA for the FY 2018-19 has been taken from the assets register and works capitalised during the FY 2019-20 have been added and the GFA computed, as detailed in the table below:

**Table 7.33 Gross Fixed Assets Movement** 

(₹ in Crores)

Sl. No.	Year	2019-20
1	Opening Balance	590.84
2	Addition during the year	57.85
3	Closing Balance	648.69

# **Commissions Analysis:**

In the absence of audited accounts the opening GFA as on 01.04.2018, furnished by the EPDS cannot be taken into consideration for the purpose of allowing depreciation or return on equity etc.

# 7.17 Depreciation

The EPDS has projected depreciation of ₹21.47 Crores for the FY 2019-20. The EPDS has stated that the depreciation has been calculated on the value of the opening GFA plus additions during the year at the rates prescribed in the SSERC Regulations. The Depreciation calculated for the assets of the distribution function. The same is detailed in the table below:

**Table 7.34: Depreciation Projected by EPDS** 

(₹ in Crores)

Sl. No.	Particulars	2019-20 (Projected)	
1	Depreciation	21.47	

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

As discussed earlier, the depreciation on the opening GFA cannot be considered. The Commission has approved the Depreciation of ₹ 19.28 Crores as same as approved in the MYT Order dated 28.03.2018 for the FY 2019-20, as detailed in the table below:

Table 7.35: Depreciation approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2019-20
1	Opening GFA	341.29
2	Additions during the Year	47.71
3	Closing GFA	389.00
4	Average GFA	365.15
5	Rate of depreciation	5.28%
6	Depreciation	19.28

The Commission therefore approves the Depreciation at ₹ 19.28 Crores for the FY 2019-20. The above Depreciation are approved only for Distribution Function.

# 7.18 Interest and Finance Charges

The EPDS has not projected interest and finance charges during the FY 2019-20.

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

The Commission has not found any loan with EPDS. As such the Commission has not considered interest and finance charges during the FY 2019-20.

# 7.19 Interest on Working Capital

The EPDS has projected interest on working capital at ₹ 11.68 Crores for the FY 2019-20 on normative basis as per 32.3 of SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2013, on requirement of:

- Operation & maintenance expenses for one month; plus
- Maintenance spares at one (1) per cent of the historical cost escalated at 6% from the date of commercial operation; plus

- Receivables equivalent to two (2) months of the expected revenue from charges for use of Distribution Wires at the prevailing tariffs; minus month Repair & Maintenance Cost and
- 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.

The rate of interest on working capital has been considered as per State Bank Advance Rate (SBAR) as on 1<sup>st</sup> April of the respective year i.e. 01.04.2018.

The EPDS has worked out interest on working capital as detailed in the table below:

**Table 7.36: Interest on Working Capital Projected by EPDS** 

(₹ in Crores)

Sl.	Particulars	2019-20
No.	1 tillentis	(Projected)
1	O & M Expenses for 1 month	8.74
2	Maintenance Spares @1% plus esclation @ 6% per annum	6.52
3	Receivables equivalent to 2 month's Revenue	71.55
4	Total Working Capital	86.81
5	Less: Security Deposit of Consumers	-
6	Net Working Capital	86.81
7	SBI Advance Rate	13.45%
8	Interest on Working Capital	11.68

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

As per Regulation as per 32.3 of SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2013, interest on working capital shall be calculated on normative basis, notwithstanding the fact that the licensee has taken working capital loan from any outside agency. Accordingly, the Interest on Working Capital has been worked out on the costs approved by the Commission, as detailed in the table below:

Table 7.37: Interest on Working Capital approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2019-20
1	O & M Expenses for 1 month	8.74
2	Maintenance Spares @1% plus esclation @ 6% per annum	-
3	Receivables equivalent to 2 month's Revenue	67.84
4	Total Working Capital	76.58
5	Less: Security Deposit of Consumers	-
6	Net Working Capital	76.58
7	SBAR as on 01.04.2018	8.70%
8	Interest on Working Capital	6.66

The Commission approves the Interest on Working Capital at ₹ 6.66 Crores for the FY 2019-20. The above Interest on Working Capital are approved only for Distribution Function.

# 7.20 Return on Equity

The EPDS has not projected Return on Equity during the FY 2019-20.

#### **Commissions Analysis:**

Regulation 29 of SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2013, provides for Return on Equity at 14% p.a. on the equity amount appearing in the audited balance sheet of annual accounts.

The EPDS has not produced audited annual accounts. In addition, it is a State Government Department; the expenses are funded by the Government. As such, no separate return is to be allowed for Return on Equity.

#### 7.21 Provision for Bad Debts

The EPDS has not claimed any provision for bad debts during the FY 2019-20.

#### 7.22 Non-Tariff Income

The EPDS has projected a Non-Tariff Income ₹ 1.62 Crores for the FY 2019-20.

## **Commission's Analysis:**

As per Regulation 69 of SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2013, non-tariff income comprises of:

- Income from rent of land or buildings;
- Income from sale of scrap;
- Income from statutory investments;
- Interest on delayed or deferred payment on bills;
- Interest on advances to suppliers/contractors;
- Rental from staff quarters;
- Rental from contractors;
- Income from hire charges from contactors and others;
- Income from advertisements, etc.;
- Meter/Metering equipment rentals;
- Revenue from late payment charges;
- Recovery for theft and pilferage of energy
- Miscellaneous receipts;
- Interest on advances to suppliers;
- Excess found on physical verification;
- Prior period income.

The EPDS has stated that most of the consumers buy and use their own energy meters and non-tariff income from meter rent is only received against meters provided by the department. EPDS is directed to submit the details of the energy meters provided by the department and procured by the consumers at their cost. Further, EPDS has projected the Non-tariff Income of ₹ 1.62 Crores as same as approved by the Commission in the MYT Order dated 28.03.2018.

The Commission approves the Non-Tariff Income at ₹ 1.62 Crores for the FY 2019-20, as projected by the EPDS.

# 7.23 Revenue from Existing Tariff

The EPDS has projected revenue from sale of energy with existing tariff at ₹ 228 Crores within the states for the FY 2019-20. Further, the EPDS has projected revenue from outside state sale at ₹ 201.31 Crores for the FY 2019-20.

## **Commissions Analysis:**

It is observed that the revenue from domestic category contributes after the highest contribution by HT Industrial. Hence, impact of change in tariff on the revenue is mostly dependent on these categories. The revenue approved at the existing Tariff is detailed in the table below:

Table 7.38: Revenue at Existing Tariff as approved by the Commission for FY 2019-20

Sl. No.	Particulars	Energy Sales (In MUs)	Average Rate (₹/Kwh)	Amount (₹ in Crores)
1	Domestic	111.26	2.57	28.64
2	Commercial	41.14	5.85	24.09
3	Public Lighting	0.29	4.88	0.14
4	Temporary Supply	3.38	8.73	2.95
5	HT Industrial	215.33	6.71	144.42
6	LT Industrial	5.67	4.16	2.36
7	Bulk Supply	28.00	7.87	22.03
8	Total sales within State	405.08	5.55	224.63
9	Sales Outside State	641.16	2.85	182.44
10	Total Sales (8+9)	1046.23	3.89	407.07

The Commission approves revenue from sale of energy with existing tariff at ₹ 224.63 Crores on sale of 405.08 MUs within the state at an average rate of ₹ 5.55/kWh & ₹ 182.44 Crores on sale of 641.16 MUs from outside State sale at an average rate of ₹ 2.85/kWh for the FY 2019-20.

# 7.24 Aggregate Revenue Requirement (ARR) and Gap

The Aggregate revenue requirement and gap projected by EPDS for the FY 2019-20 is furnished in table below.

Table 7.39: Aggregate Revenue Requirement projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	FY 2019-20 (As approved by the Commission in MYT Order dated 28.03.2018)	FY 2019-20 (Projected)
1	Cost of Fuel	0.18	0.18
2	Cost of Generation	18.83	18.83
3	Cost of Power Purchase	236.22	273.94
4	Intra State Transmission Charges	42.60	42.60
5	Employee Costs	83.51	79.92
6	Repair & Maintenance Expenses	14.78	21.19
7	Administrative and General Expenses	0.90	3.73
8	Depreciation	19.28	21.47
9	Interest Charges	-	-
10	Interest on Working Capital	7.91	11.68
11	Return on NFA/Equity	-	-
12	Total Revenue Requirement	424.21	473.53
13	Less: Non Tariff Income	1.62	1.62
14	Net Revenue Requirement	422.59	471.92
15	Revenue from Tariff		228.00
16	Revenue from Sale Outside the State		201.31
17	Gap		42.61

Based on the approvals of the above projections, the ARR & Gap of EPDS for the FY 2019-20 works out as detailed in table below:

Table 7.40: Aggregate Revenue Requirement approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2019-20
1	Cost of Fuel	0.18
2	Cost of Generation	18.83
3	Cost of Power Purchase	255.07
4	Intra State Transmission Charges	42.60
5	Employee Costs	79.92
6	Repair & Maintenance Expenses	21.19
7	Administrative and General Expenses	3.73
8	Depreciation	19.28
9	Interest Charges	-
10	Interest on Working Capital	6.66
11	Return on NFA/Equity	1
12	Total Revenue Requirement	447.46
13	Less: Non Tariff Income	1.62
14	Net Revenue Requirement	445.84

Accordingly, the Commission approves the Aggregate Revenue Requirement at ₹ 445.84 Crores against ₹ 471.92 Crores projected by EPDS for the FY 2019-20.

# 7.25 Revenue Gap for the FY 2019-20

Based on the Aggregate Revenue Requirement and revenue from existing tariffs for FY 2019-20, the resultant GAP is as shown in the table below.

Table 7.41: Approved Revenue at Existing Tariff & Gap

Sl. No.	Particulars	FY 2019-20
1	Net Revenue Requirement	445.84
2	Revenue from Tariff	224.63
3	Revenue from Sale Outside the State	182.44
4	Gap	38.77
5	Energy Sales within the State	405.08
6	Energy Sales outside the State	641.16
7	Average Cost of Supply ₹/kWh	6.50

The Revenue gap of ₹ 38.77 Crores has been arrived at on the basis of the approved data for the FY 2019-20. The Revenue Gap is about 8.70% of the net Revenue Requirement. The average cost of supply per unit for the FY 2019-20 is ₹ 6.50 & average revenue from tariff is ₹ 5.55. The average revenue gap per unit is ₹ 0.95.

The chart below provides the trend of Cost of Supply, Average Revenue & Gap over the past few years.

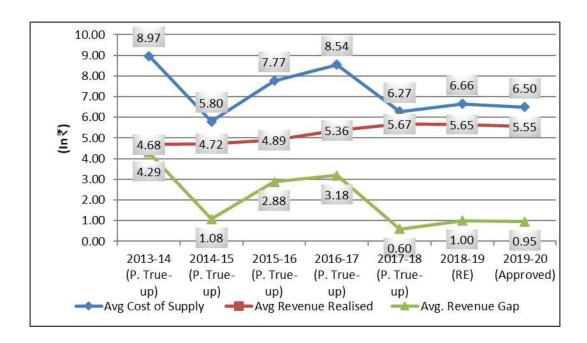


Chart 7.14: Trend of Cost of Supply, Average Revenue & Gap

The Commission is of the view that the EPDS shall make efforts to bridge the revenue gap by improving the operational performance, particularly by reduction of distribution losses which, in turn, would reduce the resource gap. A concerted effort needs to be made to recover the outstanding arrears, especially from government departments & other high end users in the State, i.e., industrial units, hotels, etc. The Commission observes that a sizeable quantum of power is purchased by the EPDS for meeting the energy demand of the State (within the State consumption). The EPDS needs to make efforts to improve its own generation, so that a sizeable part of the State's demand is met from its own generation.

# 7.26 Recovery of Revenue Gap for the FY 2019-20

As seen from para 7.25 above, there is a revenue gap of ₹ 38.77 Crores during the FY 2019-20 which is 8.70% of net ARR for the FY 2019-20. The existing tariff was fixed with effect from 01.04.2019.

EPDS does not propose to recover the entire Gap as this may result in huge burden on the consumers. Tariff is a sensitive subject having substantial impact on social, economic and financial well-being of the public at large as well as the viability and growth of power sector. Recovery of entire Gap through tariff increase is not practicable as this would make power unaffordable to the general consumers. EPDS being a Government Department funded by budgetary support from State Government, it proposes to absorb the unrecovered gap. However, EPDS proposed an average increase in tariff to bridge the gap partially.

As such, the Commission considers it to revise the tariffs at an average of 4.21% without giving tariff shock to consumers to bridge the gap partially. Owing to revision of tariffs, the EPDS is expected to get additional revenue of ₹ 9.46 Crores as detailed in table below:

Table 7.42: Revenue from revised Tariff approved by the Commission for FY 2019-20

1 Domestic (DLT) a) Up to 50 units	Sl. No.	Category	Energy Sales (In MUs)	Total (₹ in Crores)
a) Up to 50 units b) \$1 to 100 units c) \$101-200 units c) \$101-200 units d) 201 to 400 units e) 401 & above 9.65 A.82 Total 2 Commercial (CLT) a) Up to 50 units 2.36 C) 101 to 200 units 2.36 C) 102 C) 103 above 19.78 10.66 Total A 1.14 A 1.41 A 1.42 A 1.74 A 1.44 A		Domestic (DLT)	(III IVICS)	(V III Crores)
b) 51 to 100 units			11 11	5 22
C  101-200 units			+	
d)   201 to 400 units   14.94   6.87     e)   401 & above   9.65   4.82     Total   111.26   29.43     2   Commercial (CLT)     a)   Up to 50 units   4.45   1.47     b)   51 to 100 units   2.36   0.94     c)   101 to 200 units   12.20   7.32     e)   401 & above   19.78   12.66     Total   41.14   23.71     3   Public lighting			+	
e) 401 & above 9.65 4.82  Total 111.26 29.43  2 Commercial (CLT)			+	
Total			1	
2 Commercial (CLT) a) Up to 50 units b) 51 to 100 units c) 101 to 200 units c) 101 to 200 units d) 201 to 400 units 12.20 7.32 e) 401 & above 19.78 12.66  Total 3 Public lighting a) Rural Areas 0.02 0.01 b) Urban Areas 0.27 0.14 Total 0.29 0.14 Temporary 3.38 2.95 Industrial A HT a) HT (AC) above 3.3 KV b) Upto 100 KVA c) 100 - 250 KVA d) 250 - 500 KVA 500 KVA & above 76.66 72.13 B LT (Rural) a) Up to 500 units b) 501 - 1000 units c) 1001 & above 1001 & ab	<u> </u>		+	
a) Up to 50 units	2		111.20	2515
b) 51 to 100 units			4 45	1 47
C  101 to 200 units			1	
d) 201 to 400 units   12.20   7.32   e) 401 & above   19.78   12.66     Total   41.14   23.71   3			1	
e) 401 & above 19.78 12.66  Total 41.14 23.71 3 Public lighting a) Rural Areas 0.02 0.01 b) Urban Areas 0.27 0.14  Total 0.29 0.14 4 Temporary 3.38 2.95 5 Industrial				
Total			i i	
3 Public lighting a) Rural Areas	<u> </u>		+	
a) Rural Areas 0.02 0.01 b) Urban Areas 0.27 0.14 Total 0.29 0.14 4 Temporary 3.38 2.95 5 Industrial	3		72.27	25.71
Display   Disp			0.02	0.01
Total         0.29         0.14           4 Temporary         3.38         2.95           5 Industrial         A HT         A HT (AC) above 3.3 KV           b) Upto 100 KVA         45.02         19.93           c) 100 - 250 KVA         43.21         23.94           d) 250- 500 KVA         50.44         37.40           e) 500 KVA & above         76.66         72.13           Total HT         215.33         153.41           B LT (Rural)         3         Up to 500 units         5.32         1.92           b) 501 - 1000 units         0.15         0.07           c) 1001 & above         0.13         0.07           Total         5.61         2.15           C LT (Urban)         0.01         0.01           a) Up to 500 units         0.01         0.01           b) 501 - 1000 units         0.01         0.01           c) 1001 & above         0.04         0.03           Total         0.06         0.26           Total LT (B+C)         5.67         2.41           Total Industrial (A+B+C)         221.00         155.82           6 Bulk supply         4.82         4.33           b) HT         4.82         4			<del> </del>	
4 Temporary       3.38       2.95         5 Industrial       A HT         a) HT (AC) above 3.3 KV       45.02       19.93         c) 100 - 250 KVA       43.21       23.94         d) 250- 500 KVA       50.44       37.40         e) 500 KVA & above       76.66       72.13         Total HT       215.33       153.41         B LT (Rural)       1.92         a) Up to 500 units       5.32       1.92         b) 501 - 1000 units       0.15       0.07         c) 1001 & above       0.13       0.07         Total       5.61       2.15         C LT (Urban)       0.01       0.01         a) Up to 500 units       0.01       0.01         b) 501 - 1000 units       0.01       0.01         c) 1001 & above       0.04       0.03         Total       0.06       0.26         Total LT (B+C)       5.67       2.41         Total Industrial (A+B+C)       221.00       155.82         6 Bulk supply       a) LT       4.82       4.33         b) HT       23.18       17.70         Total       220.00       22.03	- 5,			
5 Industrial         A HT         a) HT (AC) above 3.3 KV         b) Upto 100 KVA       45.02       19.93         c) 100 - 250 KVA       43.21       23.94         d) 250- 500 KVA       50.44       37.40         e) 500 KVA & above       76.66       72.13         Total HT       215.33       153.41         B LT (Rural)       1.92         a) Up to 500 units       5.32       1.92         b) 501 - 1000 units       0.15       0.07         c) 1001 & above       0.13       0.07         Total       5.61       2.15         C LT (Urban)       0.01       0.01         a) Up to 500 units       0.01       0.01         b) 501 - 1000 units       0.01       0.01         c) 1001 & above       0.04       0.03         Total       0.06       0.26         Total LT (B+C)       5.67       2.41         Total Industrial (A+B+C)       221.00       155.82         6 Bulk supply       4.82       4.33         b) HT       23.18       17.70         Total       28.00       22.03	4		<del> </del>	
A HT  a) HT (AC) above 3.3 KV  b) Upto 100 KVA  c) 100 - 250 KVA  d) 250 - 500 KVA  e) 500 KVA & above  Total HT  215.33  153.41  B LT (Rural)  a) Up to 500 units  b) 501 - 1000 units  c) 1001 & above  1001 & abo			5.55	
a) HT (AC) above 3.3 KV b) Upto 100 KVA 45.02 19.93 c) 100 - 250 KVA 43.21 23.94 d) 250- 500 KVA 50.44 37.40 e) 500 KVA & above 76.66 72.13  Total HT 215.33 153.41  B LT (Rural) a) Up to 500 units 5.32 b) 501 - 1000 units 0.15 C LT (Urban) a) Up to 500 units 5.61 C LT (Urban) c) 1001 & above 0.13 0.07 Total 5.61 C LT (Urban) c) 1001 & above 0.01 0.01 c) 1001 & above 0.04 0.03 Total Total LT (B+C) 5.67 2.41 Total Industrial (A+B+C) 5.82 6 Bulk supply a) LT 4.82 4.33 b) HT 23.18 17.70 Total 70tal 28.00 22.03	-			
b) Upto 100 KVA				
c) 100 - 250 KVA 43.21 23.94 d) 250 - 500 KVA 50.44 37.40 e) 500 KVA & above 76.66 72.13  Total HT 215.33 153.41  B LT (Rural) a) Up to 500 units 5.32 1.92 b) 501 - 1000 units 0.15 0.07  Total 5.61 2.15  C LT (Urban) a) Up to 500 units 0.01 0.01 b) 501 - 1000 units 0.01 0.01 c) 1001 & above 0.01 0.01 c) 1001 & above 0.04 0.03  Total 0.06 0.26  Total LT (B+C) 5.67 2.41  Total Industrial (A+B+C) 221.00 155.82 6 Bulk supply a) LT 4.82 4.33 b) HT 23.18 17.70 Total 7.00			45.02	19 93
d)       250-500 KVA       50.44       37.40         e)       500 KVA & above       76.66       72.13         Total HT       215.33       153.41         B       LT (Rural)       215.33       153.41         a)       Up to 500 units       5.32       1.92         b)       501 - 1000 units       0.15       0.07         C       LT (Urban)       0.01       0.01         a)       Up to 500 units       0.01       0.01         b)       501 - 1000 units       0.01       0.01         c)       1001 & above       0.04       0.03         Total       0.06       0.26         Total LT (B+C)       5.67       2.41         Total Industrial (A+B+C)       221.00       155.82         6       Bulk supply       4.82       4.33         b)       HT       23.18       17.70         Total       28.00       22.03		•		
e) 500 KVA & above 76.66 72.13  Total HT 215.33 153.41  B LT (Rural)  a) Up to 500 units 5.32 1.92  b) 501 - 1000 units 0.15 0.07  Total 5.61 2.15  C LT (Urban)  a) Up to 500 units 0.01 0.01  b) 501 - 1000 units 0.01 0.01  c) 1001 & above 0.04 0.03  Total 0.06 0.26  Total LT (B+C) 5.67 2.41  Total Industrial (A+B+C) 221.00 155.82  6 Bulk supply  a) LT 4.82 4.33  b) HT 23.18 17.70  Total Total 28.00 22.03			1	
Total HT       215.33       153.41         B       LT (Rural)       1.92         a)       Up to 500 units       5.32       1.92         b)       501 - 1000 units       0.07       0.07         C       LT (Urban)       1.001       0.01         a)       Up to 500 units       0.01       0.01         b)       501 - 1000 units       0.01       0.01         c)       1001 & above       0.04       0.03         Total       0.06       0.26         Total LT (B+C)       5.67       2.41         Total Industrial (A+B+C)       221.00       155.82         6       Bulk supply       10.01       4.82       4.33         b)       HT       4.82       4.33         b)       HT       23.18       17.70         Total       28.00       22.03			<del> </del>	
B LT (Rural) a) Up to 500 units 5.32 1.92 b) 501 - 1000 units 0.15 0.07 c) 1001 & above 0.13 0.07  Total 5.61 2.15 C LT (Urban) a) Up to 500 units 0.01 0.01 b) 501 - 1000 units 0.01 c) 1001 & above 0.04 0.03  Total 0.06 0.26 Total LT (B+C) 5.67 2.41 Total Industrial (A+B+C) 5 Bulk supply a) LT 4.82 4.33 b) HT 23.18 17.70 Total 28.00 22.03			1	
a) Up to 500 units b) 501 - 1000 units c) 1001 & above Total c) LT (Urban) a) Up to 500 units b) 501 - 1000 units  0.01 0.01 0.01 0.01 c) 1001 & above 0.04 0.03 Total 0.06 0.26 Total LT (B+C) 5.67 2.41 Total Industrial (A+B+C) 5.67 2.41 5 Bulk supply a) LT 4.82 4.33 b) HT 23.18 17.70 Total 28.00 220.03	В			
b) 501 - 1000 units c) 1001 & above 0.13 0.07  Total 5.61 2.15  C LT (Urban) a) Up to 500 units 0.01 0.01 b) 501 - 1000 units 0.01 c) 1001 & above 0.04 0.03  Total 0.06 0.26  Total LT (B+C) 5.67 2.41  Total Industrial (A+B+C) 8 Bulk supply a) LT 4.82 4.33 b) HT 23.18 17.70 Total 28.00 22.03	a)		5.32	1.92
c) 1001 & above       0.13       0.07         Total       5.61       2.15         C LT (Urban)       0.01       0.01         a) Up to 500 units       0.01       0.01         b) 501 - 1000 units       0.01       0.01         c) 1001 & above       0.04       0.03         Total       0.06       0.26         Total LT (B+C)       5.67       2.41         Total Industrial (A+B+C)       221.00       155.82         6 Bulk supply       4.82       4.33         b) HT       23.18       17.70         Total       28.00       22.03		•		0.07
Total         5.61         2.15           C LT (Urban)         0.01         0.01           a) Up to 500 units         0.01         0.01           b) 501 - 1000 units         0.01         0.01           c) 1001 & above         0.04         0.03           Total         0.06         0.26           Total LT (B+C)         5.67         2.41           Total Industrial (A+B+C)         221.00         155.82           6 Bulk supply         4.82         4.33           b) HT         23.18         17.70           Total         28.00         22.03			+	0.07
C       LT (Urban)         a) Up to 500 units       0.01       0.01         b) 501 - 1000 units       0.01       0.01         c) 1001 & above       0.04       0.03         Total       0.06       0.26         Total LT (B+C)       5.67       2.41         Total Industrial (A+B+C)       221.00       155.82         6       Bulk supply       4.82       4.33         b) HT       23.18       17.70         Total       28.00       22.03			<del> </del>	2.15
a) Up to 500 units  b) 501 - 1000 units  c) 1001 & above  7 total  Total LT (B+C)  Total Industrial (A+B+C)  Bulk supply  a) LT  4.82  4.33  b) HT  23.18  17.70  Total  0.01  0.01  0.01  0.01  0.01  0.02  0.03  0.04  0.06  0.26	С	LT (Urban)		
b) 501 - 1000 units	a)		0.01	0.01
c) 1001 & above       0.04       0.03         Total       0.06       0.26         Total LT (B+C)       5.67       2.41         Total Industrial (A+B+C)       221.00       155.82         6 Bulk supply       4.82       4.33         b) HT       23.18       17.70         Total       28.00       22.03			<del> </del>	0.01
Total       0.06       0.26         Total LT (B+C)       5.67       2.41         Total Industrial (A+B+C)       221.00       155.82         6 Bulk supply       4.82       4.33         b) HT       23.18       17.70         Total       28.00       22.03			0.04	0.03
Total LT (B+C)       5.67       2.41         Total Industrial (A+B+C)       221.00       155.82         6 Bulk supply       4.82       4.33         b) HT       23.18       17.70         Total       28.00       22.03			<u> </u>	0.26
Total Industrial (A+B+C)         221.00         155.82           6 Bulk supply         4.82         4.33           b) HT         23.18         17.70           Total         28.00         22.03				2.41
6 Bulk supply a) LT 4.82 4.33 b) HT 23.18 17.70 Total 28.00 22.03			<del> </del>	155.82
b) HT 23.18 17.70 Total 28.00 22.03	6			
b) HT 23.18 17.70 Total 28.00 22.03	a)	LT	4.82	4.33
Total 28.00 22.03	b)	нт		17.70
	,			22.03
	7	Grand Total	405.08	234.09

With the revision of tariff, the EPDS will generate additional revenue of  $\stackrel{?}{\underset{?}{?}}$  9.46 Crores. Thereby, the revenue gap is calculated to  $\stackrel{?}{\underset{?}{?}}$  29.31 Crores (i.e.  $\stackrel{?}{\underset{?}{?}}$  38.77 Crores  $-\stackrel{?}{\underset{?}{?}}$  9.46 Crores), which the EPDS shall meet by improving internal efficiency.

The Commission, accordingly, approves revenue from revised tariffs at ₹ 234.09 Crores with the energy sales of 405.08 MUs. The Revenue gap has been reduced to ₹ 29.31 Crores as against ₹ 38.77 Crores (approved in Para 7.25) and has been arrived on the basis of the approved data for the FY 2019-20.

# 8. DIRECTIVES AND ADVISORIES

#### Introduction

The Commission has been carrying out Review of Performance of Energy and Power Department, the deemed licensee in the State of Sikkim, and had been issuing series of directives to the Licensee. The directives were issued by the Commission keeping in view the need to improve the overall standard of performance of the Licensee so as to bring the performance of the Licensee at par with the national standards.

This Chapter deals with the various directives issued by the Commission in its Tariff Order dated 28<sup>th</sup> March, 2018 for the FY 2018-19, the status of compliance of the directives by the Licensee, the views of the Commission thereon and new directives for compliance and implementation by the EPDS.

#### **Directive 3:**

"The EPDS is called upon to institute effective and conscious measures to mitigate revenue shortfalls attributable to T & D losses. In this regard, the concerned deemed licensee is advised to address Critical areas viz. institutionalizing an in-built energy auditing mechanism, introduction of pre-paid billing system, unbundling of generation, transmission and distribution as distinct segments, etc. The EPDS is also advised to undertake installation of Remote Sensing Meters in all Bulk load consuming units such as Industrial Units, Star category Hotels, etc. in order to facilitate effective and efficient monitoring and billing of energy consumption. These administrative measures are underlined with the view to bringing about a tangible improvement in the overall performance of the licensees."

## **Compliance:**

Under first phase IPDS scheme Consumers of three towns namely Rangpo, Gangtok & Jorethang will be installed with prepaid meters. The remaining towns will be subsequently covered in 2nd phase. In regard to Remote metering, more number of high end consumers is being covered.

#### **Commission's Comments:**

The Commission appreciates and commends the steps being taken and efforts being made by the Department towards pre-paid metering and remote metering of high end consumers. The Commission urges the Department to take necessary action for timely completion of metering of all towns and also high end consumers. The Department is directed to submit a report on the status of prepaid metering and remote metering to the Commission within a period of 90 (ninety) days from the date of issue of the tariff order.

#### Directive 4:

"In the area of energy auditing, the EPDS has reportedly undertaken a pilot project for Gangtok to address issues impacting technical and commercial losses. While appreciating the initiative taken by the EPDS in this regard, it is suggested that appropriate steps be also taken to install meters covering all Feeder 132KV, 66KV and 11KV transmission lines including the distribution transformer points to facilitate effective monitoring of distribution and consumption of energy load. These measures would contribute to containing the Transmission and Distribution losses."

#### **Compliance:**

The advice of the Hon'ble Commission is noted please.

#### **Commission's Comments:**

The Department is directed to submit a status report with details of the metering of the feeders, transmission lines and distribution transformers completed till date and as well as the works/plans in the pipeline planned for the near future within a period of thirty days from the date of issue this order.

## Directive 7:

On the request of the EPDS, the Commission has agreed to permit extension of the time for submission of all the prescribed documents and schedules relating to the Annual Accounts and the Balance Sheets along with the Profit and Loss Accounts as required under the Electricity (Supply / Annual Accounts) Rules 1985 and submit the same to the Commission.

## **Compliance:**

It is submitted that the Fixed Assets Register for the FY 2017-18 & Annual Accounts upto -FY 2017-18 is being finalised and shall be submitted shortly.

#### **Commission's Comments:**

The Commission feels that as long as a decision on the un-bundling of the Department is taken by the State Government and separate entities for generation, transmission and distribution businesses are created, the prescribed documents, formats, accounts, profit and loss statements etc can't be compiled or generated by the Department as required under the Electricity Act, 2003 or the Electricity (Supply / Annual Accounts) Rules 1985. As such, the Commission advises the Department to bring the matter to the notice of the State Government for taking early decision on the un-bundling process.

# **Directive 8: Management Information System (MIS)**

"The EPDS has not maintained proper data in respect of sales (slab wise), with number of consumers and connected load / demand etc. for proper analysis of the past data based on actuals and estimation of proper projections for consideration in the ARR. The EPDS is directed to take steps to build Credible and accurate data base and management information system (MIS) to meet the requirements for filing ARR & Tariff Petition as per regulatory requirement. The formats, software and hardware may be synchronized with the Regulatory Information and Management System (RIMS) circulated by Central Electricity Regulatory Commission (CERC)."

## **Compliance:**

Three billing centers at Rangpo, Topahakhani & Jorethang have been digitized during the month of July with online payment facilities. Digitization of more billing centers will be taken up as per availability of fund.

#### **Commission's Comments:**

The Commission is of the view that in this present age of Information Technology and digital world, the Department must take immediate steps to ensure that it does not lag behind in

the field of introducing paperless work and e-governance. Having digitized billing system for all billing centres in the State will not only avoid tedious and time consuming manual entry and up-keep of records but will also ensure that the Department is able to submit the requisite data/records to the Commission in time. The Commission urges the Department to take all possible steps for digitization of not only billing system but also for maintaining all other important data/records.

#### **Directives 14:**

Reforms in the energy sector are absolutely necessary to overhaul the Energy Sector to make it more vibrant and commercially viable in view of the huge hydro power potential in the State. As part of the reforms envisaged the State Government will have to consider seriously the huge monopolistic role of the EPDS in the generation, transmission and distribution of electricity in the State. Most of the States have already initiated the process of unbundling their Energy / Power Departments/SEBs into separate corporate entities covering generation, transmission and distribution, even going to the extent of utilizing the private sector in the distribution of power. This is an important aspect the State Government will have to look at in order to ensure that the Power sector lives up to its expectation of becoming the State's main revenue earner.

In addition the EPDS needs to examine and review the milestones agreed upon in the Memorandum of Understanding (MOU) signed with the Ministry of Power in December 2002 by the Government of Sikkim which have not been fully achieved. Necessary steps and actions need to be taken for achieving the target and commitment for implementing of reforms programme in the power sector.

#### **Compliance:**

The advice of the Hon'ble Commission is noted please.

#### **Commission's Comments:**

It is observed that even though the High Powered Committee was notified by the State Government in May 2017, only one meeting of the Committee has been convened so far.

The Commission feels that the Department needs to follow up the matter with the Committee to ensure that the report/recommendation is submitted to the State Government for decision on the un-bundling process without further delay.

## **Directives 18: Consumer Grievances Redressal Forum (CGRF)**

The EPDS has constituted the Consumer Grievances Redressal Forum (CGRF) only in East District, Gangtok. The EPDS directed to set up Consumer Grievances Redressal Forum (CGRF) in each district of the State to facilitate redressal of the grievances of the consumers and general public. The CGRFs in the remaining districts shall be constituted within a period of 2 months from the date of issue of this Order.

## **Compliance:**

The CGRFs have been constituted District wise as per the direction of the Hon'ble Commission.

#### Commission's comments:

The directives have been complied. The Commission directs the Department to take measures for creating awareness among the consumers and general public regarding the roles, functions and redressal mechanism available to the public under the CGRFs.

# Directive 19: Publicity/Awareness regarding CGRF, Consumer Grievance Cell and Ombudsman

The EPDS is directed to conduct awareness programs on the role, functions, etc. including the procedure for filing of grievances by the consumers and general public before the CGRF, Ombudsman and Consumer Grievance Cell. The EPDS is advised to make use of print and electronic media, Gram Sabha Meetings and other platforms to educate and give wide publicity on the role and functions of CGRF, Ombudsman and Consumer Grievance Cell so as to enable timely redressal of grievances/complaints of the consumers and the general public.

#### **Compliance:**

The CGRFs is all the four districts have been constituted. The direction of the Hon'ble Commission regarding the awareness to be created amongst consumers regarding role & functions of CGRFs is also noted.

#### Commission's comments:

The Commission directs the Department to explore possibility for uploading information related to roles/functioning of the CGRFs in its official website and also issue "public notice" regarding the CGRFs for information of the public in press and media.

#### **Directive 22: Renewable Energy Projects**

As the Government of India is keen on building up its Renewable Energy capacity, the State could also look at the option of taking up Renewable Energy projects to increase its overall generation capacity. As per the Solar Radiation data available with the Ministry of new and Renewable Energy, the annual average solar radiation at Gyalshing is 3.70 KWh/M²/Day); Namchi is 4.79 KWh/M²/Day) and Gangtok 2.89 KWh/M²/Day). The annual average insulation data available in the State is much better than the data shown against some of the European countries who have gone in for major solar projects.

#### **Compliance:**

Under the first phase of IPD schemes solar plants of various sizes ranging from 5 KWp to 40 KWp will be implemented in the State which totals around 300 Kwp. SREDA which is under Energy & Power Department is also implementing solar projects of 500 KWp (off Grid Type) in West Sikkim along with smaller capacity in other districts.

#### **Commission's comments:**

The Commission is of the view that the Department as well as the SREDA lacking in their efforts towards implementation of solar rooftop or renewable projects in the State inspite of enormous support and technology available in the country and the special impetus being given by the Government of India for capacity addition of renewable in the country. The Commission directs the Department and the SREDA to take immediate steps and make

efforts for timely implementation of solar roof top projects. The Department/SREDA is directed to submit a status report on the rooftop solar projects to the Commission within a period of 90 days from the date of issue of this order.

#### <u>Directives issued in the FY 2016-17 Tariff Order</u>

#### **Directive 1: Improving Own Generation**

The own generation form the various Powerhouses of the EPDS has seen a decline over the years and it is seen that most of the Powerhouses were non-operational for considerable period of time. The EPDS is directed to prepare a time bound plan for restoring the full generation of the Powerhouses to improve its own generation. The Commission has observed that EPDS has made only bare minimum provisions under the Repair Maintenance head and as such it is feared that timely repairs and requisite maintenance of the power plants are not being done. The EPDS needs to concentrate both resource and planning on the power plants having good generation capacity.

#### **Compliance:**

The advice of the Hon'ble Commission is noted please.

#### Commission's comments:

It is observed that the own generation of the Department has not made much improvement and the generation from the powerhouses are not meeting the estimated quantum being projected by the Department in its ARR. The Commission is of the view that improving own generation will aid not only in off-setting power purchase but also meet the RPO targets of the Department. Therefore, the Department must make result oriented and targeted efforts for improving its own generation.

#### **Directive 2: Segregation of Technical & Commercial Loss**

The EPDS is directed to take appropriate action for segregating the Technical and Commercial losses. The exercise towards segregating the losses may be done in a phase manner beginning with the major towns/cities in phase -1 and other areas in later phases.

#### **Compliance:**

The directive of the Hon'ble Commission is noted please.

#### Commission's comments:

The Commission observes that the Department has not put in the necessary efforts for segregation of the AT&C losses. Segregation of the AT&C losses will go a long way in helping the Department to identify the key areas/issues that need to be focused upon for taking suitable actions for reducing the losses. The Department is directed to formulate a time bound action plan for segregating the losses and furnish the same to the Commission.

#### **Directive 4: RPO and Solar Energy**

The Government of India has revised the Tariff Policy and provisions has been made in the revised Tariff Policy for Long Term Growth Trajectory of Renewable Purchase Obligation (RPO) which inter-alia provides for gradually increasing the minimum percentage of Solar RPO to 8% of total consumption, excluding hydro by March, 2022. The MNRE has estimated that Sikkim needs to generate 5 MW Solar power in order to meets its RPO requirement.

In view of the above, the EPDS is directed to consider setting up of Solar PVs in the large Government buildings, hospitals, colleges etc. coming up in the State. The EPDS is directed to approach the Urban Development and Housing Department, Buildings and Housing Department and Commerce & Industries Department, Government of Sikkim with the proposal to review the State Building Code by incorporating relevant provisions towards mandatory installation of roof top Solar PVs in all Government Buildings, Pharmaceuticals, Industrial Units and large hotels, car parks, Hydro Power Developers etc. Mandatory provisions for installing roof tops Solar PVs by various Industrial/Manufacturing Units in their premises at a minimum defined percentage of their total consumption could made in the Building Code.

#### **Compliance:**

The Hon'ble Commission will be updated on the matter at regular intervals.

#### Commission's comments:

The State Solar Policy needs to be framed and notified at the earliest so that clear guidelines and policy frameworks are available to individuals/groups who are interested to take up roof top or ground mounted solar projects in the State. The Department/SREDA is directed to follow up the matter with the State Government for notification of the State Solar Power Policy at the earliest.

#### **Directive 6: Energy Audit**

The Commission has fixed the loss reduction trajectory for the FY 2017-18, FY 2018-19 and FY 2019-20. In order to achieve the loss reduction target, the EPDS is directed to conduct the energy audit to identify the high loss areas and submit a report before filing of the next petition.

#### **Compliance:**

The directive of the Hon'ble Commission is noted please.

#### Commission's comments:

The Department needs to speed up metering at all voltage levels so that energy audit can be conducted. The Department is directed to make a road map for loss reduction. The Department has to take all available measures to adhere to the loss trajectory being fixed by the Commission.

#### <u>Directives issued in the FY 2017-18 Tariff Order</u>

#### **Directive 1: Solar Rooftop Projects**

The EPDS is directed to submit the status of the master plan/proposal prepared/proposal already approved and sanctioned by the Government of India for implementation of Roof Top Solar Projects in Privatte and Government Buildings in the State along with the details of capacity anticipated and area of roof top available within a period of two months from the date of this order.

#### **Compliance:**

The directive of the Hon'ble Commission is noted please.

#### Commission's comments:

The Commission is of the view that both the Department and SREDA need to be more proactive and forthcoming in working with the line Department/Agencies for timely completion of the assessment of the rooftop areas available for setting up of roof top solar. A detailed status report on the steps being taken for roof top solar may be submitted to the Commission within a period of 90 days from the date of issue of the directives.

#### **Directive 2: Online Payment of Electricity Bills**

The EPDS has introduced web based system for online payment of electricity bills, which is a welcome step towards digitization. The EPDS is advised to explore the options of introducing e-payment mode through various Apps, sms phone alerts on billing and payment of electricity bills etc.

#### **Compliance:**

The consumers do receive the bills and payment confirmation in email and SMS.

#### Commission's comments:

The Commission commends the steps taken by the Department towards online electricity bill payment. It is observed that the facilities for online bill payment are presently available only in the capital and few other towns/cities. The Department is advised to extend the facility to all parts of the State so that the public can pay their electricity bills sitting in the comfort of their homes. The Department is advised to give wide publicity through print and electronic media on the availability of such facilities for information of the general public.

#### **Directive 3: Prepaid metering**

The EPDS is directed to consider introduction of prepaid metering in the State especially for high end consumers whose monthly electricity consumption is high. Prepaid metering will ensure better revenue collection.

#### **Compliance:**

The installation of prepaid meters in three towns of Rangpo, Gangtok & Jorethang has started.

#### Commission's comments:

The Commission welcomes the efforts of the Department towards introduction of pre-paid metering in the three towns. The Commission advises the Department to bring all other towns under pre-paid metering system. It is also felt that possibility of installing pre-paid metering in rural areas targeting small scale industries, manufacturing units etc having higher electricity consumption needs to be explored by the Department.

#### <u>Directives issued in the FY 2018-19 Tariff Order</u>

#### **Directive 1: Furnishing of Requisite Documents/Data**

It is observed that the EPDS is not furnishing the documents/data etc. in support of the various projections/calculations etc. done in their MYT petition at the time of filing of the petition. As such it is directed that all relevant documents/data be submitted alongwith the petition in future.

#### **Compliance:**

The directives of the Hon'ble Commission is noted please.

#### Commission's comments:

Despite of directives issued by the Commission, the Department has not been submitting the documents/data in support of the projections/calculations etc. done in its ARR and Tariff petition at the time of filing of the petition. The Commission directs the Department to invariably furnish all data/documents with full details alongwith its ARR/Tariff Petition henceforth. If all relevant documents and data are not furnished at the time of filing of the petition, the Commission will not accept the petition. The Department is directed to strictly comply with the directive.

#### Directive 3: Prevention of Deaths Due to Electrocution

The EPDS is directed to take stringent measures to avoid accidental deaths due to electrocution and injuries occurring in the State. EPDS needs to explore for means/methods to reduce loss of precious lives due to electrocution. EPDS may resort to awareness campaigns in schools, gram sabhas etc to educate the people on dangers of electricity vis-àvis safety.

#### **Compliance:**

These matters are being taken up in Gram Sabhas with active participation of officers in the level of Executive Engineers and below.

#### **Commission's comments:**

The Commission urges the Department to continue with the awareness campaigns and fully ensure the safety and security of its field staffs. The Department is directed to ensure that proper fencing of electric poles ,transformers and other electrical installations are done to avoid accidental contact with human and animals. All electric poles and lines and other installations be properly earthed. The Department is directed to periodically check the lines and installations to see that safety systems and earthings are working properly.

#### Fresh Directives (FY 2019-20)

#### **Directive 1: Energy Efficiency**

The Department is directed to comply with the provisions of the Energy Efficiency Act, 2001 and ensure that steps be taken for appointment of inspection officers and also designate the State Designated Agency for Energy Efficiency as required under the Act.

#### **Directive 2: Collection of Electricity Bill in Rural Areas**

The Department may explore the possibility of extending bill collection desk or centres in villages to provide the rural consumers the ease of paying their electricity bill. Alternatively, the Department may entrust collection of bills by the Office of the Gram Panchayats or local registered NGOs or self help groups. Such steps will not only improve the billing and

revenue collection of the Department but will also encourage the rural consumers to pay their bills on time and avoid their travelling to the banks and queuing up in long lines.

#### Directive 3: Timely furnishing of data/information/replies

The Commission receives requests and directives from Ministry of Power, Government of India and other agencies like the Forum of Regulators, Central Electricity Authority (CEA), Central Electricity Regulatory Commission etc seeking data/information pertaining to the power sector, which need time bound replies. The Commission observes that the Department is not only very slow in furnishing of such data/information requested but also tends to ignore the letters being issued by the Commission. The Department often doesn't furnish the requisite data/information on time and most occasions don't respond to the letters sent by the Commission inspite of repeated reminders. The Commission directs the Department that action be taken to ensure that proper and timely replies/responses be given to all letters and communications sent by the Commission.

#### **Directive 4: Surrendering of High Cost Thermal Power**

One of the major components of the ARR is the power purchase cost. The EPDS is procuring thermal power from different sources at high cost. Even when no power is drawn from such thermal power stations, the EPDS has to pay the Demand Charges. Having back up thermal power is essential to meet the power demand during the lean season, when power from hydro sources is insufficient. The EPDS needs to review the PPAs signed for thermal power and explore the possibility of surrendering high cost thermal power. The EPDS is directed to carry out a detailed study of the power demand and supply in the State and consider surrendering high cost thermal power or review the terms and conditions of the existing PPAs to get power at competitive price. The EPDS is directed to submit proposals for surrendering of such power as well as review of the PPAS to the concerned agency/department of the Government of India.

#### **Directive 5: Development of Roof Top Solar Projects**

Considering the huge target of 175 GW of Renewable Energy (RE) by 2022 set by the Government of India and also the RE generation targets for each State/UT set by the

Ministry of New & Renewable Energy, Government of India, the EPDS/SREDA must take necessary steps for timely implementation of renewable projects especially solar power in the State to contribute towards the renewable energy target of the country. The EPDS may explore the possibility of giving up the import of high cost thermal power and in lieu set up rooftop and ground mounted solar projects in the State to meet the RE and also Renewable Purchase Obligations.

# 9. TARIFF PRINCIPLES AND DESIGN

#### 9.1 Background

(a) The Commission in determining the revenue requirement of EPDS for the ARR and retail tariff for the FY 2019-20 has been guided by the provisions of electricity Act, 2003. The National Tariff Policy (NTP), CERC Regulations in this regard and SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2013, Multi Year Tariff (First Amendment) Regulations, 2015 and Multi Year Tariff (Second Amendment) Regulations, 2017. Section 61 of the Act lays down the broad principles, which shall guide determination of retail tariff. As per these principles the tariff should "Progressively reflect cost of supply" and also reduce the Cross subsidies "within a period specified by the Commission". The Act lays special emphasis on safeguarding consumer interests and also requires that the costs should be recovered in a reasonable manner. The Act mandates that tariff determination should be guided by the factors, which encourage competition, efficiency, economical use of resources, good performance and optimum investment.

The NTP notified by GOI in January, 2006 provides comprehensive guidelines for determination of tariff as also working out the revenue requirement of power utilities. The Commission has endeavored to follow these guidelines as far as possible.

(b) The NTP mandates that Multi Year Tariff (MYT) framework be adopted for determination of tariff from 1<sup>st</sup> April, 2015. However, the Commission permitted the EPDS to file petition under single year tariff regime till FY 2017-18 considering the fact that the EPDS was functioning as a State Government Department and the fact that the Generation, Distribution and Transmission business had not been segregated. An attempt was made by the EPDS to file petition under multi year tariff

regime during the FY 2015-16 but the petition was not admitted by the Commission as the EPDS was not in a position to furnish the vital details/data/documents etc. required for processing of the petition under MYT regime. Therefore, the Commission deemed it fit to continue with single year tariff regime till such a time that the EPDS is in a position to furnish the basic/bare necessary data/figures/details required by the Commission. The EPDS had filed its petition before the Hon'ble Commission for the FY 2018-19 as per the MYT Regulation, 2013 and the Commission issued the MYT Order on 28<sup>th</sup> March, 2018. Now, the EPDS had filed its petition before the Hon'ble Commission for the FY 2019-20 as per the MYT Regulation, 2013.

- (c) The mandate of the NTP is that tariff should be within plus / minus 20% of the average cost of supply. It is not possible for the Commission to implement this at present because of consumers' paying capacity in Sikkim is low. There has been a high level of the fluctuating revenue gap. However, in this tariff order an element of performance target has been indicated by setting target for T&D loss reduction. The improved performance, by reduction of loss level, and increase in sale will result in substantial reduction in average cost of supply. The Commission has considered for a nominal increase in tariff in view of the paying capacity of the consumers.
- (d) Clause 8.3 of National Tariff Policy lays down the following principles for tariff design:
  - (i) In accordance with the National Electricity Policy, consumers below poverty line who consume below a specified level, say 30 units per Month, may receive a special support through Cross subsidy. Tariffs for such designated group of consumers will be at least 50% of the average cost of supply. This provision will be re-examined after five years.
  - (ii) For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the SSERC would notify the roadmap, within six Months with a target that latest by the end of the FY tariffs are within ± 20% of the average cost of supply. The road map would have intermediate milestones, based on the approach of a gradual reduction in Cross subsidy.

For example, if the average cost of service is ₹ 3.00 per unit, at the end of year 2018-19, the tariff for the Cross subsidized categories excluding those referred to in para-1 above should not be lower than ₹ 2.40 per unit and that for any of the Cross subsidizing categories should not go beyond ₹ 3.60 per unit.

(e) Regulation 72 of SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2013 specifies that,

"The amount received by the Distribution Licensee by way of cross subsidy surcharge as approved by the Commission in accordance with the Sikkim State Electricity Commission (Terms and Condition of Intra-State Open Access) regulations, 2012 as applicable and as amended from time to time, shall be deducted from the Aggregate Revenue Requirement in calculating the tariff supply of electricity by such Distribution Licensee at the time of truing up."

(f) The Commission has considered special treatment to BPL consumers. It has also aimed at raising the per capita consumption of the State. The Commission endeavors that the tariff progressively reflects cost of supply in a reasonable period and the Government subsidy is also reduced gradually. The tariff has been rationalized with regards to inflation, paying capacity and to avoid tariff shock.

# 9.2 Tariff Proposed by the EPDS and Approved by the Commission

#### (a) Existing & Proposed Tariff

EPDS in its tariff petition for the FY 2019-20 has proposed for revision of the existing retail tariffs to various categories of consumers to earn additional revenue to meet

the expenses to a reasonable extend. The EPDS has proposed tariff revision as indicated in table below:

Table 9.1: Existing Tariffs v/s proposed Tariffs for FY 2019-20

Sl. No.	Category of Consumers	Existing Rate Paisa/kWh	Proposed Rate Paisa/kWh
1	Domestic		
a)	Up to 50 units	110	120
b)	51 to 100 units	234	240
c)	101-200 units	365	370
d)	201 to 400 units	457	460
e)	401 & above	493	500
2	Commercial		
a)	Up to 50 units	330	330
b)	51 to 100 units	560	400
c)	101 to 200 units	560	560
d)	201 to 400 units	600	600
e)	401 & above	640	640
3	Public lighting		
	Rural Areas	300	300
	Urban Areas	500	500
4	Industrial		
A	HT		
a)	HT (AC) above 3.3 KV		
b)	Upto 100 KVA	350	400
c)	100 - 250 KVA	400	450
d)	250- 500 KVA	470	500
e)	500 KVA & above	510	550
В	LT (Rural)		
a)	Up to 500 units	350	360
b)	501 - 1000 units	440	440
	1001 & above	580	580
C	LT (Urban)		
a)	Up to 500 units	530	530
b)	501 - 1000 units	620	620
c)	1001 & above	715	715
5	Bulk supply		
a)	LT	650	650
b)	НТ	660	660

#### (b) Tariff Categories

The approved tariff categories v/s sub categories are given below:

- Domestic Supply (DS)
- Commercial Supply (CS)
- LT Industrial Supply (LTIS)
- Public Lighting
- HT Supply
- Bulk Supply
  - a. LT
  - b. HT
- Temporary Supply

#### (c) Tariffs approved by the Commission

Having considered the case no.: MYT/2019-20/P-01/EPDS of EPDS for approval of Aggregate Revenue Requirement (ARR) and determination of retail tariff for sale of energy and having approved aggregate revenue requirement under Para 7.24, the Commission has revised the tariff for different categories of consumers as detailed in the table below:

Table 9.2: Tariffs approved by the Commission for FY 2019-20

Sl. No.	Category of Consumers	Monthly Minimum Charges (₹/Consumer)	Demand Charges (HT Supply only) (₹/kVA/Month)	Approved Energy Charges (Paisa/kWh)
1	Domestic			
	Up to 50 units			120
	51 to 100 units			240
	101-200 units	Single Phase - 40		370
	201 to 400 units	3 Phase - 200		460
	401 & above			500
2	Commercial			300
a)	Up to 50 units			330
	51 to 100 units	g: 1 Di 200		400
(c)	101 to 200 units	Single Phase - 200		560
d)	201 to 400 units	3 Phase - 500		600
e)	401 & above			640
3	Public lighting			
	Rural Areas			300
	Urban Areas			500
4	Industrial			
A	HT			
a)	HT (AC) above 3.3 KV			
b)	Upto 100 KVA		200	400
c)	100 - 250 KVA		250	450
d)	250- 500 KVA		290	500
	500 KVA & above		555	550
	LT (Rural)			
	Up to 500 units			360
	501 - 1000 units	120		440
	1001 & above			580
	LT (Urban)			
	Up to 500 units	200		530
	501 - 1000 units	200		620
	1001 & above			715
	Bulk supply			650
	LT	200		650
<u>b</u> )	HT			660

Tariff Order for the FY 2019-20

Details are given in tariff schedule in the Appendix.

(d) Change of Tariff Component

The Commission has approved some changes in clause II of Tarriff Schedule of this Tariff Order

in Commercial Supply (CS) category. The details are provided in the Appendix of this Tariff

Order.

(e) Consumers with prepaid metering

Consumers with prepaid metering will be allowed for 1% additional rebate on energy

charges, as proposed by EPDS are examined and approved. These are given in tariff schedule

appended as appendix.

This order shall come into force from 01.04.2019 and shall remain effective till revised/ amended

by the Commission. The Order shall be given wide publicity by the Petitioner for information of

the general public.

Sd/-

(N. R. Bhattarai)

Chairperson

Date: 29.05.2019.

Place: Gangtok.

# 10. WHEELING CHARGES

# 10.1 Wheeling Charges

The net distribution ARR approved is segregated into wire business and retail supply business in accordance with the matrix detailed in the table below:

**Table 10.1: Allocation Matrix** 

(In %)

Sl.	Particulars	Wire	Retail Supply
No.	raruculais	Business	Business
1	Cost of Fuel	-	100.00
2	Cost of Power Purchase	-	100.00
3	Employee Costs	60.00	40.00
4	Repair & Maintenance Expenses	90.00	10.00
5	Administrative and General Expenses	50.00	50.00
6	Depreciation	90.00	10.00
7	Interest Charges	90.00	10.00
8	Interest on Working Capital	10.00	90.00
9	Return on NFA/Equity	90.00	10.00
10	Non Tariff Income	10.00	90.00

The expenses are segregated into wire business and retail supply business as per the above Matrix and shown in the table below:

Table 10.2: Segregation of wires and Retail Supply Costs for FY 2019-20

(₹ in Crores)

Sl.	Particulars	Approved	Wire	Retail Supply
No.	1 articulars	<b>Total Cost</b>	Business	Business
1	Cost of Fuel	0.18	1	0.18
2	Cost of Generation	18.83	-	18.83
3	Cost of Power Purchase	255.07	-	255.07
4	Intra State Transmission Charges	42.60	42.60	-
5	Employee Costs	79.92	47.95	31.97
6	Repair & Maintenance Expenses	21.19	19.07	2.12
7	Administrative and General Expenses	3.73	1.87	1.87
8	Depreciation	19.28	17.35	1.93
9	Interest Charges	1	1	-
10	Interest on Working Capital	6.66	0.67	6.00
11	Return on NFA/Equity	ı	-	-
12	Less: Non Tariff Income	1.62	0.16	1.46
13	Total	445.84	129.34	316.50

The wheeling charges have been computed on the basis of approved cost for its distribution wire business and the total energy expected to be wheeled through its network. In the absence of segregated data on costs of operation of 33 KV and 11 KV networks and sales, Wheeling charges are not segregated voltage wise. Combined wheeling charges determined are given in table below:

The Commission has arrived wheeling charges based on the above wire cost and energy sale for the FY 2019-20 and shown in the table below:

Table 10.3: Wheeling Tariff approved by the Commission

Sl. No.	Particulars	FY 2019-20
	ARR for wheeling function approved by the Commission (₹ in Crores)	129.34
2	Total sales within State - approved (In MUs)	405.08
3	Wheeling Tariff (₹/kWh)	3.19

The Commission approves wheeling Tariff at ₹3.19/kWh for the FY 2019-20.

## 11. FUEL AND POWER PURCHASE COST ADJUSTMENT

#### 11.1 Background

Section 62 sub-section 4 of the Electricity Act, 2003 provides that no Tariff or part of any Tariff any ordinarily be amended, more frequently than once in every financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified. This provision of the Act requires the Commission to specify the formula for fuel surcharges

12.2 Accordingly, The Commission has specified the formula for working out the Fuel and power purchase cost Adjustment (FPPCA) charges and other terms and conditions of FPPCA. Accordingly, the distribution licensee is to recover the FPPCA charges as per formula specified below:

The Fuel and Power Purchase Cost Adjustment (FPPCA) formula is given below:

$$\begin{array}{c} Q_c(RC_2-RC_1) + Q_0(RO_2-RO_1) + Q_{pp}(R_{pp2}-R_{pp1}) + V_z + A \\ \\ FPPCA \\ (Ps./kWh) \end{array} = \begin{array}{c} Q_c(RC_2-RC_1) + Q_0(RO_2-RO_1) + Q_{pp}(R_{pp2}-R_{pp1}) + V_z + A \\ \\ QP_{g1} + Q_{pp1} + Q_{pp2}) & X & \begin{bmatrix} 1 & - & \\ & & 100 \\ \end{bmatrix} \end{array}$$

Where,

Q<sub>c</sub> = Quantity of coal consumed during the adjustment period in Metric Tons (MT).

=  $(SHR \times Q_{pg}) (1+TSL) \times 1000/GCV$ , or actual whichever is less.

R<sub>c1</sub> = Weighted average base rate of coal supplied ex-power station coal yard as approved by the Commission for the adjustment period in ₹/MT

R<sub>c2</sub> = Weighted average base rate of coal supplied ex-power station coal yard for the adjustment period in ₹/MT

Q<sub>o</sub> = Actual Quantity of oil (in KL) consumed during the adjustment period or normative oil consumption as per Tariff order whichever is less.

R<sub>01</sub> = Weighted average base rate of oil ex-power station (₹/KL) approved by the Commission for the adjustment period.

R<sub>o2</sub> = Weighted average actual rate of oil ex-power station supplied (₹/KL) during the adjustment period.

Q<sub>pp</sub> = Total power purchased from different sources (kWh) = Qpp2+Qpp3

 $Q_{pp1}$  =  $Q_{pp3}$   $\left[1 - \frac{TL}{100}\right]$  in kWh

TL = Transmission loss (CTU) (in percentage terms).

Q<sub>pp2</sub> = Power Purchase from sources with delivery point within the state transmission or distribution system (in kWh)

 $Q_{pp3}$  = Power Purchase from sources on which CTU transmission loss is applicable (in kWh)

 $R_{pp1}$  = Average rate of Power Purchase as approved by the Commission (₹/kWh)

 $R_{pp2}$  = Average rate of Power Purchase as approved by the Commission ( $\overline{\xi}/kWh$ )

Q<sub>pg</sub> = Own power generation (kWh)

Q<sub>pg1</sub> = Own Power generation (kWh) at generator terminal – approved auxiliary consumption

Percentage T&D loss as approved by the Commission or actual, whichever is lower.

SHR = Station Heat Rate as approved by the Commission (Kcal / kWh)

TSL = Percentage Coal Transit and Stacking Loss as approved by the Commission

GCV = Weighted average gross calorific value of coal as fired basis during the adjustment period (Kcal / Kg)

V<sub>Z</sub> = Amount of variable charges on account of change of cost of unknown factors like water charges, taxes or any other unpredictable and unknown factors not envisaged at the time of Tariff fixation subject to prior approval of the Commission (₹)

A = Adjustment, if any, to be made in the current period to account for any excess / shortfall in recovery of fuel of Power Purchase cost in the past adjustment period, subject to the approval of the Commission (₹)

PSE = Power sold to exempted categories (Presently Agriculture and BPL-Kutir iyoti Consumers)

If there are more than one power station owned by the Licensee Qc, Rc1, Rc2, Qo, Ro1, Rot, Qpg and Qpgi will be computed separately for each power station and sum of the increase/decrease of cost of all power stations shall be taken into consideration. Can levy FPPCA charges with the prior approval of the Commission. Levy of FPPCA charges shall be subject to the following terms and conditions.

#### 11.3 Terms and Conditions for application of the FPPCA formula

- a. The basic nature of FPPCA is 'adjustment' i.e. passing on the increase or decrease in the fuel costs and power purchase cost, as the case may be, compared to the approved fuel costs and power purchase costs in this Tariff Order.
- b. The operational parameters / norms fixed by the commission in the Tariff Regulations Tariff Order shall be the basis of calculating FPPCA charges.
- c. The FPPCA will be recovered every month in the form of an incremental energy charge (₹/kwh) in proportion to the energy consumption and shall not exceed 10% of the approved avg. cost of supply in the Tariff order and balance amount, if any, in the FPPCA over and above this ceiling shall be carried forward to be billed in subsequent month.

- d. Incremental cost of power purchase due to deviation in respect of generation mix or power purchase at higher rate shall be allowed only if it is justified to the satisfaction of the Commission.
- e. Any cost increase by the licensee by way of penalty, interest due to delayed payments, etc. and due to operational inefficiencies shall not be allowed.
- f. FPPCA charges shall be levied on all categories of consumers.
- g. Distribution licensee shall file detailed computation of actual fuel cost in ₹/kWh for each month for each of power stations of the state generators as well as cost of power purchase (Fixed and Variable) from each source/station and a separate set of calculations with reference to permitted level of these costs.
- h. The data in support of the FPPCA claims shall be duly authenticated by an officer of the licensee, not below the rank of Chief Engineer on an affidavit supported with the certified copy of energy bills of power purchase, transmission and RLDC charges, bill for coal purchase and its transportation cost, oil purchase bill and the quantity of coal and oil consumed during the month.
- i. Levy of FPPCA charge will be allowed only when it is ten (10) paise or more per unit. If it is less than 10 (ten) paise/unit, the same may be carried forward for adjustment in the next month.
- j. The incremental cost per kWh due to this FPPCA arrived for a month shall be recovered in the energy bill of the month subsequent to the order of the Commission approving FPPCA with full details of rate and unit(s) on which FPPCA charges have been billed. The Generating Company and the Distribution Companies shall provide along with the proposal of FPPCA (as applicable to them) for a month, a compliance report of the previous order of the Commission in respect of FPPCA.

# Annexure - 1

# REVENUE FROM APPROVED TARIFF FOR THE FY 2019-20

Sl. No.	Category	No. of Consumers	Connected Load (In MW)	Contracted Max. Demand (In KVA)	Energy Sales (In MUs)	Demand Charges (₹/KVA/ Month)	Energy Charges (₹/Kwh)	Demand Charges (₹ in Crores)	Energy Charges (₹ in Crores)	Total (₹ in Crores)
1	Domestic (DLT)									
	Up to 50 units	100,339			44.44		1.20	-	5.33	5.33
	51 to 100 units	72,812			24.77		2.40	-	5.95	5.95
	101-200 units	17,496			17.46		3.70	-	6.46	6.46
	201 to 400 units	11,876			14.94		4.60	-	6.87	6.87
e)	401 & above	8,698			9.65		5.00	-	4.82	4.82
	Total	100,339			111.26			-	29.43	29.43
2	Commercial (CLT)									
a)	Up to 50 units	11,686			4.45		3.30	-	1.47	1.47
b)	51 to 100 units	10,900			2.36		4.00	-	0.94	0.94
c)	101 to 200 units	10,523			2.36		5.60	-	1.32	1.32
d)	201 to 400 units	6,425			12.20		6.00	-	7.32	7.32
e)	401 & above	1,773			19.78		6.40	-	12.66	12.66
	Total	11,686			41.14			-	23.71	23.71
3	Public lighting									
a)	Rural Areas	7			0.02		3.00	-	0.01	0.01
b)	Urban Areas	31			0.27		5.00	-	0.14	0.14
	Total	38			0.29			-	0.14	0.14
4	Temporary	-	-		3.38			-	2.95	2.95
5	Industrial									
Α	HT									
a)	HT (AC) above 3.3 KV									
b)	Upto 100 KVA	548		8,000	45.02	200.00	4.00	1.92	18.01	19.93
c)	100 - 250 KVA	163		15,000	43.21	250.00	4.50	4.50	19.44	23.94
d)	250- 500 KVA	114		35,000	50.44	290.00	5.00	12.18	25.22	37.40
e)	500 KVA & above	58		45,000	76.66	555.00	5.50	29.97	42.16	72.13
	Total HT	548		-	215.33			48.57	104.84	153.41
В	LT (Rural)									
_	Up to 500 units	244			5.32		3.60	-	1.92	1.92
	501 - 1000 units	157			0.15		4.40	-	0.07	0.07
	1001 & above	68			0.13		5.80	-	0.07	0.07
ŕ	Total	244		650	5.61	120.00		0.09	2.06	2.15
С	LT (Urban)				1					
	Up to 500 units	344			0.01		5.30	-	0.01	0.01
_	501 - 1000 units	148			0.01		6.20	-	0.01	0.01
	1001 & above	122			0.04		7.15	-	0.03	0.03
	Total	344		900	-	200.00		0.22	0.04	0.26
	Total LT (B+C)	588			5.67	3223		0.31	2.10	2.41
	Total Industrial (A+B+C)	1,136			221.00			48.88	106.94	155.82
6	Bulk supply	_,_50								
	LT	1,706		5000	4.82	200.00	6.50	1.20	3.13	4.33
	HT	194		10000		200.00	6.60	2.40	15.30	17.70
~)	Total	1,900		10000	28.00		2.50	3.60	18.43	22.03
	-	_,50								
7	Grand Total	115,099	-		405.08			52.48	181.61	234.09

#### Annexure - 2A

# Public Notice issued by the EPDS in Samay Dainik (Nepali/Local Edition)

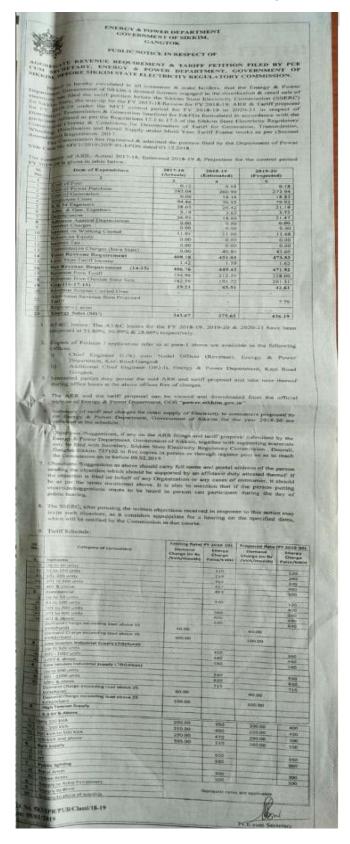
# Publication Date: 10th January, 2019



#### Annexure – 2B

# Public Notice issued by the EPDS in Sikkim Express (English Edition)

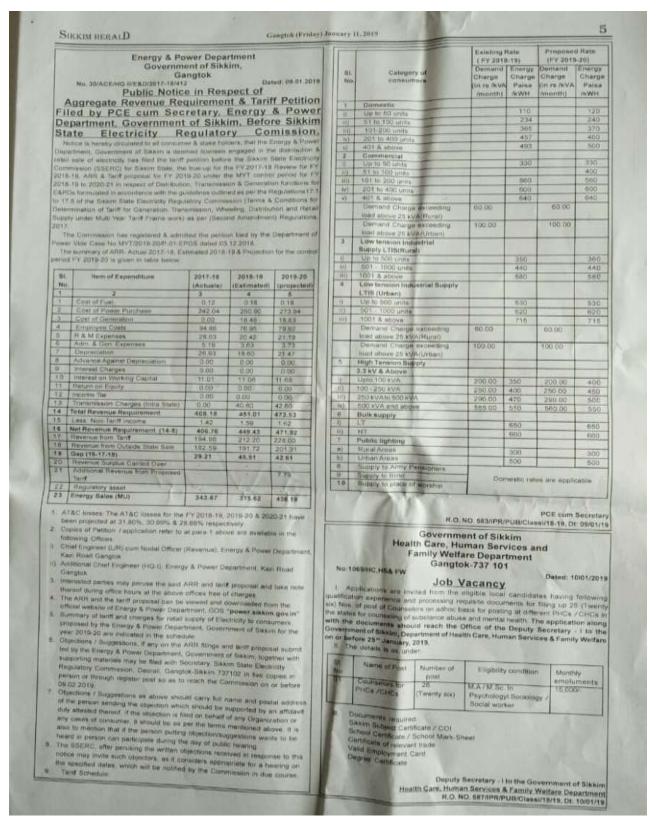
# Publication Date: 10th January, 2019



#### Annexure – 2C

#### Public Notice issued by the EPDS in Sikkim Herald (English Edition)

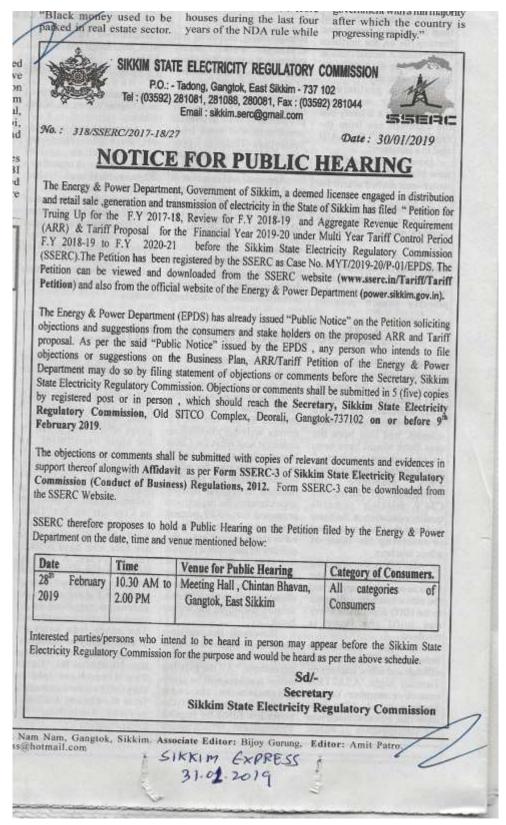
# Publication Date: 11th January, 2019



#### Annexure - 3A

# Public Notice issued by the SSERC in Sikkim Express (English Edition)

# Publication Date: 31st January, 2019



Gangtok

#### Annexure – 3B

# Public Notice issued by the SSERC in Sikkim Express (English Edition)

Publication Date: 16th February, 2019



No.: 318/SSERC/2017-18/27

Date: 30/01/2019

# NOTICE FOR PUBLIC HEARING

The Energy & Power Department, Government of Sikkim, a deemed licensee engaged in distribution and retail sale generation and transmission of electricity in the State of Sikkim has filed "Petition for Truing Up for the F.Y 2017-18, Review for F.Y 2018-19 and Aggregate Revenue Requirement (ARR) & Tariff Proposal for the Financial Year 2019-20 under Multi Year Tariff Control Period F.Y 2018-19 to F.Y 2020-21 before the Sikkim State Electricity Regulatory Commission (SSERC). The Petition has been registered by the SSERC as Case No. MYT/2019-20/P-01/EPDS. The Petition can be viewed and downloaded from the SSERC website (www.sserc.in/Tariff/Tariff Petition) and also from the official website of the Energy & Power Department (power.sikkim.gov.in).

The Energy & Power Department (EPDS) has already issued "Public Notice" on the Petition soliciting objections and suggestions from the consumers and stake holders on the proposed ARR and Tariff proposal. As per the said "Public Notice" issued by the EPDS, any person who intends to file objections or suggestions on the Business Plan, ARR/Tariff Petition of the Energy & Power Department may do so by filing statement of objections or comments before the Secretary, Sikkim State Electricity Regulatory Commission. Objections or comments shall be submitted in 5 (five) copies by registered post or in person, which should reach the Secretary, Sikkim State Electricity Regulatory Commission, Old SITCO Complex, Deorali, Gangtok-737102 on or before 9th February 2019.

The objections or comments shall be submitted with copies of relevant documents and evidences in support thereof alongwith Affidavit as per Form SSERC-3 of Sikkim State Electricity Regulatory Commission (Conduct of Business) Regulations, 2012. Form SSERC-3 can be downloaded from the SSERC Website.

SSERC therefore proposes to hold a Public Hearing on the Petition filed by the Energy & Power Department on the date, time and venue mentioned below:

Date Time		Venue for Public Hearing	Category of Consumers.		
28 <sup>th</sup> February	10.30 AM to	Meeting Hall , Chintan Bhavan,	All categories of		
2019	2.00 PM	Gangtok, East Sikkim	Consumers		

Interested parties/persons who intend to be heard in person may appear before the Sikkim State Electricity Regulatory Commission for the purpose and would be heard as per the above schedule.

> Sd/-Secretary Sikkim State Electricity Regulatory Commission

SIKKIM EXPRESS 16-02 2019

#### Annexure – 3C

#### Public Notice issued by the SSERC in Samay Dainik (Nepali/Local Edition)

Publication Date: 16th February, 2019



# SIKKIM STATE ELECTRICITY REGULATORY COMMISSION



P.O.: - Tadong, Gangtok, East Sikkim - 737 102 Tel: (03592) 281081, 281088, 280081, Fax: (03592) 281044 Email: sikkim.serc@gmail.com

# NOTICE FOR PUBLIC HEARING

The Energy & Power Department, Government of Sikkim, a deemed licensee engaged in distribution and retail sale, generation and transmission of electricity in the State of Sikkim has filed "Petition for Truing Up for the F.Y 2017-18, Review for F.Y 2018-19 and Aggregate Revenue Requirement (ARR) & Tariff Proposal for the Financial Year 2019-20 under Multi Year Tariff Control Period F.Y 2018-19 to F.Y 2020-21 before the Sikkim State Electricity Regulatory Commission (SSERC). The Petition has been registered by the SSERC as Case No. MYT/2019-20/P-01/EPDS. The Petition can be viewed and downloaded from the SSERC website (www.sserc.in/Tariff/Tariff Petition) and also from the official website of the Energy & Power Department (power.sikkim.gov.in).

The Energy & Power Department (EPDS) has already issued "Public Notice" on the Petition soliciting objections and suggestions from the consumers and stake holders on the proposed ARR and Tariff proposal. As per the said "Public Notice" issued by the EPDS, any person who intends to file objections or suggestions on the Business Plan, ARR/Tariff Petition of the Energy & Power Department may do so by filing statement of objections or comments before the Secretary, Sikkim State Electricity Regulatory Commission. Objections or comments shall be submitted in 5 (five) copies by registered post or in person, which should reach the Secretary, Sikkim State Electricity Regulatory Commission, Old SITCO Complex, Deorali, Gangtok-737102 on or before 9th February 2019.

The objections or comments shall be submitted with copies of relevant documents and evidences in support thereof along with Affidavit as per Form SSERC-3 of Sikkim State Electricity Regulatory Commission (Conduct of Business) Regulations, 2012. Form SSERC-3 can be downloaded from the SSERC Website.

SSERC therefore proposes to hold a Public Hearing on the Petition filed by the Energy & Power Department on the date, time and venue mentioned below:

Date	Time	Venue for Public Hearing	Category of Consumers
28th February 2019	10.30 AM to 2.00 PM	Meeting Hall, Chintan Bhavan, Gangtok, East Sikkim	

Interested parties/persons who intend to be heard in person may appear before the Sikkim State Electricity Regulatory Commission for the purpose and would be heard as per the above schedule.

> Sd/-Secretary

Sikkim State Electricity Regulatory Commission

SAMAY DAINIK - 16.02.2019

#### Annexure – 3D

# Public Notice issued by the SSERC in Samay Dainik (Nepali/Local Edition)

Publication Date: 7th March, 2019



# SIKKIM STATE ELECTRICITY REGULATORY COMMISSION



P.O.: - Tadong, Gangtok, East Sikkim - 737 102 Tel: (03592) 281081, 281088, 280081, Fax: (03592) 281044 Email: sikkim.serc@gmail.com

# NOTICE FOR PUBLIC HEARING

The Energy & Power Department, Government of Sikkim, a deemed licensee engaged in distribution and retail sale, generation and transmission of electricity in the State of Sikkim has filed "Petition for Truing Up for the F.Y 2017-18, Review for F.Y 2018-19 and Aggregate Revenue Requirement (ARR) & Tariff Proposal for the Financial Year 2019-20 under Multi Year Tariff Control Period F.Y 2018-19 to F.Y 2020-21 before the Sikkim State Electricity Regulatory Commission (SSERC). The Petition has been registered by the SSERC as Case No. MYT/2019-20/P-01/EPDS. The Petition can be viewed and downloaded from the SSERC website (www.sserc.in/Tariff/Tariff Petition) and also from the official website of the Energy & Power Department (power.sikkim.gov.in).

The Energy & Power Department (EPDS) has already issued "Public Notice" on the Petition soliciting objections and suggestions from the consumers and stake holders on the proposed ARR and Tariff proposal. As per the said "Public Notice" issued by the EPDS, any person who intends to file objections or suggestions on the Business Plan, ARR/Tariff Petition of the Energy & Power Department may do so by filing statement of objections or comments before the Secretary, Sikkim State Electricity Regulatory Commission. Objections or comments shall be submitted in 5 (five) copies by registered post or in person, which should reach the Secretary, Sikkim State Electricity Regulatory Commission, Old SITCO Complex, Deorali, Gangtok-737102 on or before 9th February 2019.

The objections or comments shall be submitted with copies of relevant documents and evidences in support thereof along with Affidavit as per Form SSERC-3 of Sikkim State Electricity Regulatory Commission (Conduct of Business) Regulations, 2012. Form SSERC-3 can be downloaded from the SSERC Website.

SSERC therefore proposes to hold a Public Hearing on the Petition filed by the Energy & Power Department on the date, time and venue mentioned below:

Date	Time	Venue for Public Hearing	Category of Consumers	
28th February 2019	10.30 AM to 2.00 PM	Meeting Hall, Chintan Bhavan, Gangtok, East Sikkim		

Interested parties/persons who intend to be heard in person may appear before the Sikkim State Electricity Regulatory Commission for the purpose and would be heard as per the above schedule.

Sd/-Secretary

Sikkim State Electricity Regulatory Commission

SAMAY DAINIK - 07.03.2019

#### Annexure – 3E

# Public Notice issued by the SSERC in Summit Times (English Edition)

Publication Date: 31st January, 2019



# SIKKIM STATE ELECTRICITY REGULATORY COMMISSION

P.O.: - Tadong, Gangtok, East Sikkim - 737 102
Tel: (03592) 281081, 281088, 280081, Fax: (03592) 281044
Ernail: sikkim.sero@gmail.com



No.: 318/SSERC/2017-18/27

Date: 30/01/19

#### NOTICE FOR PUBLIC HEARING

The Energy & Power Department, Government of Sikkim, a deemed licensee engaged in distribution and retail sale, generation and transmission of electricity in the State of Sikkim has filed "Petition for Truing Up for the FY 2017-18, Review for F.Y 2018-19 and Aggregate Revenue Requirement (ARR) & Tariff Proposal for the Financial Year 2019-20 under Multi Year Fariff Control Period FY 2018-19 to FY 2020-21 before the Sikkim State Electricity Regulatory Commission (SSERC). The Petition has been registered by the SSERC as Case No. MYT/2019-20/P-01/EPDS. The Petition can be viewed and downloaded from the SSERC website (www.sserc.in/Tariff/Tariff Petition) and also from the official website of the Energy & Power Department (power.sikkim.gov.in).

The Energy & Power Department (EPDS) has already issued "Public Notice" on the Petition soliciting objections and suggestions from the consumers and stake holders on the proposed ARR and Tariff proposal. As per the said "Public Notice" issued by the EPDS, any person who intends o file objections or suggestions on the Business Plan, ARR/Tariff Petition of the Energy & Power Department may do so by filling statement of objections or comments before the Secretary, Sikkim State Electricity Regulatory Commission. Objections or comments shall be submitted in 5 (five) copies by registered post or in person, which should reach the Secretary, Sikkim State Electricity Regulatory Commission, Old SITCO Complex, Deorali, Gangtok-737102 on or before 9th February 2019.

The objections or comments shall be submitted with copies of relevant documents and evidences in support thereof a season Affidavit as per Form SSERC-3 of Sikkim State Electricity Regulatory Commission (Conduct of Business) Regulations, 2012. Form SSERC-3 can be downloaded from the SSERC Website.

SSERC therefore proposes to hold a Public Hearing on the Petition filed by the Energy & Power Department on the date. Time and venue mentioned below:

Date	Time	Venue for Public Hearing	Category of Consumers.
28 <sup>th</sup> February		Meeting Hall , Chintan Bhavan,	All categories of
2019		Gangtok, East Sikkim	Consumers

Interested purposes who intend to be heard in person may appear before the Sikkim State Electricity Registery Commission for the purpose and would be heard as per the above schedule.

Sd/-Secretary Sikkim State Electricity Regulatory Commission

SUMMIT TIMES - 31.1-2019/

#### Annexure – 3F

#### Public Notice issued by the SSERC in Summit Times (English Edition)

**Publication Date: 12th February, 2019** 



# SIKKIM STATE ELECTRICITY REGULATORY COMMISSION

P.O.: - Tadong, Gangtok, East Sikkim - 737 102 Tel: (03592) 281081, 281088, 280081, Fax: (03592) 281044 Email: sikkim.serc@gmail.com



No.: 318/SSERC/2017-18/27

Date: 30/01/19

#### NOTICE FOR PUBLIC HEARING

The Energy & Power Department, Government of Sikkim, a deemed licensee engaged in distribution and retail sale, generation and transmission of electricity in the State of Sikkim has filed "Petition for Truing Up for the F.Y 2017-18, Review for F.Y 2018-19 and Aggregate Revenue Requirement (ARR) & Tariff Proposal for the Financial Year 2019-20 under Multi Year Tariff Control Period F.Y 2018-19 to F.Y 2020-21 before the Sikkim State Electricity Regulatory Commission (SSERC). The Petition has been registered by the SSERC as Case No. MYT/2019-20/P-01/EPDS. The Petition can be viewed and downloaded from the SSERC website (www.sserc.in/Tariff/Tariff Petition) and also from the official website of the Energy & Power Department (power.sikkim.gov.in).

The Energy & Power Department (EPDS) has already issued "Public Notice" on the Petition soliciting objections and suggestions from the consumers and stake holders on the proposed ARR and Tariff proposal. As per the said "Public Notice" issued by the EPDS, any person who intends to file objections or suggestions on the Business Plan, ARR/Tariff Petition of the Energy & Power Department may do so by filing statement of objections or comments before the Secretary, Sikkim State Electricity Regulatory Commission. Objections or comments shall be submitted in 5 (five) copies by registered post or in person, which should reach the Secretary, Sikkim State Electricity Regulatory Commission, Old SITCO Complex, Deorali, Gangtok-737102 on or before 9th February 2019.

The objections or comments shall be submitted with copies of relevant documents and evidences in support thereof along with Affidavit as per Form SSERC-3 of Sikkim State Electricity Regulatory Commission (Conduct of Business) Regulations, 2012. Form SSERC-3 can be downloaded from the SSERC Website.

SSERC therefore proposes to hold a Public Hearing on the Petition filed by the Energy & Power Department on the date, time and venue mentioned below:

Date Time		Venue for Public Hearing	Category of Consumers.			
28 <sup>th</sup> Februa	ry 10.30 AM to	Meeting Hall , Chintan Bhavan,	All categories of			
2019	2.00 PM	Gangtok, East Sikkim	Consumers			

Interested parties/persons who intend to be heard in person may appear before the Sikkim State Electricity Regulatory Commission for the purpose and would be heard as per the above schedule.

Sd/-

Secretary

Sikkim Style Electricity Regulatory Commission

SUMMIT TIMES - 12.02.201

#### Annexure – 3G

# Public Notice issued by the SSERC in Himalaya Darpan (Nepali/Local Edition)

Publication Date: 31st January, 2019

# SIKKIM STATE ELECTRICITY REGULATORY COMMISS



P.O.: Tadong, Gangtok, East Sikkim- 737 102 Tel: (03592) 281081, 281088, 280081, Fax: (03592) 281044 Email: sikkim.serc@gmail.com



Date: 30/01/19

Memo No. 318/SSERC/2017-18/27

#### NOTICE FOR PUBLIC HEARING

The Energy & Power Department, Government of Sikkim, a deemed licensee engaged in distribution and retail sale ,generation and transmission of electricity in the State of Sikkim has filed " Petition for Truing Up for the F.Y 2017-18, Review for F.Y 2018-19 and Aggregate Revenue Requirement (ARR) & Tariff Proposal for the Financial Year 2019-20. under Multi Year Tariff Control. Period F.Y 2018-19 to F.Y 2020-21 before the Sikkim State Electricity Regulatory Commission (SSERC). The Petition has been registered by the SSERC as Case No. MYT/2019-20/P-01/EPDS. The Petition can be viewed and downloaded from the SSERC website (www.sserc.in/Tariff/Tariff Petition) and also from the official website of the Energy & Power Department (power.sikkim.gov.in).

The Energy & Power Department (EPDS) has already issued "Public Notice" on the Petition soliciting objections and suggestions from the consumers and stake holders on the proposed ARR and Tariff proposal. As per the said "Public Notice" issued by the EPDS, any person who intends to file objections or suggestions on the Business Plan, ARRJTariff Petition of the Energy & Power Department may do so by filling statement of objections or comments before the Secretary, Sikkim State Electricity Regulatory Commission. Objections or comments shall be submitted in 5 (five) copies by registered post or in person, which should reach the Secretary, Sikkim State Electricity Regulatory Commission, Old SITCO Complex, Deorali, Gangtok-737102 on or before 9th February 2019.

The objections or comments shall be submitted with copies of relevant documents and evidences in support thereof alongwith Affidavit as per Form SSERC-3 of Sikkim State Electricity' Regulatory Commission (Conduct of Business) Regulations, 2012. Form SSER.C-3 can be downloaded from the SSERC Website.

SSERC therefore proposes to hold a Public Hearing on the Petition filed by the Energy & Power Department on the date, time and venue mentioned below:

Date	Time	Venue for Public hearing	Category of Consumers
28th February	10.30 AM to	Meeting Hall, Chintan Bhavan,	
2019	2.00 PM	Gangtok, East Sikkim	

Interested parties/persons who intend to be heard in person may appear before the Sikkim State Electricity Regulatory Commission for the purpose and would be heard as per the above schedule.

> Sd/-Secretary Sikkim State Electricity Regulatory Commission

> > HLMALAYA DARPAN- 31.01.2019.

Annexure – 3H

#### Public Notice issued by the SSERC in Himalaya Darpan (Nepali/Local Edition)

Publication Date: 14th February, 2019

# SIKKIM STATE ELECTRICITY REGULATORY COMMISSION



P.O.: Tadong, Gangtok, East Sikkim- 737 102 Tel: (03592) 281081, 281088, 280081, Fax: (03592) 281044

Email: sikkim.serc@gmail.com

Memo No. 318/SSERC/2017-18/27

# Date: 30/01/19

# NOTICE FOR PUBLIC HEARING

The Energy & Power Department, Government of Sikkim, a deemed licensee engaged in distribution and retail sale generation and transmission of electricity in the State of Sikkim has filed "Petition for Truing Up for the F.Y 2017-18, Review for F.Y 2018-19 and Aggregate Revenue Requirement (ARR) & Tariff Proposal for the Financial Year 2019-20, under Multi Year Tariff Control. Period F.Y 2018-19 to F.Y 2020-21 before the Sikkim State Electricity Regulatory Commission (SSERC). The Petition has been registered by the SSERC as Case No. MYT/2019-20/P-01/EPDS. The Petition can be viewed and downloaded from the SSERC website (www.sserc.in/Tariff/Tariff Petition) and also from the official website of the Energy & Power Department (power.sikkim.gov.in).

The Energy & Power Department (EPDS) has already issued "Public Notice" on the Petition soliciting objections and suggestions from the consumers and stake holders on the proposed ARR and Tariff proposal. As per the said "Public Notice" issued by the EPDS, any person who intends to file objections or suggestions on the Business Plan, ARRJTariff Petition of the Energy & Power Department may do so by filing statement of objections or comments before the Secretary, Sikkim State Electricity Regulatory Commission. Objections or comments shall be submitted in 5 (five) copies by registered post or in person, which should reach the Secretary, Sikkim State Electricity Regulatory Commission, Old SITCO Complex, Deorali, Gangtok-737102 on or before 9th February 2019.

The objections or comments shall be submitted with copies of relevant documents and evidences in support thereof alongwith Affidavit as per Form SSERC-3 of Sikkim State Electricity' Regulatory Commission (Conduct of Business) Regulations, 2012. Form SSER.C-3 can be downloaded from the SSERC Website.

SSERC therefore proposes to hold a Public Hearing on the Petition filed by the Energy & Power Department on the date, time and venue mentioned below:

Date	Time	Venue for Public hearing	Category of Consumers
28th February	10.30 AM to	Meeting Hall, Chintan Bhavan,	
2019	2.00 PM	Gangtok, East Sikkim	

Interested parties/persons who intend to be heard in person may appear before the Sikkim State Electricity Regulatory Commission for the purpose and would be heard as per the above schedule.

Sd/-Secretary Sikkim State Electricity Regulatory Commission

HIMALAYA DARPAN- 14-2-2019

# **APPENDIX**

#### **TARIFF SCHEDULE FOR THE FY 2019-20**

#### I. DOMESTIC SUPPLY (DS):

#### Type of Consumer:

Power supply to private house, residential flats and Government schools, residential buildings for light, Heating / electrical appliances, fans etc. for domestic purpose. This schedule can also be made applicable to the charitable organization after verifying the genuineness of their non-commercial aspects by the concerned divisional office.

#### (a) Nature of service:

Low Tension AC 430/230 volts, 50 cycles/sec (Hz)

#### (a) Rate:

Units Consumption	Paisa per kWh (Unit)	
Up to 50	120	
51 to 100	240	
101 to 200	370	
201 to 400	460	
Consumption exceeding 400 units	500	

#### (c) Monthly Minimum Charge:

Details	Rate (In ₹)
Single Phase Supply	40.00
Three Phase Supply	200.00

#### (d) Monthly Rebate (if paid within due date): 5% on Energy Charges

#### (e) Annual Surcharge (charge on the gross arrear outstanding every March end): 10%

If electricity supplied in domestic-premises is used for commercial purpose, the entire supply shall be charged under commercial supply.

Free supply of electricity for consumption up to 100 units applicable to all the domestic consumers in rural areas under Gram Panchayat Unit (GPU) as notified by the Rural Management and Development Department as per clause 1 of Government Gazette Notification No. 33/P/GEN/97/PART-V dated 25.11.2014 shall be determined on the basis of assessment recorded through energy meter only and assessment accounted on average basis shall not be entertained for subsidy. In the event of crossing the subsidized limit of 100 units of electricity in any month, the entire consumption for the month shall be charged to such consumer as per the tariff.

#### II. COMMERCIAL SUPPLY (CS):

#### Type of Consumer:

Supply of energy for light, fan, heating and power appliances in commercial and non-domestic establishments such as shops, business houses, hotel, restaurants, petrol pumps, service stations garages, auditoriums, cinema houses, nursing homes, dispensaries, doctors clinic which are used for privates gains, telephone exchange, nurseries, show rooms, x-ray plants, libraries banks, video parlors, saloons, beauty parlors', health clubs or any house of profit as identified by the Assistant Engineer/Executive Engineer concerned of the Department. In the event of exceeding connected load beyond 25 KVA, the Demand charge at the following rates shall be imposed. The seasonal consumers are allowed to install MDI meter for assessment of their monthly load profile.

#### (a) Nature of supply:

Low Tension AC 430/230 volts, 50 cycles/Sec (Hz)

# (b) Rate:

Consumption range	Paisa per	Kwh (Unit)	
Upto 50	330		
51 to 100		400	
101 to 200	560		
201 to 400	600		
Consumption exceeding 400 units	640		
<b>Demand Charges</b> - For those	Rural	Urban	
establishments whose sanctioned load is more than 25 KVA and does not have independent transformer but run their unit through shared transformers.	=	₹ 100/KVA/Month plus energy charges shown above	

If electricity supplied in domestic premises is used for commercial purpose, the entire supply shall be charged under commercial supply.

# (c) Monthly Minimum Charge:

Details	Rate (In ₹)
Single Phase Supply	200.00
Three Phase Supply	500.00

- (d) Monthly Rebate (if paid within due date): 5% on Energy Charges
- (e) Annual Surcharge (charge on the gross arrear outstanding every March end): 10%

### III. LOW TENTION INDUSTRIAL SUPPLY (LTIS):

# **Type of Consumer:**

Power supply to the industries like poultry, Agriculture load, fabrication and sheet metal works or any other units of such kind under small-scale industries having connected load not exceeding 25 kVA in total. In the event of exceeding connected load beyond 25 kVA, the Demand charge at the following rates shall be imposed.

# (a) Nature of service:

Low Tension AC 430/230 volts, 3 phase/single phase, 50 cycles/Sec (Hz)

## (b) Rate:

Units Consumption Paisa per kWh		er kWh
Area	Rural	Urban
Upto 500	360	530
501 to 1000	440	620
1001 & Above	580	715
Demand Charge – for those establishments	₹ 60/kVA/Month	₹ 100/kVA/Month
whose sanction load is more than 25 KVA &	plus energy charges	plus energy charge
does not have independent transformer but	as shown above	as shown above
run their unit through shared transformers.		

# (c) Monthly Minimum Charge:

Rural Areas	₹ 120/KVA/Month
Urban Areas	₹ 200/KVA/Month

- (d) Monthly Rebate (if paid within due date): 5% on Energy Charges
- (e) Annual Surcharge (charge on the gross arrear outstanding every March end): 10%

# IV. HIGH TENSION INDUSTRIAL SUPPLY (HTS):

## Type of Consumer:

All types of supply with contract demand at single point having 3 phase supply and voltage 11 kV & above.

# (a) Nature of supply:

High Tension AC, 11 kV & above, 3 phase, 50 cycles/Sec (Hz)

Executive Engineer should sanction the demand In the Requisition and Agreement form of the Department before the service connection is issued based on the availability of quantum of Power. The demand sanctioned by the Executive Engineer will be considered as the contract demand, however, the contract demand can be reviewed once a year if the consumer so desires. A maximum demand indicator will be installed at the consumer premises to record the maximum demand on the monthly basis. If in a month, the recorded maximum demand exceeds the contract demand, that portion of the demand in excess of the contract demand will be billed at twice the prevailing demand charges.

Energy meters are compulsorily to be installed on HT side of all transformers having capacity equal to or above 200 kVA. The meter are also allowed to install on LT side of those consumers having transformer capacity less than 200 kVA, but is such case the assessed consumption shall be grossed up by 4% to account for the transformation loss and billed accordingly.

### (b) Rate:

Units Consumption	Charges
Up to 100 kVA Demand Charge Plus Energy Charge	₹ 200/kVA/Month + 400 Paisa/Unit
Above 100 to 250 kVA Demand Charge Plus Energy Charge	₹ 250/kVA/Month + 450 Paisa/Unit
Above 250 to 500 kVA Demand Charge Plus Energy Charge	₹ 290/kVA/Month + 500 Paisa/Unit
Above 500 kVA Demand Charge Plus Energy Charge	₹ 560/kVA/Month + 550 Paisa/Unit

- (c) Monthly Minimum Charges: Demand Charges
- (d) Monthly Rebate (if paid within due date): 2% on Energy Charges
- (e) Annual Surcharge (charge on the gross arrear outstanding every March end): 10%
- (f) Penalty for poor Power Factor: The power factor adjustment charges shall be levied at the rate of 1% on the total energy charge for the month of every 1% drop or part thereof in the average power factor during the month below 95%.

# V. BULK SUPPLY (BS) (Non – COMMERCIAL SUPPLY):

# **Type of Consumer:**

Available for general mixed loads to M.E.S. and other Military Establishments, Borders roads, Sikkim Armed Police Complex (SAP), all Government Non-residential buildings Hospitals, Aerodromes and other similar establishments as identified as such supply by the Concerned Executive Engineer.

## (a) Nature of service:

Low Tension AC 430/230 volts or High tension 11 kV & above

Executive Engineer should sanction the demand in the Requisition and Agreement form of the Department before the service connection is issued.

## (b) Rate:

All Units Consumption	Paisa/Unit
LT (430/230 Volts)	650
HT (11 kV or 66 kV)	660

## (c) Monthly Minimum Charge:

LT (430/230 Volts)	₹ 200 /kVA/month of Sanction Load
HT (11 kV or 66 kV)	₹ 200/kVA/month of Sanction Load

- (d) Monthly Rebate (if paid within due date): 2% on Energy Charges
- (e) Annual Surcharge (charge on the gross arrear outstanding every March end): 10%

### VI. SUPPLY TO ARMY PENSIONERS:

## Type of Consumer:

Provided to the army pensioners or their surviving widows based on the list provided by Sikkim Rajya Sainik Board.

## (a) Nature of service:

Low Tension AC 230/430 volts, 50 cycles/Sec (Hz)

- **(b) Rate:** Domestic supply rate is applicable.
  - (i) Up to 100 units: To be billed to Secretary, Rajya Sainik Board
  - (ii) 101 and above: To be billed to the Consumer

Minimum charges, surcharges, and rebate etc. will be applicable as per domestic supply category.

#### VII. SUPPLY TO BLIND:

## **Type of Consumer:**

Service connection provided to a house of a family whose head of the family is blind and the same is certified by the National Association for Blinds.

# (a) Nature of service:

Low Tension AC 230/430 volts, 50 cycles/Sec (Hz)

- **(b) Rate:** Domestic supply rate is applicable.
  - (i) Up to 100 units: To be billed to Secretary, Social Welfare Department
  - (ii) 101 and above: To be billed to the Consumer

Minimum charges, surcharges, and rebate etc. will be applicable as per domestic supply category.

# VIII. SUPPLY TO THE PLACES OF WORSHIP (PW):

# Type of Consumer:

Supply of power to Gumpas, Manilakhangs, Tsamkhangs, Mandirs, Churches, and Mosques as identified by the State Ecclesiastical Department.

### (a) Nature of service:

Low Tension 430/230 volts, 50 cycles/Sec (Hz).

### b) Rate:

Unit Consumption Slab	Paisa per kWh (Unit)
Places of worship having:	
(i) Having 3 light points	
A) up to 100 units	
B)Above 101 units	
(ii) Having 4 to 6 light points.	
A) up to 150 units	
B) Above 151 units	
(iii) Having 7 to 12 light points	Domestic rate is applicable.
A) up to 300 units	
B) Above 301 units	
(iv) Having 13 and more light points	
A) up to 500 units	
B) Above 501 units	
A) To be billed to Secretary, Ecclesiastical Department and to be submitted to the head of Department in the District.	
B) To be billed to Head of the Place of worship.	

Minimum charges, surcharges, and rebate etc. will be applicable as per domestic supply category.

### IX. PUBLIC LIGHTING ENERGY CONSUMPTION CHARGES

It has been decided that the electrical energy consumption charges of public lighting, street light etc. in urban area shall be paid by the Urban Development & Housing Department. Similarly the consumption of electrical energy for street fight etc. in rural areas shall be paid by the concerned Panchayat / Rural Management & Development Department. The necessary meter/metering equipments shall be provided by the Energy & Power Department and for which the standard (Tariff Schedule) charges is also applicable in accordance with rules and regulations of the Department.

#### Rate:

Category	Rate
Rural Areas	300 Paisa/KWH
Urban Areas	500 Paisa/KWH

#### X. TEMPORARY SUPPLY:

## Type of consumer:

Available for temporary purposes and for the period not exceeding two months in the first instance but can be extended for the further-period not exceeding one month on each occasion. The Assessment of energy consumption shall be on the basis of recorded meter reading and not on average, however if the connection is being taken for less than one month, an advance payment should be taken from the consumer as per his/her connected load based on the average system of calculation shown in the tariff schedule.

Approval of the Temporary Supply and its duration will be the discretion of the Assistant Engineer of the Department.

If the temporary connection is more than approved period, such use of electricity will be treated as theft of power.

### (a) Nature of Service:

Low tension AC 430/230 volts, 50 Hz /H.T. AC 11 kV whichever is applicable and possible at the discretion of the department.

# (b) Rate:

Twice the Tariff under schedule DS/CS/LTIS/HT for corresponding permanent supply (Temporary supply connection shall not be entertained without energy meter). Two months assessment on sanction load shall have to be paid in advance as security deposit before taking the connection.

#### XI. ADDITIONAL REBATE FOR CONSUMERS HAVING PREPAID METERS

1% additional rebate on energy charges will be allowed to consumers having prepaid meters.

### XII. SCHEDULE FOR MISCELLANEOUS CHARGES

### **Service Connection**

Following procedures should be strictly followed while giving the new service connection. On receipt of written application with requisite, Revenue Stamp from any intending consumer addressed to the Assistant Engineer (Commercial/Revenue) the department will issue the Requisition and Agreement form of the Department. This form will be issued on production of BR for ₹ 25/- (Rupees Twenty Five Only). He/ She will complete the form in all respect and submit to the office of the Assistant Engineer. Assistant Engineer will issue the service connection estimate with the approval of the Executive Engineer. If the Substation of the area or any other connected Electrical network is under capacity, the department can decline the service connection till the capacity is increased as required. If the demand is more than 25 kVA the Department reserves the right to ask the applicant to provide suitable substation at his/her cost.

The Energy & Power Department also reserves the right to disconnect the service connection of any consumer if he/she increases the load above sanctioned load without written approval of the Department and will treat such cases as theft of power.

- (a) Single connection will be provided to the legal landlord of the building. However, an additional connection can also be given in the name of his legal heir subject to production of valid agreement by the landlord stating that he/she shall take the responsibility to clear all the electricity dues created thereof by his legal heir before the close of every financial year.
- (b) In case the flat or part of the private building is occupied by Government / Semi Government/Government Undertakings offices, separate service connection in the name of head of office can be given with the approval of the concerned Executive Engineer.

(c) ₹ 50.00 per certificate shall be charged for issuing NDC (No dues certificate), NOC (No objection certificate) or any other kind of certificate to be issued to the consumer by the Department.

# XIII. METER RENT / Month

(i)	Energy Meter	
(a)	Single Phase	₹ 40.00
(b)	Three phase	₹ 80.00
(ii) Maximum demand indicator		₹ 200.00
(iii)	Time switch	₹ 150.00

### XIV. TESTING OF METERS

i)	Energy Meters Single Phase	₹200
ii)	Other Metering Instruments	₹ 250

#### XV. DISCONNECTION & RECONNECTION

(i)	DS and CS category	₹ 150.00
(ii)	LTIS, HTS & Bulk category	₹ 250.00

Unless otherwise demanded by the Department replacement of meters or shifting the position of meter boards etc., can be entertained exclusively on the specific written request of the consumer against a payment of ₹ 100.00 each time which does not include the cost of requirement and labour and the same will be extra.

### XVI. REPLACEMENT OF FUSES

Service for replacement of fuses in the main cut-outs available against the following Payments:-

(i)	Low tension	Single phase	₹ 30.00
		Three phase	₹ 40.00
(ii)	High tension		₹ 50.00

#### XVII. RESEALING OF METERS

If by any reason the seal affixed in the meter or cutouts installed and secured by the Department are found tampered, the Department reserves the right to disconnect the service connection immediately and impose penalty as applicable under The Indian Electricity Act, 2003. In addition the consumer is liable for payment for resealing charge @ ₹ 50.00 per call of such services.

### XVIII. SECURITY DEPOSIT

Security deposit shall be deposited, by the consumer, in the following rates for the meters provided by the Department.

1	Electronic Meter	3 phase	₹ 500.00
		1 phase	₹ 200.00
2	Electromagnetic Meters	3 phase	₹ 150.00
	_	1 phase	₹ 75.00

The Security deposit will be forfeited and the line will be disconnected if the consumer tampers the meter. The line will be reconnected only after the fresh security deposit is deposited and other applicable charges are paid.

### XIX. OTHER CONDITIONS FOR SUPPLY OF ELECTRICAL ENERGY

### (a) Meter found out of order

In the event of meter being found out of order (which includes meter ceasing to record, running fast or slow, creeping or running reverse direction) and where the actual errors on reading cannot be ascertained the meter will be declared faulty and the correct quantum of energy consumption shall be determined by taking the average consumption for the previous three months.

If the average consumption for the three months cannot be taken due to the meter ceasing to record the consumption or any other reason, then the correct consumption will be determined based on the average consumption for succeeding 'three months (after installation of meter) where any differences or dispute arise as to the correctness of meter reading or bill amount etc. then the

matter shall be decided by the concerned Chief Engineer of the department upon the written intimation either from the concerned Executive Engineer or from concerned consumer. However, the bill should be paid on or before the due date. The amount so paid will be considered as advance to the credit of the consumer's account until such time as the billed amount in dispute is fully settled. After determining the correct consumption due billing will be made and necessary adjustment shall be done in the next bill issued. This method shall be applicable to all categories of consumers.

# (b) Defaulting consumer

The Department shall not give any type of service connection to a defaulting consumer.

### (c) Fixing the position of meter/metering equipment

During the inspection of Assistant Engineer of the Department the point of entry of supply of mains and position of meter, cut-out/metering equipments etc. will be decided and should not be changed later on without written permission from Department.

The Department will in no case fix the meter, main cut-out metering equipments nor allow the same to remain in any position where the employees are prohibited from entering or where there is difficulty of access for employees.

## (d) Notification/application before connection

The consumer must give not less than 2 months notice before the supply or additional supply is required. In the case of HTIS/LTIS/BS consumers, longer notice which may extend to six months or more may be required to enable the Department to make necessary arrangement for such supply, which will subject to its availability in the system and seven clear days notice shall be given by the Assistant Engineer of the area to the applicant for the Purpose of inspecting the premises and investigating the feasibility of power supply. If service can be affected by extending service line alone, the consumer will be given a written

permission from the office of the Assistant Engineer about providing the service connection to his premises.

## (e) Sketch of the premises

- (i) A neat sketch of the premises should also submit the proposed internal electrification of the building showing the light points, light plug points, power plug points, fan/exhaust fan points, main isolator position, distribution Control system location and other fittings etc.
- (ii) In the case of industrial/workshop etc. the consumer should submit a neat sketch showing the location of all E&M equipments and its motor capacity if any etc. in addition to the above.

## (f) Load sanction

Depending on the availability of the quantum of electrical energy in the system, the load shall be sanctioned for all categories of consumers by the authorized officer of the Department.

#### XX. LAND - free of cost for service connection and other association facilities:

The consumer shall provide the necessary land to the Department belonging to his/her on free of cost basis and afford all reasonable facilities for bringing in the direct cables or over headlines from the Department's T&D system for servicing the consumers but also cables or overhead lines connecting 'the department's other consumers and shall permit the department to provide all requisite switch gear thereto on the above premises and furnish supply to such other consumers through cables/ overhead lines and terminals situated on the consumer's premises.

#### XXI. ACCESS TO PREMISES AND APPARATUS

(a) If any consumer obstructs or prevents departments authorized officers/employees in any manner, from inspecting his/her premises at any time to which the supply is afforded or where the electrical installations or equipments belonging to the department or the consumers situated in such premises

and if there is scope of suspecting any malpractice, the authorized officer; employees of the department may disconnect the power supply forthwith without notice and keep such power supply disconnected till the consumer affords due facilities for inspection. If such inspection reveals nothing to undertake any malpractice or pilferage, the department then restore the power supply to his/her premises.

- (b) If such inspection reveals any commission of malpractice as specified in the "Malpractice clauses mentioned below, this may be dealt as per the relevant clauses which are indicated in the sub-head of malpractice.
- (c) The department shall not be responsible for any loss or damage or inconvenience caused to the consumer on account of such disconnection of supply.

### XXII. INTERFERENCE WITH SUPPLY MAINS AND APPARATUS

- (a) A consumer shall not interfere with the supply main or apparatus including the metering arrangement, which may have been installed in his/her premises.
- (b) The consumer shall not keep connected to the department supply system if any apparatus to which the department has taken reasonable objection or which the department may consider likely to interfere or affect injudiciously the department's equipments installed in his/her premises or the Department's supply to other consumer.
- (c) The consumer shall not keep the unbalanced loading of three phase supply taken by him/her from the Department.
- (d) The consumer shall not make such use of supply given to him/her by the department as to act prejudicially to the department's supply system in any manner whatsoever.

#### XXIII. MALPRACTICE

(i) Contravention of any provision of the terms conditions of supply the Indian Electricity Act 2003, the Indian Electricity Rules 1956 or any other law/rule

governing the supply and use of electricity regulating order shall be treated as malpractice and the consumer indulging in any such malpractice shall be liable at law/rule/order. Subject to generality as above.

- (ii) Cases mentioned hereunder, shall be generally treated as malpractice:-
  - (a) Exceeding the sanctioned/contract load authorized by the department without the permission of the department.
  - (b) Addition, alteration and extension of electrical installation in the consumer's premises without permission of the department or extension to any premises other than the one for which supply sanctioned/contracted for.
  - (c) Unauthorized supply of electricity to any service which is including the service line disconnected by the Department against electricity revenue arrear or any other offended clauses and the same service line reconnected without permission of the department.
  - (d) Non-compliance of orders in force imposing restriction of use of energy for rational and equitable distribution thereof.
  - (e) Use of electricity for any purpose other than that for which supply is contracted /sanctioned for.
  - (f) Resale of energy without the permission of the department.
  - (g) Theft of energy.
  - (h) Obstruction to lawful entry of authorized officer/employee of the department into consumer's premises.
  - (i) Interfering and tampering with the meter and metering system.

## XXIV. PAYMENT OF COMPENSATION FOR MALPRACTICES

Where a consumer is found to be indulging in malpractice with regard to use of electricity and use of device to commit theft of energy etc. the Assessing Authority of the department will decide about the payment of compensation amount to be imposed against such consumer as per the relevant rules and regulations.

### XXV. INSTITUTION OF PROSECUTION

Any officer/employee authorized to inspect and deal with cases of malpractice and theft of energy may launch prosecution as an aggrieved person as mentioned in section 135 & 150 of the Indian Electricity Act 2003.

#### XXVI. READING OF METER AND PREPARATION OF BILL

- (a) The meter reading will be taken once in a month. The reading of meter will be recorded by meter reader in a card provided near the meter and open to inspection by consumer. Bill for energy consumption charges will be prepared based on the reading noted in the card.
- (b) Any complaint with regard to the accuracy of the bill the same shall be intimated immediately by the consumer to the Assistant Engineer, who has issued the bill quoting the bill number/ account number, date etc.
- (c) If the consumer does not receive the electricity bill he shall inform the Assistant Engineer concerned about the non-receipt of his bill and on such representation, a copy will be supplied to him.

#### XXVII. DISCONNECIION OF SUPPLY FOR NON-PAYMENT OF ELECTRICITY BILL AND LEGAL ACTION

If the consumer fail to pay any bill presented to him/her the department shall be at liberty to take action under sub- section (1) of section 56 of Indian Electricity Act 2003 for disconnection of supply. The disconnection notice is printed in the bill form and further notice will not be issued by the department for disconnection.

### XXVIII. FAILURE OF POWER SUPPLY

The Department shall not be responsible for loss, damage or compensation what so ever out of failure of supply.

## XXIX. RESTRICTION OF POWER SUPPLY

The supply of electricity is liable to be curtailed or staggered or cut off all together as may be ordered by the State Government or any other enactment as amended from time to time governing the supply and use of electricity.

#### XXX. CONSUMER NUMBER

Consumer number is given to all the consumers. The same is written in the Meter reading card also. Consumer must know his/her consumer no and should quote the consumer no. while corresponding with the department for prompt attention by the department.

#### XXXI. FUSE CALL

In case the department's main fuse or fuses fail, the consumer or his representative may give the intimation in the adjacent control room either in person or through phone. Employees bearing the identity cards of the department are allowed to replace those fuses. Consumers are not allowed to replace those fuses and they will render themselves liable to pay heavy penalty if the department's seals are been found broken.

In attending the fuse – off calls. Top most priority will be given to cases of fire due to short circuit, accident, arcing in consumer's main etc.

#### XXXII. THEFT OF POWER

Theft of power is a criminal offence under electricity act. Whoever commit the theft of power shall be punishable in accordance with Indian Electricity Act 2003.

## **XXXIII. SUPPLY WITHOUT METER**

Where a supply to the consumer is given without meter the consumption of Electrical Energy in kWh will be computed in the manner indicated below:

- 1. Government office building: Sanctioned load (kW) x 6 hrs x 30 days x 60 /100
- 2. Other Consumers: Sanctioned load (kW) x 8 hrs x 30 days x 60 /100