ORDER

ON

PROVISIONAL TRUE UP FOR THE FY 2016-17, REVIEW FOR THE FY 2017-18 & AGGREGATE REVENUE REQUIREMENT FOR THE FY 2018-19 TO FY 2020-21 AND TARIFF FOR THE FY 2018-19

For

Energy & Power Department,
Government of Sikkim

March, 2018

Sikkim State Electricity Regulatory Commission
Gangtok, Sikkim

LIST OF CONTENTS

LIST OF TABLES

ABBREVIATIONS

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	Kahalgaon Thermal Power Station
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

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/2018-19/P-01/EPDS.

In the matter of

Petition for Multi Year Aggregate Revenue Requirement (ARR) for 3-Year Control Period from FY 2018-19 to FY 2020-21 & Tariff for the FY 2018-19, Provisional True Up for the FY 2016-17 and Review for the FY 2017-18 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: ……….28th March, 2018.

1. BACKGROUND AND BRIEF HISTORY

The Sikkim State Electricity Regulatory Commission (hereinafter referred to as the 'Commission') came into existence on 15th 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 11th 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 dated 28.11.2017 filed its petition before the Hon'ble Commission for consideration and approval of the provisional true up for the FY 2016-17, review 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 and Multi Year Aggregate Revenue Requirement (ARR) for the control period of FY 2018-19 to FY 2020-21 & determination of tariff for the FY 2018-19 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 28th November, 2017.

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 21st May, 2014 thereby specifying the first 3-year control period as commencing from 1st April, 2015 to 31st 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 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 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 18th March, 2015. Further the Commission notified the SSERC (Multi Year Tariff) (Second Amendment) Regulations, 2017 vide Gazette Notification No. 367 Dated 24th August, 2017 thereby rescheduling the 3-year control period as from 1st April, 2018 to 31st 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 1st 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 30th November, 2017 vide petition dated 28th 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 24th August, 2017 very limited time was available to the EPDS for filing of the Business and Capital Investment Plans within the dateline (1st September, 2017), therefore the Commission vide its letter No. 315/SSERC/2017-18/309 Dated 18th September, 2017 permitted the EPDS to file the Business Plan 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 3-year Control Period from 1st April, 2018 to 31st March, 2021 vide letter No. 5/P/Rev/Nodal/14015 Dated 28th November, 2017. The petition was received by the Commission on 28th November, 2017 and registered as Case No. MYT/2018-19/P-01/EPDS and the petition was admitted by the Commission on 4th December, 2017.

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 dated 28th November, 2017 for consideration and approval of the provisional true up for the FY 2016-17, review 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 and Multi Year Aggregate Revenue Requirement (ARR) for the control period of FY 2018-19 to FY 2020-21 & determination of tariff for the FY 2018-19 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 28th November, 2017.

The Commission during the scrutiny and examination the Multi Year 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 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:

Communications made by the Commission		**Response/Replies received from EPDS**	
Letter no. / E-mail	Dated	Letter no. / E-mail	Dated
318/SSERC/2017-18/16	09.01.2018	CE(L/R)/E&P/2017-18/04/83	01.02.2018
E-mail	15.02.2018	5/P/Rev/Nodal/14-15/318	24.02.2018

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 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 also had an interactive meeting with the EPDS on 15th February, 2018 wherein the various aspects of the MYT Petition, True UP and Review Petition were discussed and deliberated upon. The Commission also sought clarifications from the EPDS on the various projections and calculations presented in the MYT petition. The EPDS provided the necessary clarifications and responses to the queries posed by the Commission.

1.3 Admission of the Petition

Although the petition was filed by the EPDS on 28th November, 2017, the Commission admitted the Petition on 04th December, 2017 after thoroughly going through the details submitted by the EPDS. The Petition was registered as Case no. MYT/2018-19/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. 315/SSERC/2017-18/33 dated 24th January, 2018.

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 objections, suggestions, comments and views latest by 25th February, 2018.

- Sikkim Herald (English)…………………………….on 9th February, 2018.
- Summit Times (English)…………………………….on 5th February, 2018.
- Himali Bhela (Nepali/Local language) ………on 5th February, 2018.

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 necessary cost. The petition filed by the EPDS was also uploaded in the official website of the Commission.

No 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.

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 12th March, 2018. 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)........................14th February, 2018 & 28th February, 2018.
- Samay Dainik (Nepali/Local Language).. 14th February,2018 & 28th February, 2018.
- Summit Time (English)……………………………..14th February, 2018 & 1st March, 2018.

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

1.6 Public Hearing

The Public Hearing was held on 12th March, 2018, 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 no participation by the individual public/consumers side except by the representatives of the three Pharmaceutical Companies. Nonetheless , the Commission deemed it fit to proceed with the Public Hearing and the representativies of the three companies were given the opportunity of being heard. The Company representatives raised the similar/identical issues on billing and metering during the Public Hearing. The EPDS responded to the suggestions, views and objections of the all participants. The Commission and the EPDS also put forth their views and suggestions during the discussion. The views and suggestions given by the participants have been taken into consideration while issuing this Tariff Order. The list of officials who attended the Public Hearing and details of the objectors 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:

1. 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 2016-17.
6. Sixth Chapter - This deals with the review for the FY 2017-18.
7. Seventh Chapter - This contains the Multi Year Annual Revenue Requirement for the FY 2018-19 to FY 2020-21, the Commission's analysis and decisions thereon.
8. Eighth Chapter - This contains the Multi Year Annual Revenue Requirement for the FY 2018-19 to FY 2020-21 for Transmission Function, the Commission's analysis and decisions thereon.
9. Nineth Chapter - This contains the Annual Revenue Requirement for the FY 2018-19 to FY 2020-21 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 2018-19.
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

The Commission prepared Salient Features highlighting the important aspects of the petition filed by the EPDS for Truing up for the FY 2016-17, Review for the FY 2017-18 and Multi Year ARR for the 1st 3-year control period from FY 2018-19 to FY 2020-21 & Tariff Petition for the FY 2018-19 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 16th January, 2018 in the Commission's Office. During the meeting, the Members of the SAC were apprised of the various aspects of the Multi Year ARR & Tariff Petition. The Members of the SAC discussed each and every aspect of the Tariff Petition and the submissions/projections made by the EPDS were deliberated upon in detail. The Members of the Committee put forth their observations, comments and suggestions on the Multi Year ARR & Tariff Petition. The summary of the discussions and the views, suggestions and comments of the State Advisory Committee are presented hereunder:

- The Members of the SAC opined that the SAC is aware of the efforts being made by the EPDS towards improving its performance but the efforts need to be continued with better focus and determination.

- The Members of the SAC opined that the EPDS needs to work out ways and means to reduce the employee costs preferably by re-deploying the excess manpower to other departments after providing training and necessary skills.

- The Members of the SAC opined that Although the entire thermal power can't be surrendered, the EPDS need to look into possibility of curtailing high cost thermal power by setting up of alternative energy sources like solar energy. The EPDS need to take advantage of the booming solar power market (mainly roof top) to reduce dependence on import of power during lean season.

- The Members of the SAC opined that Continuous efforts are needed from the EPDS to collect the unpaid/pending dues from the State Government Departments and other agencies. Only the honest and conscious consumers are paying the electricity bills regularly but the outstanding dues receivable by the EPDS is enormous and pending for long, which is not justifiable.

- The Members of the SAC opined that Efforts need to be made by the EPDS for bringing consumer awareness on existence of complaint cell, Consumer Grievance Redressal Forum (CGRF) et al.

- The Members of the SAC suggested that Installation of Smart Meters/CT meters should be started by the EPDS beginning with major cities, towns and district headquarters.

- The Members of the SAC suggested that the EPDS need to make efforts for setting up of Solar Power in the State. Presently there is lack of awareness amongst the public about the cost, feasibility and other aspects of Roof Top Solar. Awareness campaigns need to be done by the SREDA/EPDS to disseminate information about roof top solar.

- The Members of the SAC suggested that the EPDS need to take up timely repair and renovation of its power houses to improve its own generation so that import of power can be minimised.

- The Members of the SAC suggested that the EPDS should explore the possibility of installing roof top solar and solar street lamps in areas like M.G. Marg, Palzor Stadium, Pakyong Airport, 1500 Bedded New Hospital etc.

- The Members of the SAC suggested that Powerhouse like Jali Power House and Rimbi Power House Stage-I having historical importance need to renovated and converted into heritage sites for posterity. Such powerhouses could become tourist attractions as well.

- The SAC Members observed that the ARR presented by the EPDS for its Distribution function shows increase in the revenue gap every year, which is not a good indicator. The members opined that the revenue gap should decrease every year considering the fact that the EPDS is carrying out a number of modernization and improvement schemes/works. The members opined that increase in the revenue gap portrays a negative image of the EPDS and as such efforts need to be made to bridge the gap. The members felt that the EPDS need to make proper projections for the ensuing years keeping all aspects in mind. The members opined that the EPDS need to come out with more realistic projections in the ARR.

- The SAC members opined that in view of surplus power available to the State from various hydropower projects commissioned in the State by private power developers, the revenue from sale of power outside the State projected by the EPDS is on the lower side. Similarly, the members observed that cost of power purchase is showing increasing trend, which again is a negative indicator. The members opined that the EPDS should make efforts to make realistic projections of the various items in their ARR petition. The members opined that the projections made by the EPDS in the ARR are in the public domain, so wrong/un-realistic projections should not portray negative image of the Department/State.

- The SAC members opined that since the ARR and revenue gap for the Distribution function is showing an "increasing" trend every year, the EPDS is bound to submit petition for hike in tariff every year. However, the members also noted that unlike in bigger States, the EPDS being a State Government Department has to look after the welfare of the people in line with the State Government policy and as such the members felt that EPDS has its limitations and bottlenecks. The members opined that due credit must be given to the EPDS for making efforts and providing quality service to the consumers in spite of all the bottlenecks and limitations that the Department have.

- The SAC members opined that almost 80% of the total consumers in the State are from rural areas and as such proposal to hike the tariff for the "Domestic Category" consumer has to be considered keeping in view the fact that rural consumers may not be able to afford expensive power. The members opined that power consumption in the rural areas is also less and hiking of tariff may not make big difference towards bridging of the revenue gap. The members opined that it may be advisable to retain the existing tariff for the domestic category consumers for 2018-19.

- The SAC members opined that nowadays the Panchayats in villages are functioning independently and have their own fund/budget and sources of revenue. So the cost of power for rural street lights should be collected from the Panachayat.

- The SAC members stated that the big pharmaceutical and other manufacturing units need regular power supply at appropriate voltage and they are ready to pay for good power supply. They opined that it is cheaper for these units to buy power from the EPDS than to run their DG sets. Therefore industrial consumers should be provided with quality and regular power supply by the EPDS, as a major share of revenue comes from them.

- The SAC members observed that supply of power to pharmaceutical units in the State is not too satisfactory and they have frequently found these units complain about poor power supply. The members opined that the EPDS need to make efforts to give quality power to such manufacturing units in order to earn good revenue. The members also opined that the proposal to club the different tariff slabs is not advisable as the EPDS has not only to undertake the huge exercise of re-printing of the electricity bills but "clubbing" of the tariff slabs will not have any major positive impact towards reduction of the revenue gap. The members opined and suggested that it would be proper to keep the tariff structure/category un-disturbed.

- The SAC members opined that under the Open Access framework, consumers can opt to draw power from any power distributor or power generator. Therefore, the electricity tariff has to be reasonable and power supply qualitative and reliable otherwise the EPDS may lose their high end consumers.

- The SAC members opined that the transmission business of the EPDS is small and limited and therefore there should not be major problem for the EPDS in making correct projections in their ARR and submission of necessary data/information and details to the Commission. The members observed that the transmission charges per MW/Day proposed by the EPDS is almost double of the existing charge. The members also observed that the proposed hike in transmission tariff from 2018-19 to 2019-20 is sudden and not gradual. The members opined that such sudden hike in tariff should be avoided.

- The SAC members observed that most of the powerhouse owned by the EPDS are either abandoned or not operating at their full capacities. The members opined that the EPDS must take necessary steps to revive the non-operative powerhouses in order to improve the own generation of the EPDS. The members observed that projects like Lagyap HEP has not started generation though repair and renovation works started long time back. The members further observed that generation tariff for projects which have been already abandoned are also proposed in the petition, which needs proper study by the Commission.

- The members opined that old power houses like Jalipower house and Rimbi Powerhouse have historical significance and they need to be preserved for posterity. The members opined that such abandoned powerhouses can be converted into tourist place. The members stressed on the need and urgency for the EPDS to improve its own generation.

- The SAC members opined that the EPDS need to provide information about the free power and revenue being generated from various power projects developed by the private developers and added that hardly any information about IPP projects are available in the public domain.

- The SAC members opined that actions must be taken by the EPDS for reviving the installed hydropower projects like 120 MW Rangit-IV HEP and 500 MW Teesta-VI HEP. They added that many local contractors have invested their money in the construction works of these projects but they have not been paid by the project authorities due to which there is a sense of resentment and distrust among the contractors and public about the private developers. They opined that delay in implementation of these projects is a huge financial loss to the State and if timely revival is not done there is every possibility of the projects becoming financially unviable. They further added that few interested parties had visited 120 MW Rangit-IV HEP to study financial viability of the project but most of the parties have backed out due to high project cost. SAC members suggested that the Commission should bring the matter to the notice of the State Government.

- The SAC members opined that the EPDS being the Nodal Department dealing with IPP projects, it must make all possible efforts by involving all stake holders to sort out the issues for revival of the projects. The members further proposed that a meeting between the SAC and the EPDS needs to be arranged shortly wherein the issues and queries related to IPP hydropower projects can be discussed thoroughly.

2. SUMMARY OF AGGREGATE REVENUE REQUIREMENT FOR FY 2017-18

2.1 Aggregate Revenue Requirement (ARR)

The Petitioner has submitted the Multi Year Aggregate Revenue Requirement for the 1st control period of FY 2018-19 to FY 2020-21 for meeting its expenses and estimated the revenue with the existing tariff. The projected ARR and Revenue gap are shown in Table below:

Table 2.1: Aggregate Revenue Requirement Projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
1	**2**	**3**	**4**	**5**	**6**
1	Cost of Fuel	0.18	0.18	0.18	0.18
2	Cost of Power Purchase	226.25	239.75	254.07	269.24
3	Cost of Power Purchase	0.00	17.60	18.04	18.51
4	Employee Costs	106.19	79.14	83.37	87.79
5	Repair and Maintanance Expenses	21.80	19.50	20.31	21.18
6	Administration and General Expenses	1.14	0.84	0.84	0.88
7	Depreciation	33.21	17.94	18.84	19.29
8	Interest Charges	0.00	0.00	0.00	0.00
9	Interest on Working Capital	10.87	10.80	11.43	12.06
10	Return on NFA/Equity	0.00	0.00	0.00	0.00
11	Transmission Charges (Intra State)	0.00	40.73	42.09	43.87
12	**Total Revenue Requirement**	**399.64**	**426.48**	**449.16**	**473.00**
13	Less: Non Tariff Income	1.55	1.59	1.62	1.65
14	**Net Revenue Requirement**	**398.08**	**424.90**	**447.55**	**471.35**
15	Revenue from Tariff	179.57	196.89	207.81	218.20
16	Revenue from Outside State Sale	86.46	131.08	132.44	133.80
17	**Gap (14 - 15 - 16)**	**132.05**	**96.93**	**107.30**	**119.35**
18	Revenue surplus carried over	0.00	0.00	0.00	0.00
19	Additional revenue from proposed tariff	0.00	3.30	2.73	2.10
20	Regulatory asset	0.00	0.00	0.00	0.00
	Energy sales within States (MU)	**344.63**	**369.36**	**393.22**	**415.14**

2.2 Tariff – Existing vs. Proposed

In its Petition, EPDS has submitted the proposed Tariffs for the FY 2018-19, as detailed in Table below:

Table 2.2: Existing Tariffs v/s Proposed Tariffs for the FY 2018-19

Sl. No.	Category of Consumers	Existing Rate Paisa/KWH	Proposed Rate Paisa/KWH
1	2	3	4
1	**Domestic**		
a)	Up to 50 units	110	170
b)	51 to 100 units	234	
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	450
b)	51 to 200 units	561	
c)	201 to 400 units	594	600
d)	401 & above	635	640
3	**Public lighting**		
	Rural Areas	270	270
	Urban Areas	500	500
4	**Industrial**		
A	HT		
a)	HT (AC) above 3.3 KV		
b)	Upto 100 KVA	336	350
c)	100 - 250 KVA	389	400
d)	250- 500 KVA	459	470
e)	500 KVA & above	496	510
B	LT (Rural)		
a)	Up to 500 units	250	350
b)	501 - 1000 units	440	
c)	1001 & above	580	585
C	LT (Urban)		
a)	Up to 500 units	528	575
b)	501 - 1000 units	616	
c)	1001 & above	713	715
5	**Bulk supply**		
a)	LT	606	606
b)	HT	657	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 2016-17.
- To Review the estimates for the FY 2017-18.
- To admit the Tariff Petition for the FY 2018-19 and approve the Business Plan & ARR for the FY 2018-19 to FY 2020-21 in respect of Distribution function, Transmission Function & Generation Function for EPDS .
- 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 was a tiny Himalayn Kingodm ruled by the "Chogyals" or Dharma Kings until its merger to India in 1973. The total geographical area of the State is 7,096 SqKm. and has a population of 6,10,577 as per 2011 census. Inspite of its small size, Sikkim is endowed with rich natural resources and bio-diversity. The State is blessed with unparralled natural beauty and is among the top tourist destinations in the country. Lakhs of tourists visit the State to enjoy it pristine natural beauty. More than 50% of its total geographical area is covered under forest area making it one of the hot spots of biodiversity. The third highest peak of the world Mount Kangchen Dzenga is located in the State. The **Kangchen Dzenga National Park (KNP)** has been declared as **"UNESCO world heritage site"** by the United Nations Organization. The KNP is an 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.

The State Government has banned use of all kinds of chemical fertilizers, insecticides and pesticides in the State. Sikkim is today recognized worldwide as the **"First Organic State"** in India and also one of the greenest and cleanest States. Althogh Sikkim has limited area available for agriculture, the State has made its 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 are Eco-Tourism, Hydropower and Organic Farming apart from horticulture and floriculture.

Due to its small population and less number of high power consuming industrial units , the requirement of power is also very small in the State. The only major industrial units in the State are the pharmaceutical units, breweries, and distilleries. There are also small scale industries like hatcheries, restaurants, hotels etc. Therefore, the power demand and supply scenario is very well balanced in the State.

The EPDS is the only utility 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 own and operates a number of small hydropower projects and diesel generating stations. Thus the EPDS is also a power generator. Apart from the EPDS, the Sikkim Power Development Corporation Limited (SPDCL), A Government of Sikkim Enterprise is also 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.

3.2 Development of Hydro Power Projects in Sikkim

Central Water Commission,Government of India had assessed the total hydropower potential of the State to be around 8000 MWs. The State Government with the intention of generating revenue took the decisions to harness the hydropower potential of the State and has taken up implementation of the projects on Private Public Partnership (PPP) mode. 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 some of the project construction has been delayed. The deyal in most cases is 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	Panan HEP	300	Himagiri Hydro Energy Pvt. Ltd.
5	Bhasmey HEP	51	Gati Infrastructure Pvt. Ltd.

The State of Sikkim is already receiving free power from the various hydropower projects already commissioned @ 12% after their commissioning for the first 15 years of their operation. From the 16th year onwards the royalty in the from of free power will be @ 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 31st 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 Lines		
1	132 KV	14.80 Ckt.Km
HT Lines		
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		
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**	**1,48,162.00**

3.4 Consumer Profile and Energy Sales

The total number of registered consumers in the State as on 31st March, 2017 was 1,08,114 with annual consumption of about 323.47 MUs. The Energy Sales outside the State for the FY 2016-17 was 478.88 MUs. The category-wise number of consumers and energy sales during the FY 2016-17 are given in Table below.

Table 3.1: Consumer profile and Energy Sales during the FY 2016-17

Sl. No.	Consumer Category	No. of Consumer		Energy Sales	
		(Nos.)	(%)	(MUs)	(%)
1	Domestic	94,552	87.46%	96.74	29.91%
2	Commercial	11,308	10.46%	39.68	12.27%
3	Public Lighting	34	0.03%	0.26	0.08%
4	Temporary Supply	-	-	2.92	0.90%
5	HT Industrial Consumers	460	0.43%	156.16	48.28%
6	LT Industrial Consumers	246	0.23%	1.31	0.40%
7	Bulk Supply	1,514	1.40%	26.40	8.16%
8	**Total**	**1,08,114**	**100.00%**	**323.47**	**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 2016-17 are 139.31 MUs and percentage loss is 30.10%. The details of T&D losses for the FY 2016-17 are given in the Table below.

Table 3.2: T&D Loss calculation approved by the Commission for the FY 2016-17

Sl. No.	Particulars	Unit	FY 2016-17
1	Own generation	MUs	8.14
2	Energy purchased from NTPC	MUs	382.74
3	Energy purchased from WBSEDCL	MUs	52.65
4	Energy purchased from NHPC	MUs	36.21
5	Energy purchased (2+3+4)	MUs	471.60
6	Pool loss	%	2.41
7	Pool loss	MUs	11.37
8	Net energy available (5-7)	MUs	460.23
9	Energy purchased from PTC	MUs	45.62
10	Energy purchased from SPDC	MUs	27.09
11	UI purchased	MUs	40.02
12	Free energy	MUs	360.56
13	Total energy available at state periphery (1+8+9+10+11+12)	MUs	941.66
14	Outside state sale through UI / Trading	MUs	478.88
15	Net energy available for sale within the state (13-14)	MUs	462.78
16	Energy sales within the state	MUs	323.47
17	T & D loss (15-16)	MUs	139.31
18	**T & D loss**	**%**	**30.10**

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 Ramam HEP in West Bengal is about 179.38 MWs, as detailed in Table 3.3 below:

Table 3.3: Power Allocation from CGS and other sources

Sl. No.	Source	Capacity (In MWs)	Allocation	
			(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 of EPDS

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 and the present day status of the generation stations owned by the EPDS are as detailed in Table 3.4 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 2016-17 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 2016-17

Sl. No.	Stations	Power Purchased (In MUs)	Cost of Power (₹ in Crores)	Average Cost (₹ / Kwh)
1	NTPC			
	a) FSTPP	113.07	43.94	3.89
	b) KHSTPP-I	63.97	22.30	3.49
	c) KHSTPP-II	21.63	7.08	3.27
	d) BSTPP	30.18	33.95	11.24
	e) TSTPP	153.89	43.97	2.86
2	NHPC			
	a) RANGIT-III	4.34	1.70	3.92
	b) TEESTA-V	31.87	7.61	2.39
3	Other Sources			
	a) PTC	45.62	9.48	2.08
	b) WBSEDCL	52.65	6.74	1.28
	c) SPDC	27.09	10.54	3.89
4	UI/Deviation	40.02	0.40	
5	Free Power	360.56		
6	Transmission & Other Charges		26.51	
7	Rebate / Other Charges		-0.72	
8	**Total**	**944.91**	**213.51**	

3.8 Energy Balance

The supply and demand scenario during the FY 2016-17 approved by the Commission are given in Chapter 5, is given in Table 3.6 below:

Table 3.6: Energy Balance of EPDS for FY 2016-17

Sl. No.	Particulars	Unit	FY 2016-17
A	**ENERGY REQUIREMENT**		
1	Energy sales within the state	MUs	323.47
2	Outside state sale through UI / Trading	MUs	478.88
3	Total energy sales (1+2)	MUs	802.35
4	Overall T & D losses	%	30.10
5	Overall T & D losses	MUs	139.31
6	Total energy requirement (3+5)	MUs	941.66
B	**ENERGY AVAILABILITY**		
1	Own generation	MUs	8.14
2	Power purchased from CGS/UI etc.	MUs	584.33
3	Free Power	MUs	360.56
4	Overall pool loss	%	2.41
5	Overall pool loss	MUs	11.37
6	Total energy availability (1+2+3-5)	MUs	941.66
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 objections received/raised against the proposed Multi Year 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 Multi Year Tariff Petition for the 3-year control period from FY 2018-19 to FY 2020-21. 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 12th March, 2018. In spite of all the notices, no written suggestions/objections or comments were received.

The Public Hearing on 12th March, 2018 also witnessed almost no participation by individual consumers except by the representatives of the following three Companies:

1. Zydus Wellness –Sikkim Unit-II, Mamring Block, Namthang Elakha, South Sikkim
2. Zydus Healthcare Limited, Bhagey Khola, Majhitar, Rangpo, East Sikkim.
3. Micro Labs Limited, Mamring, Mamring—Namthang Road, South Sikkim.

The submissions made by the representatives of all the three aforementioned Companies were same and their written suggestions were also similar. Therefore, the submissions and suggestions given by the three Companies, the responses given by the Petitioner and the comments of the Commission are given hereunder:

1. M/s Zydus Wellness –Sikkim unit-II, Mamring Block, Namthang Elakha, South Sikkim
2. M/s Zydus Healthcare Limited, Bhagey Khola, Majhitar, Rangpo, East Sikkim.
3. M/s Micro Labs Limited, Mamring, Mamring—Namthang Road, South Sikkim.

The Companies submitted their suggestions/comments in written to the Commission on the Notification No. 33/P/Gen/97/Par-Section IV (A)at the Public Hearing vide their letter dated 9th March, 2018. The written suggestions of the Company are reproduced below:

" *In case recorded maximum demand exceeds the contract demand for three consecutive month, the demand charge will be payable on the basis of installed capacity of the transformer which is very harsh on us. We propose that portion of the demand in excess of contract demand will be billed at twice the prevailing demand charges only upto official intimation from power department. Because now metering system is online and we are unable to see our maximum demand in monthly bills in Online Portal".*

The above mentioned written suggestions of the three Companies were on the Section IV of the Extra Ordinary Gazette Notification No. 361 Dated 21st August, 2017 issued by the Government of Sikkim whereby the Energy & Power Department, Government of Sikkim had notified the Tariff Schedule for the Financial Year 2017-18 as per the Tariff order issued by the Commission.

While furnishing their suggestions on the Section IV of the said Notification, the representatives of the Companies also made the following submissions before the Commission:

1. That the Companies don't have any conflict or objections to the Tariff or Demand Charges being billed by the Energy & Power Department as per the Tariff Order issued by the Hon'ble Commission.
2. That the bills for the maximum demand in excess of their contract demand were raised to the Companies by the Energy & Power Department very late (after 8 months) and as such, the Companies were not aware that they had exceeded their contract demand. That no time limit is specified in the Notification for raising of the bill by the Petitioner. Therefore a time limit needs to be defined by the Hon'ble Commission to avoid excessive delay in raising of bills by the Petitioner.
3. That the Companies did not have the requisite meters installed in their premises to indicate excess drawal due to which they were unaware of their drawal exceeding the contract demand.

4. That the Companies are ready/willing to pay for the demand exceeded over their contract demand but they should be exempted from paying the demand charge on the basis of the installed capacity of the transformer. That it was for the first time that such instance of exceeding the contract demand has arisen and as such the Companies should be exempted from payment of the penalty as provided in the Section IV of the Gazette Notification mentioned above.
5. The Companies also informed the Hon'ble Commission that they had approached the Consumer Grievance Redressal Forum (CGRF) of the Energy & Power Department in this regard and that the CGRF had already pronounced its order/judgment on the matter.

Responses of the Petitioner (Energy & Power Department):

Responding to the submissions of the Companies, the Petitioner made the following submissions before the Hon'ble Commission:

1. That the delay in raising the bills for the contract demand exceeded was due to the fact that the Petitioner was updating the billing software.
2. That the Companies had approached the Department with the request for exemption from payment of the penalty and the Department had advised the Companies to approach the CGRF. Accordingly, one of the Companies viz Zydus had filed its grievance before the CGRF of the Department.
3. That the CGRF had admitted the grievance/petition of the Company and thereafter had heard the pleadings of the Company afterwhich the CGRF pronounced its order/judgment. The CGRF in its order had clearly mentioned that if the Company is not satisfied with the order of the CGRF, the Company should approach the next higher forum viz the Electricity Ombudsman.
4. That the provisions made for penalty for exceeding the contract demand under Section IV of the Gazette Notification issued by the Petitioner is in confirmation with the Tariff Order issued for FY 2017-18.
5. That the Company ought to have approached the next higher forum i.e the Electricity Ombudsman in time if it was not satisfied with the Order issued by the CGRF.

Commission's Observations:

The Hon'ble Commission observed that the present Public Hearing is meant for obtaining the views/objections/suggestions of the stake holders on the Multi Year Tariff Petition and Tariff proposal for 3-year control period FY 2018-19 to 2020-21 of the Petitioner and therefore it is not the right platform for raising the issues pertaining to matter falling under the Tariff Order already issued by Hon'ble Commission in the past. However, the Hon'ble Commission opined that it would be unfair not to hear the submissions made by the representatives of the Companies and permitted the Companies to place their submissions. Accordingly, the Hon'ble Commission heard the submissions of the Companies and the responses given by the Petitioner and gave the following observations:

i. The grievances submitted by the Companies had been already heard by the CGRF and the CGRF had pronounced its order. The CGRF in its order had clearly mentioned that if the applicant Company is not satisfied with the order issued by the CGRF, the Company should approach the next higher forum i.e the Electricity Ombudsman. However, the applicant Company had neither approached the Electricity Ombudsman nor the Hon'ble Commission; therefore the Commission can't issue any order or directives on the matter. The Hon'ble Commission opined that is upto the Petitioner whether to exempt or waive off the penalty imposed and the Commission has no jurisdiction whatsoever on the matter unless the Company files petition before the Commission following the due procedure.

ii. The Hon'ble Commission also suggested that the Companies should keep themselves well informed about the various rules, regulations and regulatory procedures so that they can approach the appropriate forum for resolving any grievances in future. The Commission informed the Companies that they can visit the Commission anytime to seek clarifications on any matter and the Commission is ready to provide all assistance to them.

iii. The Hon'ble Commission assured the representatives that due considerations will be given to the suggestions given by the Companies while finalizing the Tariff Order.

List of Participants in the Public Hearing Held on 12th March, 2018 at Gangtok, East Sikkim

Sl. No.	Name	Designation	Department/Agency
1	Shri N. R. Bhattarai	Chairperson	SSERC, Gangtok
2	Shri N. T. Bhutia	PCE cum secretary	Energy & Power Department, Govt. of Sikkim, Gangtok
3	Shri Karma Tenzing	Secretary	SSERC, Gangtok
4	Shri K. B. Kunwar	Principal Chief Engineer	Energy & Power Department, Govt. of Sikkim, Gangtok
5	Shri A. B. Rai	Principal Chief Engineer	Energy & Power Department, Govt. of Sikkim, Gangtok
6	Shri Jigme D. Denzongpa	Director (Legal)	SSERC, Gangtok
7	Shri Ganesh Chettri	Chief Engineer	Energy & Power Department, Govt. of Sikkim, Gangtok
8	Shri P. M. Sharma	Chief Engineer	Energy & Power Department, Govt. of Sikkim, Gangtok
9	Shri Binod Sharma	Additional Director (F&A)	Energy & Power Department, Govt. of Sikkim, Gangtok
10	Shri Palchen D. Chaktha	Director (Tariff & Technical)	SSERC, Gangtok
11	Shri D. N. Khatiwada	Additional Chief Engineer	Energy & Power Department, Govt. of Sikkim, Gangtok
12	Shri Sonam Palzor	Assistant Director	SSERC, Gangtok
13	Miss. Khusbhu Gurung	Under Secretary	SSERC, Gangtok
14	Shri B. Mallick	Consultant	Energy & Power Department, Govt. of Sikkim, Gangtok
15	Shri Hem Kumar Chettri	Office Assistant	SSERC, Gangtok
16	Mrs. Yangzom Bhutia	Office Assistant	SSERC, Gangtok
17	Mrs. Hishey D. Bhutia	Office Assistant	SSERC, Gangtok
18	Mrs. Zangmu Bhutia	Office Assistant	SSERC, Gangtok
19	Shri Arun Kumar Bhujel	Peon	SSERC, Gangtok
20	Shri K. B. Chettri	Peon	SSERC, Gangtok
21	Representatives	Majhitar, Rangpo, East Sikkim	Zydus Wellness-Sikkim Unit-II
22	Representatives	Mamring, Namthang Road, South Sikkim	Micro Labs Limited
23	Representatives	Bhagey Khola, Majhitar, Rangpo, East Sikkim	Zydus Healthcare Limited

5. PROVISIONAL TRUE UP FOR THE FY 2016-17

5.1 Preamble

The Commission had approved the ARR and Tariff for the FY 2016-17 vide its Order dated 11.04.2016, based on the projected data submitted by the EPDS. Now, the EPDS has submitted proposals for provisional True up for the FY 2016-17, duly furnishing the actuals for the FY 2016-17, 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 2016-17. Therefore, true up cannot be done. EPDS has stated that though the accounts are not audited, the data furnished for the FY 2016-17 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 2016-17, the actual sales given by EPDS, as per provisional accounts in the Multi Year ARR & Tariff Petition for the FY 2018-19 and now approved by the Commission, are summarised in Table 5.1 below.

Table 5.1: Energy Sales approved by Commission for FY 2016-17

(In MUs)

Sl. No.	Category	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
1	Domestic	94.97	96.74	96.74
2	Commercial	40.75	39.68	39.68
3	Public Lighting	0.35	0.26	0.26
4	Temporary Supply	1.45	2.92	2.92
5	HT Industrial	153.21	156.16	156.16
6	LT Industrial	1.45	1.31	1.31
7	Bulk Supply	25.07	26.40	26.40
8	**Total**	**317.25**	**323.47**	**323.47**

The Commission now approves energy sales for the FY 2016-17 at 323.47 MUs, as per the actuals furnished by EPDS.

5.3 Transmission & Distribution Losses (T&D Losses)

The Commission in its Order for the FY 2016-17, had fixed the target of T&D Losses at 27.41% for the FY 2016-17. The EPDS in its Multi Year ARR & Tariff Petition for the FY 2018-19, has stated that the actual T&D losses during the FY 2016-17 is 30.61% as per provisional accounts.

Commission's Analysis:

As per the weekly loss scheduling of ERLDC from 04.04.2016 to 02.04.2017, the average pool loss during the above period was 2.41%. As such, the inter-state transmission loss (pool loss) for the FY 2016-17 has been considered at 2.41% and T&D Loss, when recalculated, is as shown in Table 5.2 below.

Table 5.2: T&D Loss calculation approved by the Commission for FY 2016-17

Sl. No.	Particulars	Unit	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
1	Own generation	MUs	10.00	8.14	8.14
2	Energy purchased from NTPC	MUs	365.95	382.74	382.74
3	Energy purchased from WBSEDCL	MUs	51.20	52.65	52.65
4	Energy purchased from NHPC	MUs	35.72	36.21	36.21
5	Energy purchased (2+3+4)	MUs	452.87	471.60	471.60
6	Pool loss	%	2.34	1.55	2.41
7	Pool loss	MUs	10.60	8.03	11.37
8	Net energy available (5-7)	MUs	442.27	463.57	460.23
9	Energy purchased from PTC	MUs	42.36	45.62	45.62
10	Energy purchased from SPDC	MUs	17.03	27.09	27.09
11	UI purchased	MUs	0.00	40.02	40.02
12	Free energy	MUs	337.65	360.56	360.56
13	Total energy available at state periphery (1+8+9+10+11+12)	MUs	849.31	945.00	941.66
14	Outside state sale through UI / Trading	MUs	412.26	478.88	478.88
15	Net energy available for sale within the state (13-14)	MUs	437.05	466.12	462.78
16	Energy sales within the state	MUs	317.25	323.47	323.47
17	T & D loss (15-16)	MUs	119.80	142.65	139.31
18	**T & D loss**	**%**	**27.41**	**30.61**	**30.10**

The Commission now approves T&D Loss at 30.10% for the FY 2016-17.

5.4 Own Generation

The Commission in its Tariff Order for the FY 2016-17 had approved Own Generation for the EPDS at 10.00 MUs. Now, the EPDS has furnished actual own generation was 8.14 MUs during the FY 2016-17, as detailed in Table 5.3 below.

Table 5.3: Own Generation approved by the Commission during FY 2016-17

(In MUs)

Sl. No.	Stations	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
1	Total Generation	10.00	8.14	8.14
2	**Total**	**10.00**	**8.14**	**8.14**

The Commission now approves Own Generation of EPDS during the FY 2016-17 at 8.14 MUs, as per actuals furnished by EPDS.

5.5 Power Purchase

The Commission in its Tariff Order dated 11.04.2016 had approved the power purchase quantity of 849.91 Mus including free power quantity of 337.65 MUs. Now, the EPDS has furnished actuals for the FY 2016-17 at 944.91 MUs including free power of 360.56 MUs in Multi Year ARR and Tariff Petition for the FY 2018-19, as detailed in Table 5.4 below.

Table 5.4: Power Purchase approved by the Commission during FY 2016-17

(In MUs)

Sl. No.	Stations	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
1	NTPC			
	a) FSTPP	114.16	113.07	113.07
	b) KHSTPP-I	62.60	63.97	63.97
	c) KHSTPP-II	20.81	21.63	21.63
	d) BSTPP	10.67	30.18	30.18
	e) TSTPP	157.71	153.89	153.89
2	NHPC			
	a) RANGIT-III	3.07	4.34	4.34
	b) TEESTA-V	32.65	31.87	31.87
3	Other Sources			
	a) PTC	42.36	45.62	45.62
	b) WBSEDCL	51.20	52.65	52.65
	c) SPDC	17.03	27.09	27.09
4	UI Purchase	0.00	40.02	40.02
5	Free Power	337.65	360.56	360.56
6	**Total**	**849.91**	**944.91**	**944.91**

The Commission now approves power purchase of 944.91 MUs, including free power of 360.56 MUs during the FY 2016-17, 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 11.04.2016 for the FY 2016-17 and the actuals furnished by the EPDS, and now approved by the Commission, are presented in Table 5.5 below:

Table 5.5: Energy Balance approved by the Commission for FY 2016-17

Sl. No.	Particulars	Unit	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
A	**ENERGY REQUIREMENT**				
1	Energy sales within the state	MUs	317.25	323.47	323.47
2	Outside state sale through UI / Trading	MUs	412.26	478.88	478.88
3	Total energy sales (1+2)	MUs	729.51	802.35	802.35
4	Overall T & D losses	%	27.41	30.61	30.10
5	Overall T & D losses	MUs	119.80	142.65	139.31
6	Total energy requirement (3+5)	MUs	849.31	945.00	941.66
B	**ENERGY AVAILABILITY**				
1	Own generation	MUs	10.00	8.14	8.14
2	Power purchased from CGS/UI etc.	MUs	512.26	584.33	584.33
3	Free Power	MUs	337.65	360.56	360.56
4	Overall pool loss	%	2.34	1.55	2.41
5	Overall pool loss	MUs	10.60	8.03	11.37
6	Total energy availability (1+2+3-5)	MUs	849.31	945.00	941.66
C	**ENERGY SURPLUS/(GAP)**	**MUs**	**0.00**	**0.00**	**0.00**

5.7 Fuel Cost

EPDS owns 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 11.04.2016, actuals furnished by EPDS and the cost now approved by the Commission are given in Table 5.6 below.

Table 5.6: Fuel Cost approved by the Commission for FY 2016-17

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
1	Cost of fuel	0.15	0.17	0.17
2	**Total**	**0.15**	**0.17**	**0.17**

The Commission now approves the fuel cost of ₹ 0.17 Crores for the FY 2016-17, 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 2016-17, actuals furnished by EPDS and the cost now approved by the Commission are given in Table 5.7 below.

Table 5.7: Power Purchase Cost approved by the Commission for FY 2016-17

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
1	Power Purchase Cost	180.29	213.51	213.51
2	**Total**	**180.29**	**213.51**	**213.51**

The Commission now approves power purchase cost of ₹ 213.51 Crores for the FY 2016-17, as per actuals furnished by EPDS.

5.9 Employee Cost

The Commission vide its Order dated 11.04.2016, had approved employee cost at ₹ 80.36 Crores for the FY 2016-17. The EPDS has furnished actuals at ₹ 101.00 Crores for the FY 2016-17 and the cost now approved by the Commission are given in Table 5.8 below.

Table 5.8: Employee Cost approved by the Commission for FY 2016-17

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
1	Employee Cost	80.36	101.00	101.00
2	**Total**	**80.36**	**101.00**	**101.00**

The Commission, accordingly, now approves ₹ 101.00 Crores towards employee cost for the FY 2016-17, as per actuals furnished by EPDS.

5.10 Repairs and Maintenance Expenses

The Commission vide its Order dated 11.04.2016 had approved Repair & Maintenance Expenses of ₹ 25.26 Crores for the FY 2016-17. The EPDS has furnished actual Repair & Maintenance Expenses at ₹ 22.29 Crores for the FY 2016-17 and the cost now approved by the Commission are given in Table 5.9 below.

Table 5.9: Repair & Maintenance Expenses approved by the Commission for FY 2016-17

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
1	Repair & Maintenance Expenses	25.26	22.29	22.29
2	**Total**	**25.26**	**22.29**	**22.29**

The Commission, accordingly, now approves ₹ 22.29 Crores towards Repair & Maintenance Expenses for the FY 2016-17, as per actuals furnished by EPDS.

5.11 Administrative and General Expenses

The Commission vide its Order dated 11.04.2016 had approved ₹ 2.53 Crores towards Administrative and General Expenses for the FY 2016-17. The EPDS has furnished actuals at ₹ 1.14 Crores for the FY 2016-17 and the cost now approved by the Commission are given in Table 5.10 below.

Table 5.10: A & G Expenses approved by the Commission for FY 2016-17

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
1	Administrative & General Expenses	2.53	1.14	1.14
2	**Total**	**2.53**	**1.14**	**1.14**

The Commission now approves ₹ 1.14 Crores towards Administrative & General Expenses for the FY 2016-17, as per actuals furnished by EPDS.

5.12 Capital Investment and Capitalisation

Capital investment and capitalisation during the FY 2016-17 approved by the Commission, vide its Order dated 11.04.2016 and actuals furnished by EPDS and now approved by the Commission are furnished in Table 5.11 below.

Table 5.11: Capital Investment and Capitalisation approved for FY 2016-17

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
1	Opening balance of CWIP	36.14	63.30	37.46
2	Capital Investment during the year	113.06	47.66	47.66
3	Total (1+2)	149.20	110.96	85.12
4	Capitalisation during the year	104.01	16.17	16.17
5	**Closing balance of CWIP (3-4)**	**45.19**	**94.79**	**68.95**

The Commission now approves the capital investment of ₹ 47.66 Crores and capitalisation of ₹ 16.17 Crores during the FY 2016-17, as per actuals furnished by EPDS.

5.13 Gross Fixed Assets

In the absence of valid information regarding gross fixed assets, the Commission in its Tariff Order dated 11.04.2016, had not approved the value of gross fixed assets. The EPDS in its Multi Year ARR and Tariff Petition for the FY 2018-19, EPDS has stated that the values of gross fixed assets are taken from the Asset Registers, as detailed in Table 5.12 below:

Table 5.12: Gross Fixed Assets during FY 2016-17

(₹ in Crores)

Sl. No.	Particulars	Amount
1	Opening balance	954.95
2	Additions during the year	16.17
3	**Closing balance (1+2)**	**971.12**

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 Multi Year ARR and Tariff Petition for the FY 2018-19, has furnished actuals at ₹ 27.15 Crores for the FY 2016-17.

Commission's Analysis:

The Commission in its Tariff Order dated 11.04.2016 had approved a depreciation of ₹ 21.36 Crores for the FY 2016-17 on the average GFA of ₹ 404.51 Crores at the rate of 5.28%. Now, the EPDS has stated that ₹ 16.17 Crores were capitalised during the FY 2016-17. The depreciation calculated by EPDS of ₹ 27.15 Crores. Now the Commission calculated Depreciation, is shown in the Table 5.13 below:

Table 5.13: Depreciation approved by the Commission for FY 2016-17

(₹ in Crores)

Sl. No.	Particulars	Amount
1	Opening balance GFA as on 01.04.2016	343.84
2	Additions during the year	16.17
3	Closing balance to end of 31.03.2017 (1+2)	360.01
4	Average GFA	351.93
5	Rate of depreciation	5.28%
6	**Depreciation**	**18.58**

The Commission accordingly now approves a depreciation of ₹ 18.58 Crores for the FY 2016-17.

5.15 Interest and Finance Charges

The EPDS in its Multi Year ARR and Tariff Petition for the FY 2018-19, has not furnished interest and finance charges during the FY 2016-17.

Commission's Analysis:

The Commission in its Tariff Order dated 11.04.2016 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 2016-17. **The Commission therefore, does not consider any interest.**

5.16 Interest on Working Capital

The EPDS in its Multi Year ARR and Tariff Petition for the FY 2018-19, has furnished Interest on Working Capital at ₹ 10.66 Crores during the FY 2016-17.

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 1st April of the relevant year.

Accordingly, the Commission has arrived at the interest on working capital as shown in the Table 5.14 below.

Table 5.14: Interest on Working Capital calculated by the Commission for FY 2016-17

(₹ in Crores)

Sl. No.	Particulars	Total Cost	Working Capital & Interest
1	O & M Expenses		
a)	Emoployee Cost	101.00	8.42
b)	Repair & Maintenance Expenses	22.29	1.86
c)	Administrative & General Expenses	1.14	0.10
2	Maintenance of Spares		
3	Receivables	259.75	43.29
4	Total		53.66
5	SBI PLR as on 01.04.2016		14.05%
6	**Interest on Working capital**		**7.54**

Table 5.15: Interest on Working Capital now approved by the Commission for FY 2016-17

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
1	Interest on Working Capital	4.82	10.66	7.54
2	**Total**	**4.82**	**10.66**	**7.54**

The Commission now approves interest on working capital at ₹ 7.54 Crores for the FY 2016-17 as against the ₹ 10.66 Crores furnished by EPDS.

5.17 Return on Equity

EPDS has not claimed any amount towards Return on Equity for the FY 2016-17.

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 ₹ 1.52 Crores during the FY 2016-17.

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 ₹ 0.94 Crores in its Tariff Order dated 11.04.2016. EPDS now submits a non-tariff Income of ₹ 1.52 Crores as the actuals.

Table 5.16: Non-Tariff Income approved by the Commission for FY 2016-17

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
1	Non Tariff Income	0.94	1.52	1.52
2	**Total**	**0.94**	**1.52**	**1.52**

The Commission therefore considers ₹ 1.52 Crores towards Non-Tariff Income for the FY 2016-17, as per the actuals furnished by EPDS.

5.19 Revenue from Existing Tariffs for the FY 2016-17

Revenue from existing tariffs approved by the Commission for the FY 2016-17 in the Tariff Order dated 11.04.2016, and actuals furnished by the EPDS and now approved by the Commission are furnished in the Table 5.17 below.

Table 5.17: Revenue from Sales approved by Commission for FY 2016-17

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
1	Domestic	22.91	24.96	24.96
2	Commercial	20.35	22.26	22.26
3	Public Lighting	0.14	0.11	0.11
4	Temporary Supply	1.05	2.20	2.20
5	HT Industrial Consumers	87.64	106.44	106.44
6	LT Industrial Consumers	0.70	0.78	0.78
7	Bulk Supply	13.88	16.69	16.69
8	Outside state	126.52	86.31	86.31
9	**Total**	**273.19**	**259.75**	**259.75**

The Commission now approves revenue from existing tariff at ₹ 259.75 Crores including revenue from outside sales at ₹ 86.31 Crores for the FY 2016-17, as per the actuals furnished by EPDS.

5.20 Aggregate Revenue Requirement (ARR) for the FY 2016-17

The ARR for the FY 2016-17 approved by the Commission in its Tariff Order for the FY 2016-17, actuals furnished by the EPDS and now approved by the Commission are furnished in the Table 5.18 below.

Table 5.18: Aggregate Revenue Requirement approved by Commission for FY 2016-17

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 11.04.2016	Actuals as per Provisional Accounts	Now approved by the Commission
1	Cost of Fuel	0.15	0.17	0.17
2	Cost of Power Purchase	180.29	213.51	213.51
3	Employee Costs	80.36	101.00	101.00
4	Repair & Maintenance Expenses	25.26	22.29	22.29
5	Administrative & General Expenses	2.53	1.14	1.14
6	Depreciation	21.36	27.15	18.58
7	Interest charges	0.00	0.00	0.00
8	Interest on Working Capital	4.82	10.66	7.54
9	Return on NFA /Equity	0.00	0.00	0.00
10	**Total Revenue Requirement**	**314.76**	**375.91**	**364.23**
11	Less: Non Tariff Income	0.94	1.52	1.52
12	**Net Revenue Requirement**	**313.82**	**374.39**	**362.71**
13	Revenue from Tariff	146.67	173.43	173.44
14	Revenue from Outside State Sale	126.52	86.31	86.31
15	**Gap (12 - 13 - 14)**	**40.63**	**114.65**	**102.96**

Provisional True up for the FY 2016-17 indicates that the revenue gap has been increased to ₹ 102.96 Crores, as against ₹ 40.63 Crores approved by the Hon’ble Commission in the Tariff Order for the FY 2016-17.

6. REVIEW FOR THE FY 2017-18

6.1 Preamble

The Commission had approved the ARR and Tariffs for the FY 2017-18 in its order dated 21.03.2017 based on the projected data furnished by the EPDS. Now the EPDS has submitted proposals for review of the FY 2017-18 duly furnishing data based on the revised estimates for the FY 2017-18.

"Regulation 14(1) & (2) of the SSERC (Terms and Conditions for Determination of Tariff) Regulation, 2012, reads as under:

(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 variation between approvals and revised estimates / pre actuals of sale of electricity, income and expenditure for the relevant year and permit necessary adjustments / charges in case such variations are for adequate and justifiable reasons. Such an exercise shall be called 'Review'.

(b) After audited accounts of a year are made available the commission shall under take similar exercise as above with reference to the final actual figures as 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'."

(c) The Commission considers it appropriate and fair to revisit and review the approvals granted by it in the Tariff Order for the FY 2017-18, with reference to the Revised Estimates now made available by the EPDS, but without altering the principles and norms adopted earlier. These matters are discussed in the succeeding paragraphs.

6.2 Energy Demand (Sales)

Vide its Tariff Order dated 21.03.2017, the Commission had approved energy sales of

291.32 MUs within the state for the FY 2017-18, as against 276.01 MUs projected by EPDS.

The EPDS in its Review Petition for the FY 2017-18 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 2017-18, estimate by EPDS and approved by the Commission are shown in Table 6.1 below:

Table 6.1: Energy Sales approved by the Commission for FY 2017-18

(In MUs)

Sl. No.	Category	As approved by the Commission in Tariff Order dated 21.03.2017	Review Estimate	Now approved by the Commission
1	Domestic	78.20	101.58	101.58
2	Commercial	40.45	40.47	40.47
3	Public Lighting	0.16	0.27	0.27
4	Temporary Supply	1.21	1.50	1.50
5	HT Industrial	143.31	171.78	171.78
6	LT Industrial	1.44	1.32	1.32
7	Bulk Supply	26.56	27.72	27.72
8	**Total**	**291.32**	**344.64**	**344.64**

The Commission now approves energy sales for the FY 2017-18 at 344.64 Mus as per RE furnished by the EPDS.

6.3 Transmission & Distribution Losses (T&D Losses)

The Commission in its order of the FY 2017-18 had fixed the target of T&D Losses at 26% for the FY 2017-18. EPDS in its Review Petition for the FY 2017-18, has stated that the estimated T&D Losses during the FY 2017-18 are at 27.43%.

Commission's Analysis:

As per weekly loss scheduling of ERLDC from 03.04.2017 to 11.03.2018, the average pool loss during the above period was 2.14%. As such, the pool loss for the FY 2017-18 is considered at 2.14% and T&D Loss is shown as detailed in Table 6.2 below:

Table 6.2: 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 21.03.2017	Review Estimate	Now approved by the Commission
1	Own generation	MUs	12.00	12.00	12.00
2	Energy purchased from NTPC	MUs	346.74	382.74	382.74
3	Energy purchased from WBSEDCL	MUs	53.83	52.65	52.65
4	Energy purchased from NHPC	MUs	37.98	36.21	36.21
5	Energy purchased (2+3+4)	MUs	438.55	471.60	471.60
6	Pool loss	%	2.26	1.70	2.14
7	Pool loss	MUs	9.91	8.03	10.09
8	Net energy available (5-7)	MUs	428.64	463.57	461.51
9	Energy purchased from PTC	MUs	39.60	45.62	45.62
10	Energy purchased from SPDC	MUs	29.38	27.09	27.09
11	UI purchased	MUs	0.00	40.02	40.02
12	Free energy	MUs	350.37	360.56	360.56
13	Total energy available at state periphery (1+8+9+10+11+12)	MUs	859.99	948.86	946.80
14	Outside state sale through UI / Trading	MUs	466.32	473.98	473.98
15	Net energy available for sale within the state (13-14)	MUs	393.67	474.88	472.82
16	Energy sales within the state	MUs	291.32	344.64	344.64
17	T & D loss (15-16)	MUs	102.35	130.24	128.18
18	**T & D loss**	**%**	**26.00**	**27.43**	**27.11**

The Commission now approves T&D Loss for the FY 2017-18 at 27.11%.

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 2017-18 had approved own generation at 12.00 MUs. The EPDS has proposed the same for the FY 2016-17 and approved by the Commission are shown in Table 6.3 below.

Table 6.3: Own Generation approved by the Commission for FY 2017-18

(In MUs)

Sl. No.	Stations	As approved by the Commission in Tariff Order dated 21.03.2017	Review Estimate	Now approved by the Commission
1	Total Generation	12.00	12.00	12.00
2	**Total**	**12.00**	**12.00**	**12.00**

The Commission now approves Own Generation during the FY 2017-18 at 12 MUs, as per RE furnished by the EPDS.

6.5 Power Purchase

The Commission in its Tariff Order dated 21.03.2017 had approved power purchase quantity at 857.91 Mus including free power quantity at 350.37 MUs. The EPDS has furnished RE for the FY 2017-18 at 944.91 MUs including free power of 360.56 MUs in Review Petition for the FY 2017-18 as detailed in Table 6.4 below:

Table 6.4: Power Purchase approved by the Commission for FY 2017-18

(In MUs)

Sl. No.	Stations	As approved by the Commission in Tariff Order dated 21.03.2017	Review Estimate	Now approved by the Commission
1	NTPC			
	a) FSTPP	85.78	113.07	113.07
	b) KHSTPP-I	52.86	63.97	63.97
	c) KHSTPP-II	23.83	21.63	21.63
	d) BSTPP	14.53	30.18	30.18
	e) TSTPP	169.74	153.89	153.89
2	NHPC			
	a) RANGIT-III	5.05	4.34	4.34
	b) TEESTA-V	32.93	31.87	31.87
3	Other Sources			
	a) PTC	39.60	45.62	45.62
	b) WBSEDCL	53.83	52.65	52.65
	c) SPDC	29.38	27.09	27.09
4	UI/Deviation	0.00	40.02	40.02
5	Free Power	350.37	360.56	360.56
6	**Total**	**857.90**	**944.91**	**944.91**

The Commission now approves power purchase of 944.91 MUs including free power of 360.56 MUs during the FY 2017-18.

6.6 Energy Balance

The details of energy requirement and availability projected by the EPDS and approved by the Commission for the FY 2017-18 and now approved by the Commission are furnished in Table 6.5 below.

Table 6.5: Energy Balance approved by the Commission for FY 2017-18

Sl. No.	Particulars	Unit	As approved by the Commission in Tariff Order dated 21.03.2017	Review Estimate	Now approved by the Commission
A	**ENERGY REQUIREMENT**				
1	Energy sales within the state	MUs	291.32	344.64	344.64
2	Outside state sale through UI / Trading	MUs	466.32	473.98	473.98
3	Total energy sales (1+2)	MUs	757.64	818.62	818.62
4	Overall T & D losses	%	26.00	27.43	27.11
5	Overall T & D losses	MUs	102.35	130.24	128.18
6	Total energy requirement (3+5)	MUs	859.99	948.86	946.80
B	**ENERGY AVAILABILITY**				
1	Own generation	MUs	12.00	12.00	12.00
2	Power purchased from CGS/UI etc.	MUs	507.53	584.35	584.35
3	Free Power	MUs	350.37	360.56	360.56
4	Overall pool loss	%	2.26	1.70	2.14
5	Overall pool loss	MUs	9.91	8.03	10.09
6	Total energy availability (1+2+3-5)	MUs	859.99	948.88	946.82
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 2017-18, RE furnished by EPDS and now approved by the Commission are furnished in Table 6.6 below.

Table 6.6: Fuel Cost approved by the Commission for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 21.03.2017	Review Estimate	Now approved by the Commission
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 2017-18 same as approved for the FY 2017-18 in the Tariff order dated 21.03.2017, against the same projected in RE by EPDS.

6.8 Power Purchase Cost

The Power Purchase Cost approved by the Commission for the FY 2017-18, RE furnished by the EPDS and now approved by the Commission are furnished in Table 6.7 below.

Table 6.7: 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 21.03.2017	Review Estimate	Now approved by the Commission
1	Power Purchase Cost	202.90	226.25	226.25
2	**Total**	**202.90**	**226.25**	**226.25**

The Commission now approves the power purchase cost of ₹ 226.25 Crores for the FY 2017-18, as per RE furnished by EPDS.

6.9 Employee Cost

The Commission in its Order dated 21.03.2017 had approved employee cost at ₹ 99.64 Crores for the FY 2017-18. The EPDS has furnished RE at ₹ 106.19 Crores for the FY 2017-18. The details shown in the Table 6.8 below:

Table 6.8: Employee Cost approved by the Commission for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 21.03.2017	Review Estimate	Now approved by the Commission
1	Employee Cost	99.64	106.19	106.19
2	**Total**	**99.64**	**106.19**	**106.19**

The Commission now approves the employee cost of ₹ 106.19 Crores for the FY 2017-18, as per RE furnished by EPDS.

6.10 Repair and Maintenance Expenses

The Commission in its Order dated 21.03.2017 had approved Repair & Maintenance Expenses at ₹ 25.41 Crores for the FY 2017-18. The EPDS has estimated at ₹ 21.80 Crores for the FY 2017-18 and now approved by the Commission are furnished in Table 6.9 below.

Table 6.9: 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 21.03.2017	Review Estimate	Now approved by the Commission
1	Repair & Maintenance Expenses	25.41	21.80	21.80
2	**Total**	**25.41**	**21.80**	**21.80**

The Commission now approves ₹ 21.80 Crores towards Repair & Maintenance Expenses for the FY 2017-18, as per RE furnished by EPDS.

6.11 Administrative and General Expenses

The Commission in its Order dated 21.03.2017, had approved ₹ 3.08 Crores towards Administrative and General Expenses for the FY 2017-18. The EPDS has furnished RE at ₹ 1.14 Crores for the FY 2017-18 and now approved by the Commission are furnished in Table 6.10 below.

Table 6.10: 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 21.03.2017	Review Estimate	Now approved by the Commission
1	Administrative & General Expenses	3.08	1.14	1.14
2	**Total**	**3.08**	**1.14**	**1.14**

The Commission now approves ₹ 1.14 Crores towards Administrative & General Expenses for the FY 2017-18 as per RE furnished by EPDS.

6.12 Capital Investment and Capitalisation

Capital investment and capitalisation during the FY 2017-18 approved by the Commission in its Order dated 31.03.2017 and RE furnished by EPDS and now approved by the Commission are furnished in Table 6.11 below.

Table 6.11: Capital Investment and Capitalization approved for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 21.03.2017	Review Estimate	Now approved by the Commission
1	Opening balance of CWIP	63.91	94.79	68.95
2	Capital Investment during the year	192.12	104.23	104.23
3	Total (1+2)	256.03	199.02	173.18
4	Capitalisation during the year	170.37	104.23	104.23
5	**Closing balance of CWIP (3-4)**	**85.66**	**94.79**	**68.95**

The Commission now approves the capital investment of ₹ 104.23 Crores and capitalisation of ₹ 104.23 Crores during the FY 2017-18 as per the RE furnished by EPDS.

6.13 Gross Fixed Assets

In the absence of valid information regarding gross fixed assets, the Commission in its Tariff Order dated 21.03.2017, had not approved the value of gross fixed assets. The EPDS in its review petition for the FY 2017-18 has stated that the values of gross fixed assets have been taken from the asset registers, as detailed in Table 6.12 below.

Table 6.12: Gross Fixed Assets furnished by EPDS for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	Amount
1	Opening balance	971.12
2	Additions during the year	104.23
3	**Closing balance (1+2)**	**1075.35**

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.**

6.14 Depreciation

The EPDS in its review petition has furnished depreciation of ₹ 33.21 Crores for the FY 2017-18.

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 21.03.2017 had approved depreciation of ₹ 28.60 Crores for the FY 2017-18 on the average GFA of ₹ 541.70 Crores at the rate of 5.28%. As such the depreciation has been worked out accordingly as detailed in Table 6.13 below.

Table 6.13: Depreciation approved by the Commission for 2017-18

(₹ in Crores)

Sl. No.	Particulars	Amount
1	Opening balance GFA as on 01.04.2017	360.01
2	Additions during the year	104.23
3	Closing balance to end of 31.03.2018 (1+2)	464.24
4	Average GFA	412.13
5	Rate of depreciation	5.28%
6	**Depreciation**	**21.76**

The Commission accordingly approves depreciation at ₹ 21.76 Crores for the FY 2017-18.

6.15 Interest and Finance Charges

The EPDS has not projected interest and finance charges during the FY 2017-18.

Commission's Analysis:

The Commission in its Tariff Order dated 21.03.2017 had not approved any interest and finance charges for the FY 2017-18. EPDS has not shown any loans and interest. **As such the Commission has not considered interest and finance charges during the FY 2017-18.**

6.16 Interest on Working Capital

The EPDS has furnished interest on working capital at ₹ 10.87 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 of spares at the rate of 1% of the historical cost and escalated at the rate of 6% P.A from the date of commercial operations.

(c) Receivables equivalent to 2 months on fixed and variable charges of sale of energy.

Rate of interest on working capital shall be equal to the short term prime lending rate of SBI as on 1st April of the relevant year.

Accordingly, the interest on working capital works out to ₹ 7.74 Crores, as detailed in Table 6.14 below:

Table 6.14: 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	106.19	8.85
b)	Repair & Maintenance Expenses	21.80	1.82
c)	Administrative & General Expenses	1.14	0.10
2	Maintenance of Spares		
3	Receivables	266.03	44.34
4	Total		55.10
5	SBI PLR as on 01.04.2016		14.05%
6	**Interest on Working capital**		**7.74**

Table 6.15: Interest on Working Capital approved by the Commission for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 21.03.2017	Review Estimate	Now approved by the Commission
1	Interest on Working Capital	4.62	10.87	7.74
2	**Total**	**4.62**	**10.87**	**7.74**

The Commission now approves interest on working capital at ₹ 7.74 Crores for the FY 2017-18 against the RE furnished by EPDS at ₹ 10.87 Crores.

6.17 Return on Equity

The EPDS has not projected 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 for return on equity.**

6.18 Non-Tariff Income

The EPDS has furnished non-tariff income at ₹ 1.55 Crores during the FY 2017-18, the same as approved in the Tariff Order dated 21.03.2017.

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
- 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 6.16: 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 21.03.2017	Review Estimate	Now approved by the Commission
1	Non Tariff Income	1.55	1.55	1.55
2	**Total**	**1.55**	**1.55**	**1.55**

The Commission now approves Non-Tariff Income as same as approved in the Tariff Order dated 21.03.2017 at ₹ 1.55 Crores for the FY 2017-18, as per the RE furnished by EPDS.

6.19 Revenue from existing tariff for the FY 2017-18

Revenue from the existing tariff approved by the Commission for the FY 2017-18 in its Tariff Order dated 21.03.2017 and revised estimates furnished by the EPDS and now approved by the Commission are shown in Table 6.17 below.

Table 6.17: Revenue from the existing Tariff approved by the Commission for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 21.03.2017	Review Estimate	Now approved by the Commission
1	Domestic	22.16	26.21	26.21
2	Commercial	22.05	22.71	22.71
3	Public Lighting	0.07	0.11	0.11
4	Temporary Supply	1.05	2.00	2.00
5	HT Industrial Consumers	96.70	110.83	110.83
6	LT Industrial Consumers	1.06	0.78	0.78
7	Bulk Supply	17.19	16.93	16.93
8	Outside state	108.15	86.46	86.46
9	**Total**	**268.43**	**266.03**	**266.03**

The Commission approves the Revenue from existing Tariff at ₹ 266.03 Crores including Revenue from outside sales at ₹ 86.46 Crores for the FY 2017-18, as per the RE furnished by EPDS.

6.20 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 21.03.2017, Revised Estimate furnished by the EPDS and now approved by the Commission are furnished in Table 6.18 below.

Table 6.18: Aggregate Revenue Requirement and Gap approved for FY 2017-18

(₹ in Crores)

Sl. No.	Particulars	As approved by the Commission in Tariff Order dated 21.03.2017	Review Estimate	Now approved by the Commission
1	Cost of Fuel	0.18	0.18	0.18
2	Cost of Power Purchase	202.90	226.25	226.25
3	Employee Costs	99.64	106.19	106.19
4	Repair & Maintenance Expenses	25.41	21.80	21.80
5	Administrative & General Expenses	3.08	1.14	1.14
6	Depreciation	28.60	33.21	21.76
7	Interest charges	0.00	0.00	0.00
8	Interest on Working Capital	4.62	10.87	7.74
9	Return on NFA /Equity	0.00	0.00	0.00
10	**Total Revenue Requirement**	**364.43**	**399.64**	**385.06**
11	Less: Non Tariff Income	1.55	1.55	1.55
12	**Net Revenue Requirement**	**362.88**	**398.08**	**383.51**
13	Revenue from Tariff	160.28	179.57	179.57
14	Revenue from Outside State Sale	108.15	86.46	86.46
15	**Gap (12 - 13 - 14)**	**94.45**	**132.05**	**117.48**

Review for the FY 2017-18 indicates that the revenue gap has increased to ₹ 117.48 Crores as against at ₹ 94.45 Crores approved in the Tariff Order for the FY 2017-18.

7. MULTI YEAR AGGREGATE REVENUE REQUIREMENT FOR THE FY 2018-19 TO FY 2020-21, COMMISSION'S ANALYSIS AND DECISIONS

7.1 Consumer Categories

The EPDS was serving 1,08,114 consumers as on 31.03.2017 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

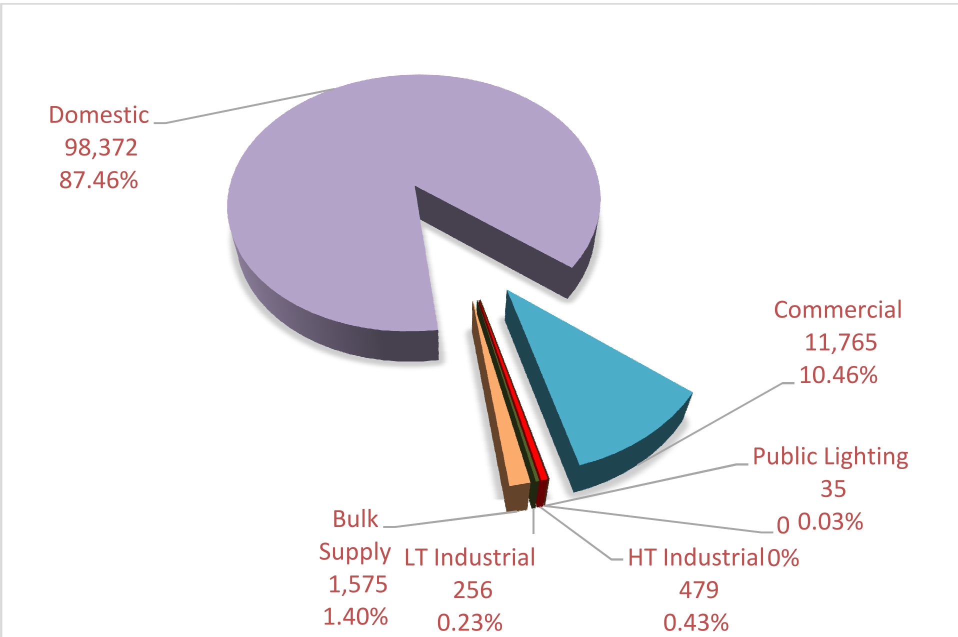
Details of the category-wise growth of consumers over the actuals during the FY 2016-17, the estimated figures for the FY 2017-18 and the projections for the FY 2018-19 to FY 2020-21 are furnished in Table 7.1 below:

Table 7.1: Projected of no. of consumers

(In No.)

Sl. No.	Category	2016-17 (Actual)	2017-18 (Estimated)	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Domestic	94,552	96,443	98,372	1,00,339	1,02,346
2	Commercial	11,308	11,534	11,765	12,000	12,240
3	Public Lighting	34	34	35	34	35
4	Temporary Supply	0	0	0	0	0
5	HT Industrial	460	469	479	488	498
6	LT Industrial	246	251	256	262	268
7	Bulk Supply	1,514	1,544	1,575	1,606	1,638
8	**Total**	**1,08,114**	**1,10,276**	**1,12,482**	**1,14,729**	**1,17,025**

Chart 7.1: No. of consumers projected by EPDS for FY 2018-19



7.2 Category-wise Energy Sales

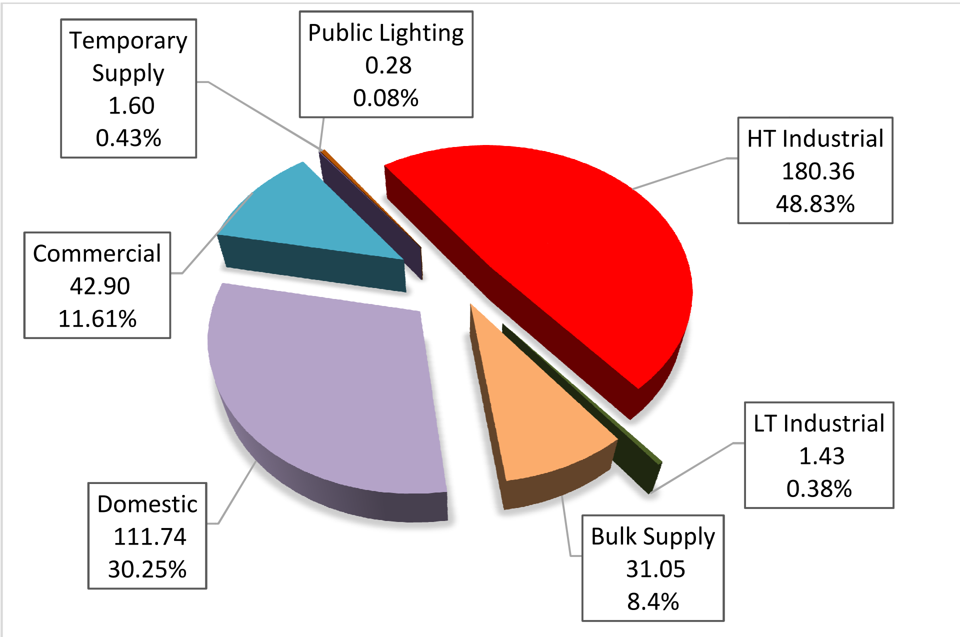
EPDS has provided actual sales for the FY 2016-17, estimated for the FY 2017-18 and the projected energy sales to various categories of consumer for the FY 2018-19 to FY 2020-21 as given below:

Table 7.2: Energy Sales projected by EPDS

(In MUs)

Sl. No.	Category	2016-17 (Actual)	2017-18 (Estimated)	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Domestic	96.74	101.58	111.74	120.67	127.91
2	Commercial	39.68	40.47	42.90	45.47	47.75
3	Public Lighting	0.26	0.27	0.28	0.29	0.31
4	Temporary Supply	2.92	1.50	1.60	1.70	1.80
5	HT Industrial	156.16	171.78	180.36	189.38	198.85
6	LT Industrial	1.31	1.32	1.43	1.54	1.64
7	Bulk Supply	26.40	27.72	31.05	34.15	36.88
8	**Total**	**323.47**	**344.63**	**369.36**	**393.22**	**415.14**

Chart 7.2: Energy Sales projected by EPDS for FY 2018-19



The EPDS has projected the category-wise energy sales for the FY 2018-19 to FY 2020-21 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 2012-13 to FY 2016-17 is worked out and shown in Table 7.3 below:

Table 7.3: CAGR of energy sales

Sl. No.	Category	2012-13 (Actual)	2013-14 (Actual)	2014-15 (Actual)	2015-16 (Actual)	2016-17 (Actual)	CAGR for 4 years from FY 2012-13 to FY 2016-17	CAGR for 3 years from FY 2013-14 to FY 2016-17	CAGR for 2 years from FY 2014-15 to FY 2016-17	CAGR for YOY from FY 2015-16 to FY 2016-17
		(In MUs)					(In %)			
1	Domestic	78.98	83.98	78.93	74.96	96.74	5.20	4.83	10.71	29.06
2	Commercial	38.26	35.43	35.33	37.43	39.68	0.92	3.85	5.98	6.01
3	Public Lighting	0.43	0.35	0.29	0.15	0.26	-11.82	-9.43	-5.31	73.33
4	Temporary Supply	0.09	1.61	1.36	1.16	2.92	138.66	21.95	46.53	151.72
5	HT Industrial	91.76	97.11	110.49	126.30	156.16	14.22	17.16	18.88	23.64
6	LT Industrial	1.15	1.15	1.37	1.34	1.31	3.31	4.44	-2.31	-2.24
7	Bulk Supply	16.23	17.74	20.98	23.37	26.40	12.93	14.17	12.18	12.97
8	**Total**	**226.90**	**237.37**	**248.75**	**264.71**	**323.47**				

Table 7.4: Specific monthly consumption/consumer

(In Kwh)

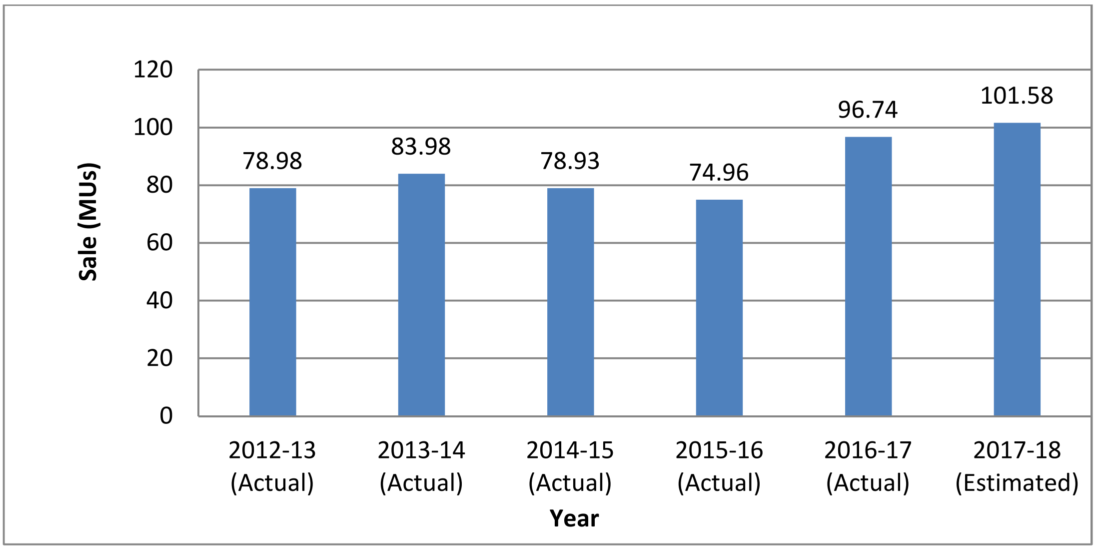
Sl. No.	Category	2014-15 (Actual)	2015-16 (Actual)	2016-17 (Actual)
1	Domestic	83	69	85
2	Commercial	287	286	292
3	HT Industrial	22,605	24,591	28,290
4	LT Industrial	213	235	444
5	Bulk Supply	1,415	1,406	1,453

The consumption of each category of consumers is discussed below, so as to arrive at a reasonable projection of energy sales for the FY 2018-19 to FY 2020-21.

Domestic

The EPDS has projected energy sales to this category at 111.74 MUs, 120.67 MUs and 127.91 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. The trend of the actual consumption in the category for the FY 2012-13 to FY 2016-17 & RE for the FY 2017-18 is shown in the chart below:

Chart 7.3: Trend of actual consumption – Domestic Category



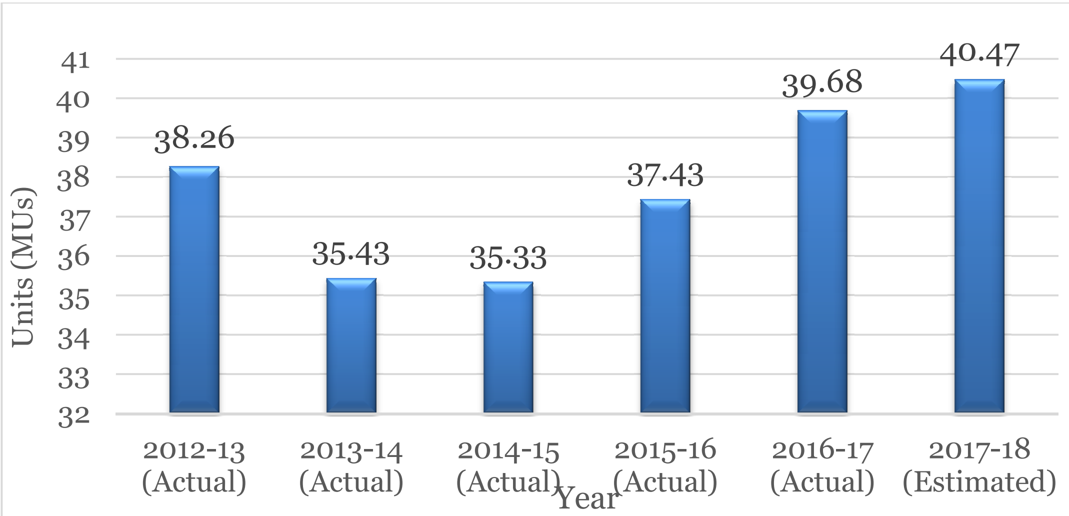
On analysis of the above trend and CAGR over different periods it is seen that the 4 years CAGR (FY 2012-13 to FY 2016-17) is 5.20%, the 3 years CAGR (FY 2013-14 to FY 2016-17) is 4.83%, 2 years CAGR (FY 2014-15 to FY 2016-17) is 10.71% and the YoY growth (FY 2015-16 to FY 2016-17) is 29.06%. The actual specific consumption during the FY 2016-17 is 85 Kwh. On analysis of the above trend, CAGR over different periods and actual consumption of 96.74 MUs in the FY 2016-17, the projected consumption of 111.74 MUs, 120.67 MUs & 127.91 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively are considered reasonable.

The Commission approves energy sales at 111.74 MUs, 120.67 MUs & 127.91 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively as projected by EPDS.

Commercial

The EPDS has projected energy sales to this category at 42.90 MUs, 45.47 MUs and 47.75 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. The trend of the actual consumption in the category for the FY 2012-13 to FY 2016-17 & RE for the FY 2017-18 is shown in the chart below:

Chart 7.4: Trend of actual consumption – Commercial Category



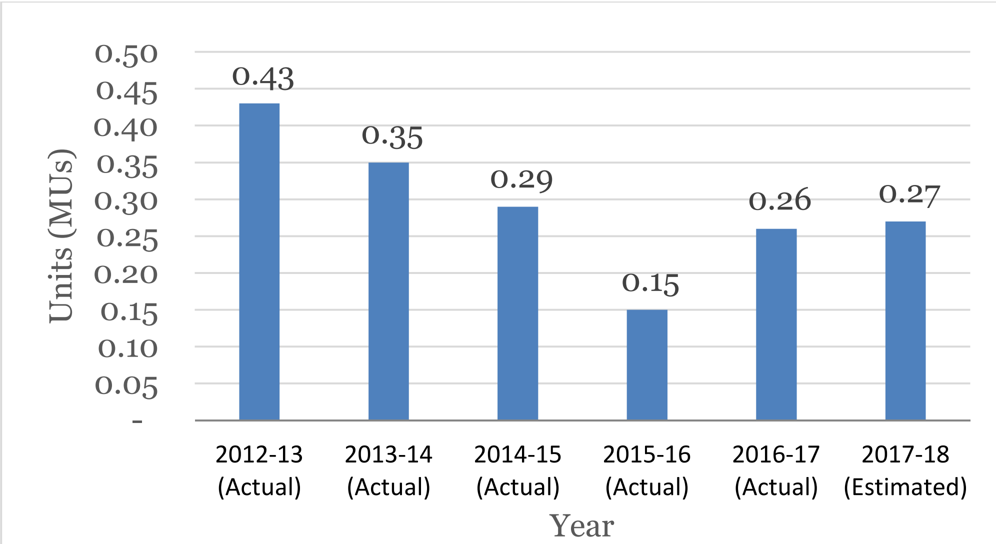
On analysis of the above trend and CAGR over different periods it is seen that the 4 years CAGR (FY 2012-13 to FY 2016-17) is 0.92%, the 3 years CAGR (FY 2013-14 to FY 2016-17) is 3.85%, 2 years CAGR (FY 2014-15 to FY 2016-17) is 5.98% and the YoY growth (FY 2015-16 to FY 2016-17) is 6.01%. The actual specific consumption during the FY 2016-17 is 292 Kwh. On analysis of the above trend, CAGR over different periods and actual consumption of 39.68 MUs in the FY 2016-17, the projected consumption of 42.90 MUs, 45.47 MUs & 47.75 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively are considered reasonable.

The Commission approves energy sales at 42.90 MUs, 45.47 MUs & 47.75 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively as projected by EPDS.

Public Lighting

The EPDS has projected energy sales to this category at 0.28 MUs, 0.29 MUs and 0.31 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. This is an unmetered category and negative growth is observed during the FY 2013-14, FY 2014-15 & FY 2015-16 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 2012-13 to FY 2016-17 & RE for the FY 2017-18 is shown in the chart below:

Chart 7.5: Trend of actual consumption – Public Lighting Category



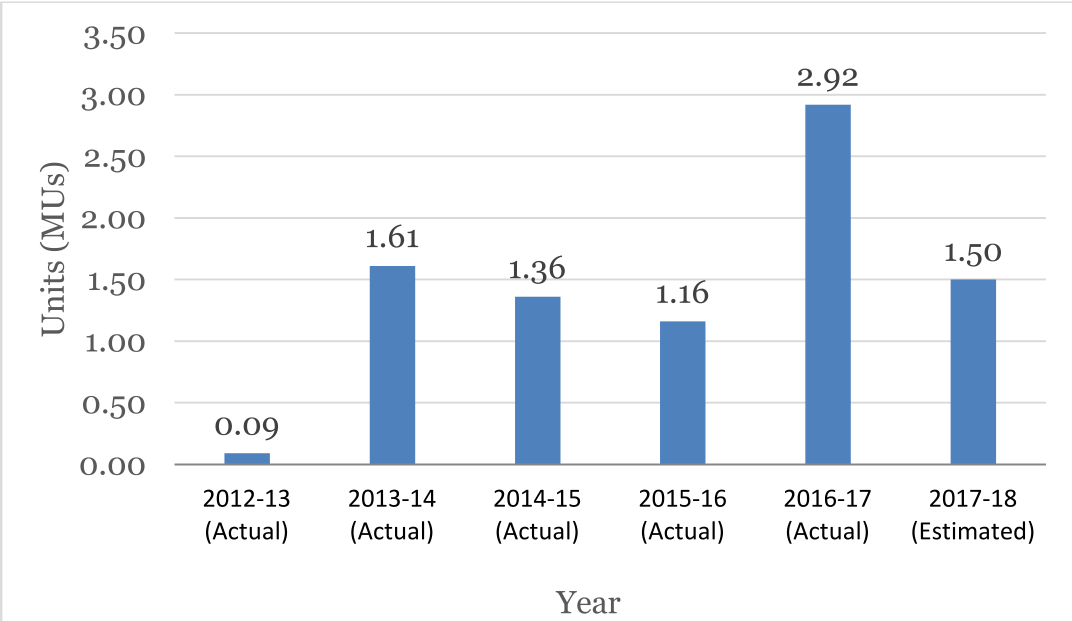
On analysis of the above trend and CAGR over different periods it is seen that the 4 years CAGR (FY 2012-13 to FY 2016-17) is (-) 11.82%, the 3 years CAGR (FY 2013-14 to FY 2016-17) is (-) 9.43%, 2 years CAGR (FY 2014-15 to FY 2016-17) is (-) 5.31% and the YoY growth (FY 2015-16 to FY 2016-17) is 73.33%. On analysis of the above trend, CAGR over different periods and actual consumption of 0.26 MUs in the FY 2016-17, the projected consumption of 0.28 MUs, 0.29 MUs & 0.31 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively are considered reasonable.

The Commission approves energy sales at 0.28 MUs, 0.29 MUs & 0.31 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively as projected by EPDS.

Temporary Supply

The EPDS has projected energy sales to this category at 1.60 MUs, 1.70 MUs and 1.80 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. The trend of the actual consumption in the category for the FY 2012-13 to FY 2016-17 & RE for the FY 2017-18 is shown in the chart below:

Chart 7.6: Trend of actual consumption – Temporary Supply Category



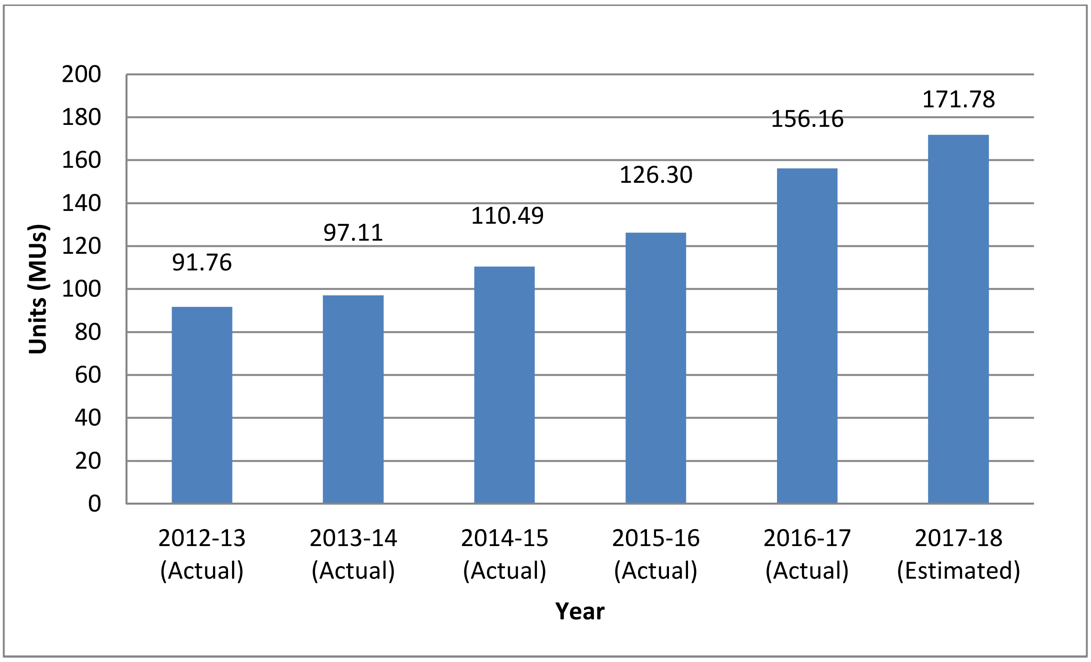
On analysis of the above trend and CAGR over different periods it is seen that the 4 years CAGR (FY 2012-13 to FY 2016-17) is 138.66%, the 3 years CAGR (FY 2013-14 to FY 2016-17) is 21.95%, 2 years CAGR (FY 2014-15 to FY 2016-17) is 46.53% and the YoY growth (FY 2015-16 to FY 2016-17) is 151.72%. On analysis of the above trend, CAGR over different periods and actual consumption of 2.92 MUs in the FY 2016-17, the projected consumption of 1.60 MUs, 1.70 MUs & 1.80 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively are considered reasonable.

The Commission approves energy sales at 1.60 MUs, 1.70 MUs & 1.80 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively as projected by EPDS.

HT Industrial

The EPDS has projected energy sales to this category at 180.36 MUs, 189.38 MUs and 198.85 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. The trend of the actual consumption in the category for the FY 2012-13 to FY 2016-17 & RE for the FY 2017-18 is shown in the chart below:

Chart 7.7: Trend of actual consumption – HT Industrial Category



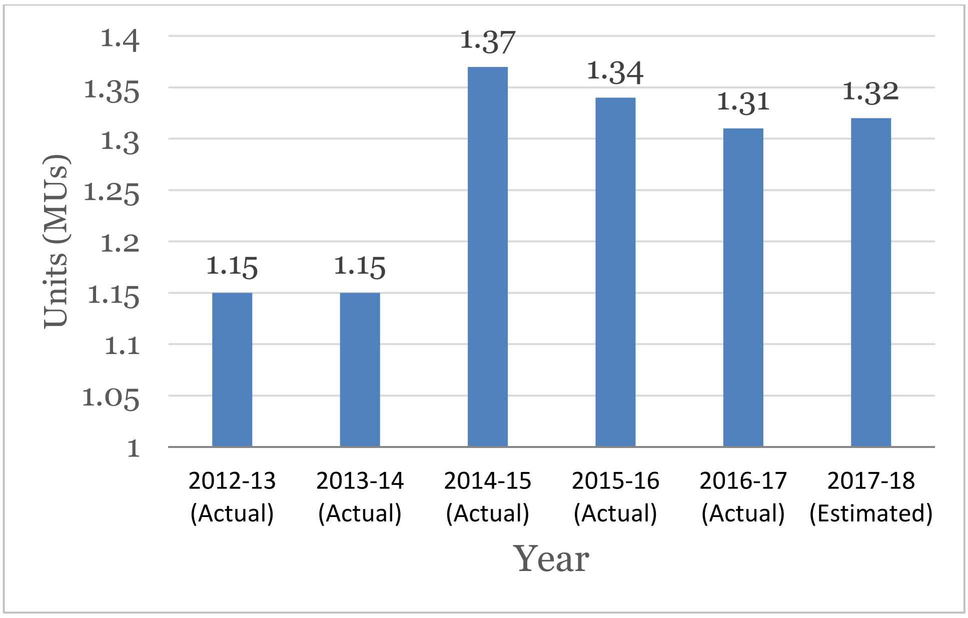
On analysis of the above trend and CAGR over different periods it is seen that the 4 years CAGR (FY 2012-13 to FY 2016-17) is 14.22%, the 3 years CAGR (FY 2013-14 to FY 2016-17) is 17.16%, 2 years CAGR (FY 2014-15 to FY 2016-17) is 18.88% and the YoY growth (FY 2015-16 to FY 2016-17) is 23.64%. The actual specific consumption during the FY 2016-17 is 28290 Kwh. On analysis of the above trend, the CAGR for 4 years of 14.22% is considered reasonable and consumption works out to 196.20 MUs, 224.09 MUs & 255.95 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

The Commission approves energy sales at 196.20 MUs, 224.09 MUs & 255.95 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

LT Industrial

The EPDS has projected energy sales to this category at 1.43 MUs, 1.54 MUs and 1.64 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. Negative growth is observed during the FY 2015-16 & FY 2016-17 over the previous year's sales. The EPDS has not furnished reasons for such cases. The trend of the actual consumption in the category for the FY 2012-13 to FY 2016-17 & RE for the FY 2017-18 is shown in the chart below:

Chart 7.8: Trend of actual consumption – LT Industrial Category



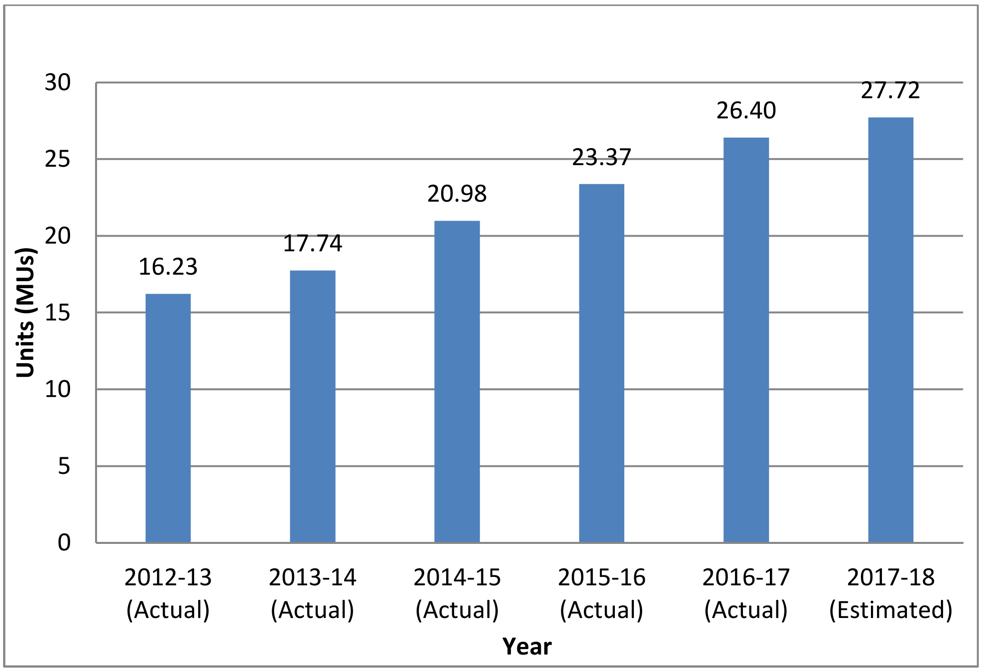
On analysis of the above trend and CAGR over different periods it is seen that the 4 years CAGR (FY 2012-13 to FY 2016-17) is 3.31%, the 3 years CAGR (FY 2013-14 to FY 2016-17) is 4.44%, 2 years CAGR (FY 2014-15 to FY 2016-17) is (-) 2.31% and the YoY growth (FY 2015-16 to FY 2016-17) is (-) 2.24%. The actual specific consumption during the FY 2016-17 is 444 Kwh. On analysis of the above trend, CAGR over different periods and actual consumption of 1.31 MUs in the FY 2016-17, the projected consumption of 1.43 MUs, 1.54 MUs & 1.64 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively are considered reasonable.

The Commission approves energy sales at 1.43 MUs, 1.54 MUs & 1.64 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively as projected by EPDS.

Bulk Supply

The EPDS has projected energy sales to this category at 31.05 MUs, 34.15 MUs and 36.88 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. The trend of the actual consumption in the category for the FY 2012-13 to FY 2016-17 & RE for the FY 2017-18 is shown in the chart below:

Chart 7.9: Trend of actual consumption – Bulk Supply Category



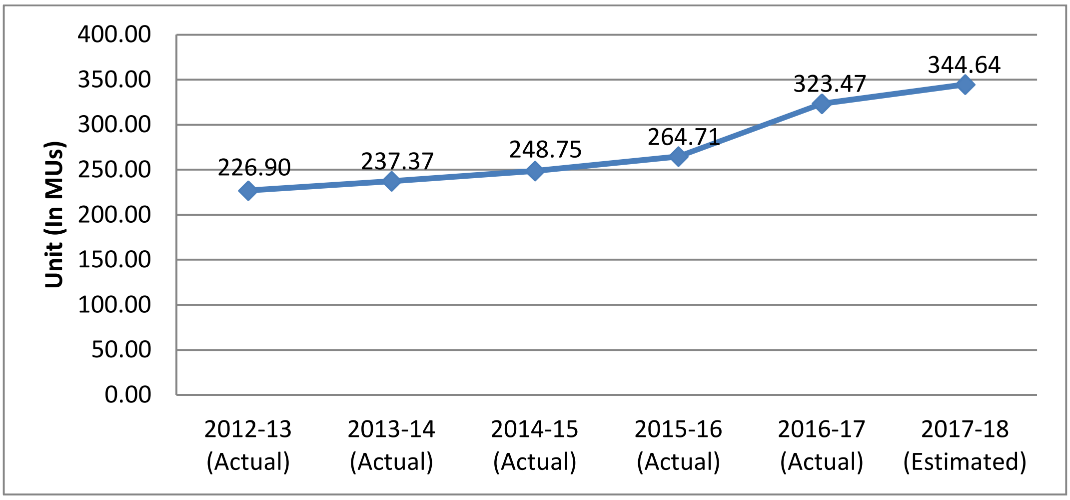
On analysis of the above trend and CAGR over different periods it is seen that the 4 years CAGR (FY 2012-13 to FY 2016-17) is 12.93%, the 3 years CAGR (FY 2013-14 to FY 2016-17) is 14.17%, 2 years CAGR (FY 2014-15 to FY 2016-17) is 12.18% and the YoY growth (FY 2015-16 to FY 2016-17) is 12.97%. The actual specific consumption during the FY 2016-17 is 1453 Kwh. On analysis of the above trend, CAGR over different periods and actual consumption of 26.40 MUs in the FY 2016-17, the projected consumption of 31.05 MUs, 34.15 MUs and 36.88 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively are considered reasonable.

The Commission approves energy sales at 31.05 MUs, 34.15 MUs and 36.88 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively as projected by EPDS.

Total sales

The trend of the actual consumption within the state of Sikkim for the FY 2012-13 to FY 2016-17 & RE for the FY 2017-18 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 2018-19, FY 2019-20 and FY 2020-21 are given in Table below:

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

(In MUs)

Sl. No.	Category	FY 2018-19	FY 2019-20	FY 2020-21
1	Domestic	111.74	120.67	127.91
2	Commercial	42.90	45.47	47.75
3	Public Lighting	0.28	0.29	0.31
4	Temporary Supply	1.60	1.70	1.80
5	HT Industrial	196.20	224.09	255.95
6	LT Industrial	1.43	1.54	1.64
7	Bulk Supply	31.05	34.15	36.88
8	**Total**	**385.20**	**427.91**	**472.24**

The Commission approves total energy sales within the state at 385.20 MUs, 427.91 MUs and 472.24 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

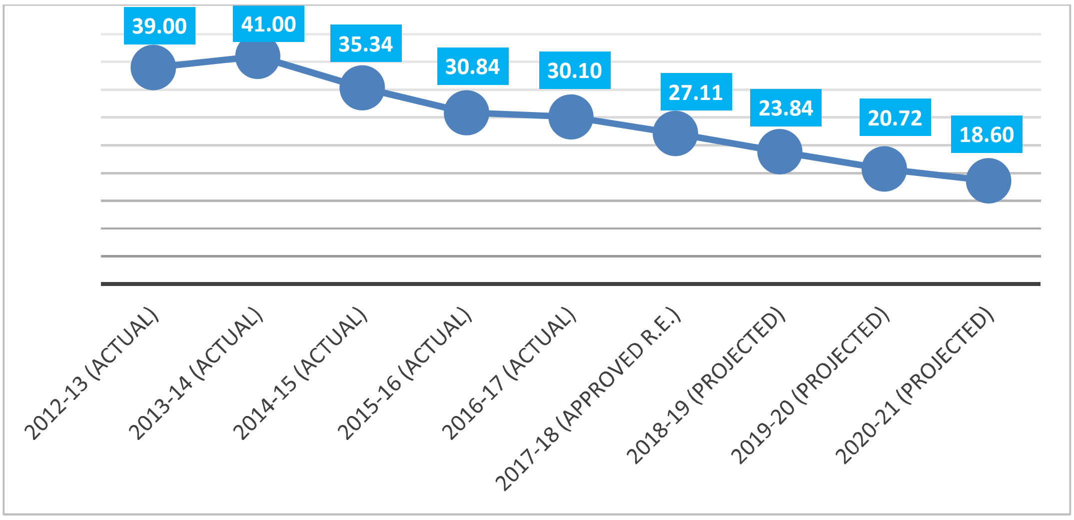
7.4 Transmission and Distribution Losses (T&D Losses)

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% to 18% for the control period.

Commission's Analysis:

The chart below depicts the trend of actual T&D losses for the FY 2012-13 to FY 2016-17, R.E. of T&D loss for the FY 2017-18 & projected T&D losses for the FY 2018-19 to FY 2020-21.

Chart 7.11: Trend of T & D Losses



During the FY 2016-17, the actual T&D Losses works out to 30.10%, while in the FY 2017-18 the T&D Losses are approved at 27.11%, as discussed in the review of the respective years. But in the Tariff Order for the FY 2017-18, the trajectories for loss reduction were fixed and as per the trajectory the Commission has fixed the T&D losses at 24%, 22% & 20% for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. However, EPDS has projected T&D losses at 23.84% for the FY 2018-19, 20.72% for the FY 2019-20 & 18.60% for the FY 2020-21. So, trajectory loss % target is considered as reasonable. EPDS should take steps to keep the T&D losses as projected for the FY 2018-19, FY 2019-20 & FY 2020-21.

The Commission accordingly approves T&D Losses at 24%, 22% & 20% for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. 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	Unit	FY 2018-19	FY 2019-20	FY 2020-21
1	Energy sales approved	MUs	385.20	427.91	472.24
2	T & D Losses approved	%	24.00	22.00	20.00
3	T & D Losses approved	MUs	121.64	120.69	118.06
4	Energy requirement	MUs	506.84	548.60	590.30

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 7.7 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	**40.692**	

The EPDS has projected a generation of 40.00 MUs, 42 MUs & 45 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively from its own generating stations. As per EPDS data the net total own generation for the period of 01.04.2017 to 30.09.2017 is 6.71 MUs. The EPDS has stated that some projects will start functioning from the FY 2018-19 onwards.

The Commission accordingly approves net own generation at 40 MUs, 42 MUs & 45 MUs from its own generating stations for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

7.5.2 Power purchase from Central Generating Stations

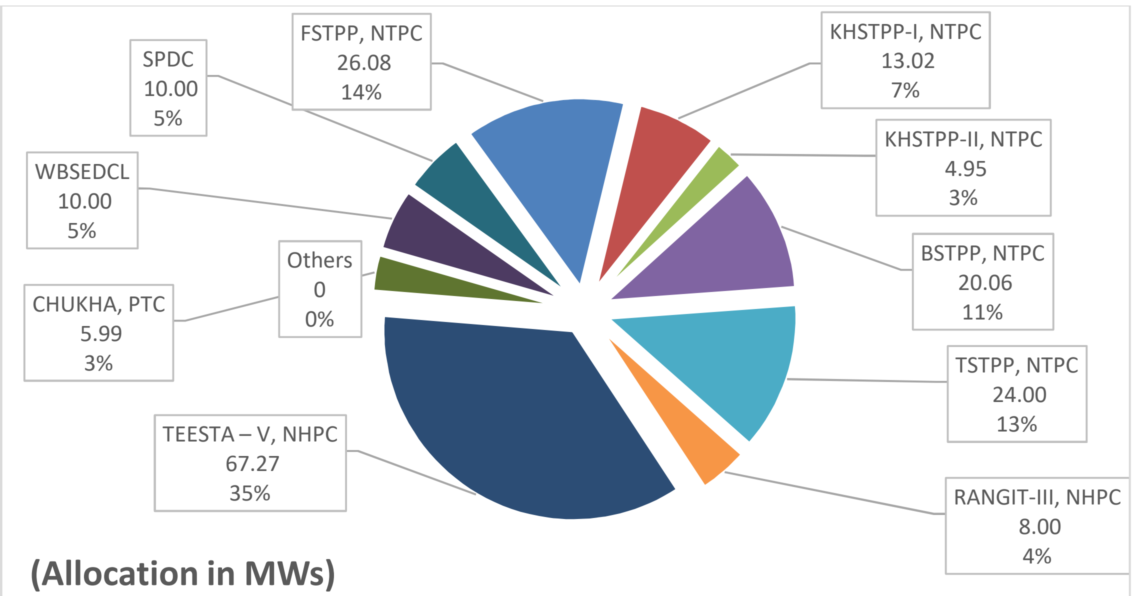
The balance energy requirement of EPDS is mainly met from allocation of power from Central Stations of NTPC, NHPC and other sources such as PTC, Chukka, SPDC and WBSEDCL, as detailed in Table below:

Table 7.8: Power Allocation

Sl. No.	Source	Capacity (In MWs)	Allocation	
			(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**	**7,160.00**		**189.38**

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

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 control period 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 2018-19, FY 2019-20 & FY 2020-21 are furnished in Table below:

Table 7.9: Summary of Power Purchase furnished by EPDS

(In MUs)

Sl. No.	Source	2016-17 (Actuals)	2017-18 (Estimated)	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
	Central Sector					
1	FSTPP, NTPC	113.07	113.07	113.07	113.07	113.07
2	BSTPP, NTPC	30.18	30.18	30.18	30.18	30.18
3	KHSTPP-I, NTPC	63.97	63.97	63.97	63.97	63.97
4	KHSTPP-II, NTPC	21.63	21.63	21.63	21.63	21.63
5	TSTPP, NTPC	153.89	153.89	153.89	153.89	153.89
6	RANGIT-III, NHPC	4.34	4.34	4.34	4.34	4.34
7	TEESTA-V, NHPC	31.87	31.87	31.87	31.87	31.87
	Others					
8	CHUKHA, PTC	45.62	45.62	45.62	45.62	45.62
9	WBSEDCL	52.65	52.65	52.65	52.65	52.65
10	SPDC	27.09	27.09	27.09	27.09	27.09
11	UI /over drawn (net)	40.02	40.02	40.02	40.02	40.02
12	Free Power	360.56	360.56	360.56	360.56	360.56
13	**TOTAL**	**944.91**	**944.91**	**944.91**	**944.91**	**944.91**

Commission's Analysis:

As seen from the power procurement projection, the EPDS has projected the power drawal during the control period at the same level of actual drawal during the FY 2016-17 and estimated of the FY 2017-18.

The Commission has considered the power procurement projected by EPDS during the control period. 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. No.	Source	FY 2018-19	FY 2019-20	FY 2020-21
	Central Sector			
1	FSTPP, NTPC	113.07	113.07	113.07
2	BSTPP, NTPC	30.18	30.18	30.18
3	KHSTPP-I, NTPC	63.97	63.97	63.97
4	KHSTPP-II, NTPC	21.63	21.63	21.63
5	TSTPP, NTPC	153.89	153.89	153.89
6	RANGIT-III, NHPC	4.34	4.34	4.34
7	TEESTA-V, NHPC	31.87	31.87	31.87
	Others			
8	CHUKHA, PTC	45.62	45.62	45.62
9	WBSEDCL	52.65	52.65	52.65
10	SPDC	27.09	27.09	27.09
11	UI /over drawn (net)	0.00	0.00	0.00
12	Free Power	360.56	360.56	360.56
13	**TOTAL**	**904.87**	**904.87**	**904.87**

The Commission approves power procurement of 904.87 MUs including free power of 360.56 MUs for each FY of the control period for the FY 2018-19 to FY 2020-21.

7.6 Energy requirement and availability

The energy requirement and availability for the FY 2016-17 (Actuals), estimated for the FY 2017-18 and projected for the FY 2018-19, FY 2019-20 & FY 2020-21 are furnished by the EPDS in the table below:

Table 7.11: Energy Balance projected by EPDS

(In MUs)

Sl. No.	Source	2016-17 (Actuals)	2017-18 (Estimated)	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
A	**ENERGY REQUIREMENT**					
1	Energy Sales within State	323.47	344.63	369.36	393.22	415.14
2	Sales Outside State	478.88	473.98	491.88	482.88	471.87
3	Total Energy Sales	802.35	818.61	861.23	876.09	887.01
4	Overall T & D Losses %	30.61	27.43	23.84	20.72	18.60
5	Overall T & D Losses (MUs)	142.67	130.27	115.64	102.78	94.86
6	Total Energy Requirement	945.02	948.88	976.87	978.87	981.87
B	**ENERGY AVAILABILITY**					
7	Power Purchase from CGS/UI etc.	944.91	944.91	944.91	944.91	944.91
8	Less: Overall Pool Loss	8.03	8.03	8.03	8.03	8.03
9	Generation	8.14	12.00	40.00	42.00	45.00
10	Total Energy Availability	945.02	948.88	976.87	978.87	981.87
C	**ENERGY SURPLUS/(GAP)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Commission's Analysis:

The average inter-state transmission losses in the Eastern Region during the period of 49 weeks from 03.04.2017 to 11.03.2018 are 2.14%. 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	Unit	FY 2018-19	FY 2019-20	FY 2020-21
A	**ENERGY REQUIREMENT**				
1	Energy sales within the state	MUs	385.20	427.91	472.24
2	Overall T & D losses	%	24.00	22.00	20.00
3	Overall T & D losses	MUs	121.64	120.69	118.06
4	Total energy requirement (1+3)	MUs	506.84	548.60	590.30
B	**ENERGY AVAILABILITY**				
1	Own generation	MUs	40.00	42.00	45.00
2	Power purchased from CGS/UI etc.	MUs	544.31	544.31	544.31
3	Free Power	MUs	360.56	360.56	360.56
4	Overall pool loss	%	2.14	2.14	2.14
5	Overall pool loss	MUs	10.09	10.09	10.09
6	Total energy availability (1+2+3-5)	MUs	934.78	936.78	939.78
C	**ENERGY SURPLUS/(GAP)**	**MUs**	**427.94**	**388.18**	**349.48**

The energy balance approved for a surplus energy of 427.94 MUs, 388.18 Mus & 349.48 MUs for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

7.7 Aggregate Revenue Requirement

The EPDS has projected Aggregate Revenue Requirement at ₹ 452.11 Crores, ₹ 487.02 Crores & ₹ 515.07 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. After review of the petition, the Commission had directed to the EPDS to review the ARR for the control period of FY 2018-19 to FY 20220-21. After considering the Commission view, the EPDS had presented the Aggregate Revenue Requirement at ₹ 424.90 Crores, ₹ 447.55 Crores & ₹ 471.35 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively, as detailed in Table below:

Table 7.13: Aggregate Revenue Requirement projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Cost of Fuel	0.18	0.18	0.18
2	Cost of Power Purchase	239.75	254.07	269.24
3	Cost of Generation	17.60	18.04	18.51
4	Transmisssion Charges (Intra State)	40.73	42.09	43.87
5	Employee Costs	79.14	83.37	87.79
6	Repair and Maintanance Expenses	19.50	20.31	21.18
7	Administration and General Expenses	0.84	0.84	0.88
8	Depreciation	17.94	18.84	19.29
9	Interest Charges	-	-	-
10	Interest on Working Capital	10.80	11.43	12.06
11	Return on NFA/Equity	-	-	-
12	Income Tax	-	-	-
13	**Total Revenue Requirement**	**426.48**	**449.16**	**473.00**
14	Less: Non Tariff Income	1.59	1.62	1.65
15	**Net Revenue Requirement**	**424.90**	**447.55**	**471.35**

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 each FY of the control period.

The Commission approves fuel cost at ₹ 0.18 Crores for each FY of the control period, as projected by EPDS.

7.9 Cost of Generation

The EPDS has projected Cost of Generation at ₹ 17.60 Crores, ₹ 18.04 Crores & ₹ 18.51 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. The details of expenses projected by the EPDS are furnished in table below:

Table 7.14: Cost of Generation projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Cost of Generation	17.60	18.04	18.51

Commission's Analysis:

On the basis of the detailed analysis in Chapter 9 of this Tariff Order, the Commission approved the Cost of Generation for the 1st MYT control period of FY 2018-19 to FY 2020-21, as detailed in table below.

Table 7.15: Cost of Generation approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	Cost of Generation	18.48	18.83	19.19

The Commission therefore approves the Cost of Generation at ₹ 18.48 Crores, ₹ 18.83 Crores & ₹ 19.19 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

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 2016-17

(₹ in Crores)

Sl. No.	Source	Energy received (MUs)	Variable Cost (Ps./Unit)	Total Variable Cost	Total Fixed Cost	Others	Total Cost i/c supplementary bills	Unit Cost (₹ / Kwh)
1	NTPC							
	a) FSTPP	113.07		28.18	13.98	1.78	43.94	3.89
	b)BSTPP	30.18		7.90	25.96	0.09	33.95	11.25
	b) KHSTPP-I	63.97		13.69	7.88	0.74	22.30	3.49
	c)KHSTPP-II	21.63		4.86	2.45	-0.24	7.08	3.27
	d)TSTPP	153.89		25.61	14.20	4.16	43.97	2.86
	TOTAL	382.74		80.24	64.47	6.53	151.24	
2	NHPC							
	a) RANGIT-III	4.34		0.77	0.87	0.07	1.70	3.92
	b)TEESTA -V	31.87		3.64	4.02	-0.05	7.61	2.39
	TOTAL	36.21		4.41	4.89	0.02	9.31	
3	Other sources							
	a) PTC	45.62				9.48	9.48	2.08
	b)WBSEDCL	52.65				6.74	6.74	1.28
	c) SPDC	27.09				10.54	10.54	3.89
4	Other Charges							
	a) Transmission & Other Charges						26.51	
5	UI Purchase	40.02					0.40	
6	Free Power	360.56					-	
7	Rebate/ Other Charges						-0.72	
8	**Total**	**944.91**					**213.51**	

Power Purchase Cost projected for the control period

The EPDS has projected a power purchase cost at ₹ 239.75 Crores, ₹ 254.07 Crores & ₹ 269.24 Crores including interstate transmission charges of ₹ 29.78 Crores, ₹ 31.56 Crores & ₹ 33.45 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. Free power is projected at 360.56 MUs and UI purchase is projected at the cost of ₹ 0.40 Crores for each FY of the control period for the FY 2018-19 to FY 2020-21. The details are furnished in the table below:

Table 7.17: Power Purchase Cost projected by EPDS for FY 2018-19

Sl. No.	Source	Energy received (MUs)	Unit Cost (₹ / Kwh)	Total Cost i/c supplementary bills (₹ in Crores)
1	**NTPC**			
	FSTPP	113.07	4.38	49.35
	BSTPP	30.18	12.63	38.13
	KHSTPP-I	63.97	3.92	25.05
	KHSTPP-II	21.63	3.67	7.95
	TSTPP	153.89	3.21	49.39
2	**NHPC**			
	RANGIT-III	4.34	4.40	1.91
	TEESTA -V	31.87	2.68	8.55
3	**PTC**			
	CHUKHA	45.62	2.33	10.65
4	**Other sources**			
	WBSEDCL	52.65	1.44	7.57
	SPDC	27.09	4.37	11.84
	UI Purchase	40.02	0.00	0.40
5	**Total Energy Purchase**	**584.33**		**210.79**
6	**Rebate/Other Charges**			**-0.81**
7	**Transmission Charges**			**29.78**
8	**Net Power Purchase Expenses (Excl. Free Power)**	**584.33**		**239.75**

Table 7.18: Power Purchase Cost projected by EPDS for FY 2019-20

Sl. No.	Source	Energy received (MUs)	Unit Cost (₹ / Kwh)	Total Cost i/c supplementary bills (₹ in Crores)
1	**NTPC**			
	FSTPP	113.07	4.64	52.30
	BSTPP	30.18	13.39	40.42
	KHSTPP-I	63.97	4.15	26.55
	KHSTPP-II	21.63	3.89	8.43
	TSTPP	153.89	3.40	52.34
2	**NHPC**			
	RANGIT-III	4.34	4.67	2.03
	TEESTA -V	31.87	2.84	9.06
3	**PTC**			
	CHUKHA	45.62	2.47	11.28
4	**Other sources**			
	WBSEDCL	52.65	1.52	8.02
	SPDC	27.09	4.63	12.55
	UI Purchase	40.02	0.00	0.40
5	**Total Energy Purchase**	**584.33**		**223.39**
6	**Rebate/Other Charges**			**-0.86**
7	**Transmission Charges**			**31.56**
8	**Net Power Purchase Expenses (Excl. Free Power)**	**584.33**		**254.07**

Table 7.19: Power Purchase Cost projected by EPDS for FY 2020-21

Sl. No.	Source	Energy received (MUs)	Unit Cost (₹ / Kwh)	Total Cost i/c supplementary bills (₹ in Crores)
1	**NTPC**			
	FSTPP	113.07	4.92	55.43
	BSTPP	30.18	14.19	42.83
	KHSTPP-I	63.97	4.40	28.13
	KHSTPP-II	21.63	4.13	8.93
	TSTPP	153.89	3.60	55.47
2	**NHPC**			
	RANGIT-III	4.34	4.95	2.15
	TEESTA -V	31.87	3.01	9.60
3	**PTC**			
	CHUKHA	45.62	2.62	11.96
4	**Other sources**			
	WBSEDCL	52.65	1.61	8.50
	SPDC	27.09	4.91	13.30
	UI Purchase	40.02	0.00	0.40
5	**Total Energy Purchase**	**584.33**		**236.70**
6	**Rebate/Other Charges**			**-0.91**
7	**Transmission Charges**			**33.45**
8	**Net Power Purchase Expenses (Excl. Free Power)**	**584.33**		**269.24**

Commission Analysis:

As seen from the above, the EPDS has claimed the power purchase cost for the 1st MYT control period at the escalation of 5.98% year over year based on WPI where the base rate as actually paid during the FY 2016-17. The Commission has considered the power purchase cost at the escalation of 5.98% year over year where the base rate as the station-wise average rate on the basis of the bill for the month of September, 2017 to compute the power purchase cost for the 1st MYT control period. Accordingly, the power purchase cost for the 1st MYT control period is worked out, as detailed in table below.

The EPDS has projected cost of ₹ 0.40 Crores under UI/deviation. The Commission has not considered the same as there is surplus power. The Commission has not considered ₹ (-) 0.81 Crores, ₹ (-) 0.86 Crores & ₹ (-) 0.91 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively 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 2018-19 onwards are 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/order is issued by the CERC/Commission, the same shall be applicable for determination of RPO.

The EPDS submitted that the RPO obligation stands complied as per the provisions of the RPO regulations and stated that it need not need purchase renewable power/REC Certificate regarding RPO.

The details of the power to be purchased from renewable sources (small hydropower), hydropower sources (above 25 MW) including free power from hydropower for the FY 2018-19 to FY 2020-21 submitted by the EPDS are furnished in the Table 7.20 below:

Table 7.20: RPO Compliance furnished by EPDS

(In MUs)

Sl. No.	Source	FY 2018-19	FY 2019-20	FY 2020-21
1	RANGIT-III, NHPC	43.51	43.51	43.51
2	TEESTA -V, NHPC	353.27	353.27	353.27
3	CHUKHA, PTC	45.62	45.62	45.62
4	RAMMAM, WBSEDCL	52.65	52.65	52.65
5	SPDC	27.09	27.09	27.09
6	EPDS	40.00	42.00	45.00
7	**Total Hydro Generation available (including Free Power)**	**562.14**	**564.14**	**567.14**
8	**Total Consumption including T&D Loss**	**485.00**	**496.00**	**510.00**
9	**Excess Hydro Generation available (including Free Power)**	**77.14**	**68.14**	**57.14**

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 7.21: RPO Compliance approved by the Commission

(In MUs)

Sl. No.	Source	FY 2018-19	FY 2019-20	FY 2020-21
1	RANGIT-III, NHPC	43.51	43.51	43.51
2	TEESTA -V, NHPC	353.27	353.27	353.27
3	CHUKHA, PTC	45.62	45.62	45.62
4	RAMMAM, WBSEDCL	52.65	52.65	52.65
5	SPDC	27.09	27.09	27.09
6	EPDS	40.00	42.00	45.00
7	**Total Hydro Generation available (including Free Power)**	**562.14**	**564.14**	**567.14**
8	**Total Consumption including T&D Loss**	**506.84**	**548.60**	**590.30**
9	**Excess Hydro Generation available (including Free Power)**	**55.30**	**15.54**	**-23.16**

The above table shows that the EPDS needs to purchase the REC certificate/generate the power for Solar for fulfilling the RPO for the FY 2020-21. The table also shows that the EPDS is compling the RPO requirement for the FY 2018-19 & FY 2019-20. However, The power procurement projection for the FY 2018-19 to FY 2020-21 shows that there is no provision for procurement of power from solar sources. As per the power procurement plan of EPDS is not fulfilling the solar RPO Obligation for the FY 2020-21, the Commission has allowed purchase of Renewable Energy Certificates (REC) for meeting the shortfall in RPO requirement for the FY 2020-21. Further, EPDS is directed to make efforts for developing solar sources & procuring power from solar sources. The detailed computation is shown in the table below:

Table 7.22: Amount required for purchase of RECs for FY 2020-21

Sl. No.	Source	Energy sales within the State	RPO		Power Available	Shortfall / Surplus		Cost / Mwh	Cost of REC Purchase
		(In MUs)	(In %)	(In MUs)	(In MUs)	(In MUs)	(In Mwhs)	(In ₹)	(₹ in Crores)
1	Solar	23.16	6.75	1.56	0.00	1.56	1563.30	1,000	0.16

Accordingly, the Commission approves ₹ 0.16 Crores for the FY 2020-21 for purchase of Renewable Energy Certificates (RECs) for meeting the shortfall in Solar RPO requirement in accordance with the CERC order dated 30th March, 2017. The detail of Power Purchase quantum and cost approved by the Commission is given in the Table below:

Table 7.23: Power Purchase Cost approved by the Commission for FY 2018-19

Sl. No.	Source	Energy received (MUs)	Unit Cost (₹ / Kwh)	Total Cost i/c supplementary bills (₹ in Crores)
1	**NTPC**			
	FSTPP	113.07	4.33	48.98
	BSTPP	30.18	11.72	35.36
	KHSTPP-I	63.97	4.02	25.69
	KHSTPP-II	21.63	4.27	9.24
	TSTPP	153.89	2.50	38.52
2	**NHPC**			
	RANGIT-III	4.34	3.94	1.71
	TEESTA -V	31.87	2.41	7.67
3	**PTC**			
	CHUKHA	45.62	2.44	11.12
4	**Other sources**			
	WBSEDCL	52.65	1.36	7.14
	SPDC	27.09	4.24	11.48
	UI Purchase	0.00	0.00	0.00
5	**Total Energy Purchase**	**544.31**		**196.93**
6	**Rebate/Other Charges**			**-**
7	**Transmission Charges**			**25.96**
8	**Free Power**	**360.56**		**-**
9	**REC Purchase**			**-**
10	**Net Power Purchase Expenses**	**904.87**		**222.89**

Table 7.24: Power Purchase Cost approved by the Commission for FY 2019-20

Sl. No.	Source	Energy received (MUs)	Unit Cost (₹ / Kwh)	Total Cost i/c supplementary bills (₹ in Crores)
1	**NTPC**			
	FSTPP	113.07	4.59	51.91
	BSTPP	30.18	12.42	37.48
	KHSTPP-I	63.97	4.26	27.23
	KHSTPP-II	21.63	4.53	9.80
	TSTPP	153.89	2.65	40.82
2	**NHPC**			
	RANGIT-III	4.34	4.18	1.81
	TEESTA -V	31.87	2.55	8.13
3	**PTC**			
	CHUKHA	45.62	2.58	11.79
4	**Other sources**			
	WBSEDCL	52.65	1.44	7.57
	SPDC	27.09	4.49	12.17
	UI Purchase	0.00	0.00	0.00
5	**Total Energy Purchase**	**544.31**		**208.70**
6	**Rebate/Other Charges**			**-**
7	**Transmission Charges**			**27.51**
8	**Free Power**	**360.56**		**-**
9	**REC Purchase**			**-**
10	**Net Power Purchase Expenses**	**904.87**		**236.22**

Table 7.25: Power Purchase Cost approved by the Commission for FY 2020-21

Sl. No.	Source	Energy received (MUs)	Unit Cost (₹ / Kwh)	Total Cost i/c supplementary bills (₹ in Crores)
1	**NTPC**			
	FSTPP	113.07	4.87	55.02
	BSTPP	30.18	13.16	39.72
	KHSTPP-I	63.97	4.51	28.85
	KHSTPP-II	21.63	4.80	10.38
	TSTPP	153.89	2.81	43.26
2	**NHPC**			
	RANGIT-III	4.34	4.43	1.92
	TEESTA -V	31.87	2.70	8.61
3	**PTC**			
	CHUKHA	45.62	2.74	12.49
4	**Other sources**			
	WBSEDCL	52.65	1.52	8.02
	SPDC	27.09	4.76	12.90
	UI Purchase	0.00	0.00	0.00
5	**Total Energy Purchase**	**544.31**		**221.18**
6	**Rebate/Other Charges**			**-**
7	**Transmission Charges**			**29.16**
8	**Free Power**	**360.56**		**-**
9	**REC Purchase**			**0.16**
10	**Net Power Purchase Expenses**	**904.87**		**250.50**

The Commission approves the power purchase cost at ₹ 222.89 Crores including transmission charges at ₹ 25.96 Crores for purchase of 544.31 MUs & Free Power of 360.56 MUs for the FY 2018-19 against the total cost ₹ 239.75 Crores as projected by the EPDS, for the FY 2019-20 the power purchase cost approved at ₹ 236.22 Crores including transmission charges at ₹ 27.51 Crores for purchase of 544.31 MUs & Free Power of 360.56 MUs against the total cost ₹ 254.07 Crores as projected by the EPDS and for the FY 2020-21 the power purchase cost approved at ₹ 250.50 Crores including transmission charges at ₹ 29.16 Crores for purchase of 544.31 MUs & Free Power of 360.56 MUs against the total cost ₹ 269.24 Crores as projected by the EPDS.

7.11 Intra State Transmission Charges

The EPDS has projected Intra State Transmission Charges at ₹ 40.73 Crores, ₹ 42.09 Crores & ₹ 43.87 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. The details of expenses projected by the EPDS are furnished in the table below:

Table 7.26: Intra State Transmission Charges projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Intra State Transmission Charges	40.73	42.09	43.87

Commission's Analysis:

On the basis of the detailed analysis in Chapter 8 of this Tariff Order, the Commission approved the Intra State Transmission Charges for the 1st MYT control period of FY 2018-19 to FY 2020-21, as detailed in table below.

Table 7.27: Intra State Transmission Charges approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	Intra State Transmission Charges	40.80	42.60	44.51

The Commission therefore approves the Intra State Transmission Charges at ₹ 40.80 Crores, ₹ 42.60 Crores & ₹ 44.51 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

7.12 Employee Cost

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

Table 7.28: Employee Strength

Sl. No.	Particulars	2016-17 (Actuals)	2017-18 (Estimated)	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Generation	373	370	384	384	384
2	Transmission	746	739	768	768	768
3	Distribution	2610	2586	2687	2687	2687
4	Total	3729	3695	3839	3839	3839

Employee productive parameters as shown below:

Table 7.29: Employee Productive Parameters

Sl. No.	Particulars	2016-17 (Actuals)	2017-18 (Estimated)	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Number of Consumers	108114	110276	112482	114729	117025
2	Number of Employees	3729	3695	3839	3839	3839
3	Energy sold within state in MU	323.47	344.63	369.36	393.22	415.14
4	Employees per MU of energy sold	11.53	10.72	10.39	9.76	9.25
5	Employees for 1000 consumers	34.49	33.51	34.13	33.46	32.80

EPDS has projected employee cost for the FY 2018-19, FY 2019-20 & FY 2020-21 as shown in the table below:

Table 7.30: Employee Cost furnished by EPDS

(₹ in Crores)

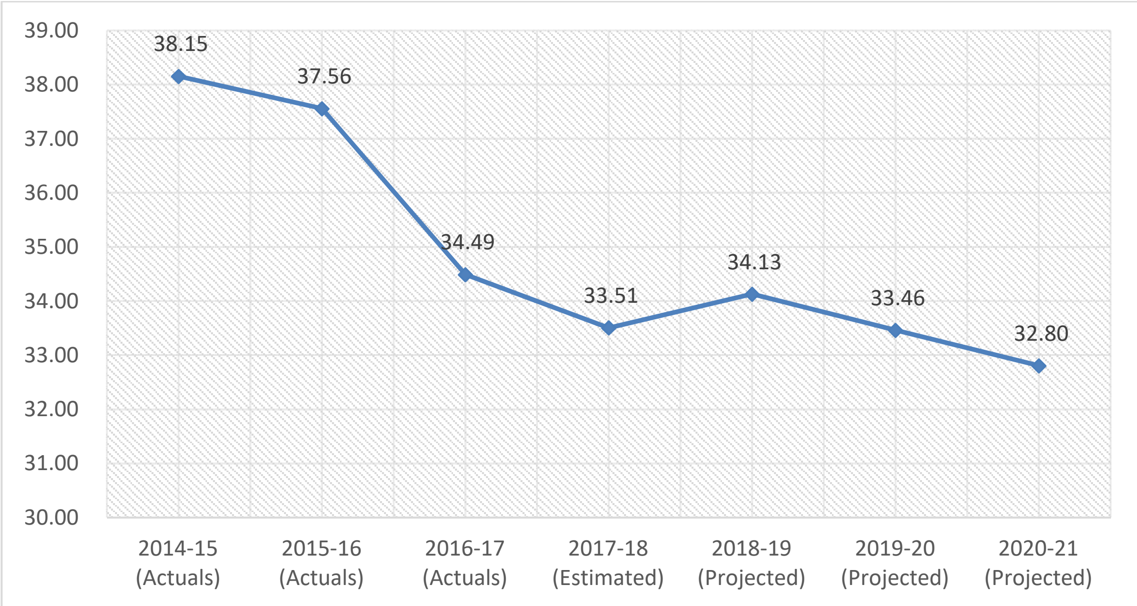
Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Employee Expenses	79.14	83.37	87.79

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 2016-17. Employee Cost for the FY 2018-19 to FY 2020-21 are projected by escalating the cost of the FY 2017-18 considering all factors affecting the employee costs.

Commission's Analysis:

EPDS has furnished actuals for the FY 2016-17 in the Format prescribed. EPDS has not provided detailed methodology on how the cost is arrived for the 1st MYT control period. 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 1st MYT control period. The above chart is also shown that the EPDS has some increased growth in the FY 2017-18 to FY 2018-19. Hence, the EPDS should take steps for rationalization & effective utilization of its manpower.

The Commission has considered the approved cost for the FY 2017-18 at ₹ 106.19 Crores and adjusted the same on account of revised projection of number of employees. Further, escalation @ 6% (as per MYT Regulation) has been considered for projecting the employee cost for the 1st MYT control period over the employee cost of the FY 2017-18 as approved in this Tariff Order. Further, the functionwise segregration of the cost has been considered as per actual no. of employee provided by the EPDS for the FY 2016-17. Accordingly, after considering the above factors, the employee cost are approved by the Commission for the 1st MYT control period 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 7.31: Employee Cost approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	Employee Expenses	78.78	83.51	88.52

The Commission therefore approves the employee cost at ₹ 78.78 Crores, ₹ 83.51 Crores & ₹ 88.52 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. 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 ₹ 0.84 Crores, ₹ 0.84 Crores & ₹ 0.88 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. 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 7.32: Administrative and General Expenses Projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Administration & General Expenses	0.84	0.84	0.88

Commission's Analysis:

The Commission has considered the approved cost for the FY 2017-18 at ₹ 1.14 Crores and adjusted the same on account of revised projection of number of employees. Further, escalation @ 6% (as per MYT Regulation) has been considered for projecting the Administration & General Expenses for the 1st MYT control period over the Administration & General Expenses of the FY 2017-18 as approved in this Tariff Order. Further, the funstionwise segregration of the cost has been considered as per actual no. of employee provided by the EPDS for the FY 2016-17. Accordingly, after considering the above factors, the Administration & General Expenses are approved by the Commission for the 1st MYT control period as shown in the table below. Further, the Commission directs EPDS to furnish the details of A&G expenses at the time of Review & True-up.

Table 7.33: Administration & Generation Expenses approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	Administration & General Expenses	0.85	0.90	0.95

The Commission therefore approves the Administrative and General Expenses at ₹ 0.85 Crores, ₹ 0.90 Crores & ₹ 0.95 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. The above Administrative and General Expenses are approved only for Distribution Function.

7.14 Repairs and Maintenance Expenses

The EPDS has projected at ₹ 19.50 Crores, ₹ 20.31 Crores & ₹ 21.18 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively 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 7.34: Repair and Maintenance Expenses projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Repair & Maintenance Expenses	19.50	20.31	21.18

Commission's Analysis:

The Commission has considered the approved cost for the FY 2017-18 at ₹ 21.80 Crores and adjusted the same on account of revised projection of value of Gross Fixed Assets. Further, escalation @ 6% (as per MYT Regulation) has been considered for projecting the Repair and Maintenance Expenses for the 1st MYT control period over the Repair and Maintenance Expenses of the FY 2017-18 as approved in this Tariff Order. Further, the funstionwise segregration of the cost has been considered as per actual value of GFA provided by the EPDS for the FY 2016-17. Accordingly, after considering the above factors, the Repair and Maintenance Expenses are approved by the Commission for the 1st MYT control period 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 7.35: Repair and Maintenance Expenses approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	Repair & Maintenance Expenses	13.95	14.78	15.67

The Commission therefore approves the Repair and Maintenance Expenses at ₹ 13.95 Crores, ₹ 14.78 Crores & ₹ 15.67 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. The above Repair and Maintenance Expenses are approved only for Distribution Function.

7.15 Capital Investment

The EPDS has proposed a Capital Investment of ₹ 47.54 Crores, ₹ 39.10 Crores & ₹ 19.47 Crores during the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. The Capital Investment had projected by the EPDS for the FY 2018-19, FY 2019-20 & FY 2020-21, are furnished in the table below:

Table 7.36: Investment plan projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Schemes sanctioned under MDs	3.00	3.00	3.00
2	NEC Schemes	3.43	0.00	0.00
3	NLCPR Schemes	6.65	16.63	9.98
4	State Share of NEC Schemes	0.34	0.00	0.00
5	State Share of NLCPR Schemes	1.67	0.00	0.00
6	DDUGJY	24.85	14.91	4.97
7	IPDS	7.60	4.56	1.52
8	**Grand Total**	**47.54**	**39.10**	**19.47**

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

Table 7.37: Works in Progress

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Opening Balance	52.82	39.27	30.67
2	Add: New Investments	47.54	39.10	19.47
3	Total (1+2)	100.36	78.37	50.14
4	Less: Investment Capitalised	61.09	47.71	30.52
5	**Closing Balance (3-4)**	**39.27**	**30.67**	**19.62**

Commission's Analysis:

As seen from the above, the EPDS has projected a capital investment of ₹ 47.54 Crores, ₹ 39.10 Crores & ₹ 19.47 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. Further, the EPDS has projected a capitalisation of ₹ 61.09 Crores, ₹ 47.71 Crores & ₹ 30.52 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. 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.

5 *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.*

6 *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.

8 *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.*

9 *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

1 *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 1st MYT control period. 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 ₹ 47.54 Crores, ₹ 39.10 Crores & ₹ 19.47 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively as projected by the EPDS and capitalisation of ₹ 61.09 Crores, ₹ 47.71 Crores & ₹ 30.52 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. The same shall be approved/revised after the required details are being submitted.

7.16 Gross Fixed Assets (GFA)

The EPDS has stated that the opening GFA for the FY 2017-18 has been taken from the assets register and works capitalised during the 1st MYT control period have been added and the GFA computed, as detailed in the table below:

Table 7.38: Gross Fixed Assets Movement

(₹ in Crores)

Sl. No.	Year	Opening Balance	Addition during the year	Closing Balance
1	FY 2018-19	431.95	47.54	479.49
2	FY 2019-20	479.49	39.10	518.59
3	FY 2020-21	518.59	19.47	538.06

Commissions Analysis:

In the absence of audited accounts the opening GFA as on 01.04.2017, 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 ₹ 17.94 Crores, ₹ 18.84 Crores & ₹ 19.29 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. 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 thr table below:

Table 7.39: Depreciation Projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Depreciation	17.94	18.84	19.29

Commission's Analysis:

The EPDS has not furnished the rate at which depreciation is arrived. As discussed earlier, the depreciation on the opening GFA cannot be considered. The functionwise segregration of the opening GFA has been considered as per actual value of GFA provided by the EPDS for the FY 2016-17. Further, depreciation has been considered on the amount of actual closing balance at the end of the FY 2016-17 and estimated additions during the FY 2017-18 and 50% of the amount to be capitalised during the each FY of the MYT control period at and average depreciation rate of 5.28%, as detailed in the table below:

Table 7.40: Depreciation approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	Opening GFA	280.20	341.29	389.00
2	Additions during the Year	61.09	47.71	30.52
3	Closing GFA	341.29	389.00	419.52
4	Average GFA	310.75	365.15	404.26
5	Rate of depreciation	5.28%	5.28%	5.28%
6	**Depreciation**	**16.41**	**19.28**	**21.35**

The Commission therefore approves the Depreciation at ₹ 16.41 Crores, ₹ 19.28 Crores & ₹ 21.35 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. 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 1st MYT control period.

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 each FY of the 1st MYT control period.**

7.19 Interest on Working Capital

The EPDS has projected interest on working capital at ₹ 11.38 Crores, ₹ 12.27 Crores & ₹ 13.00 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively 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 1st April of the respective year i,e. 01.04.2017.

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

Table 7.41: Interest on Working Capital Projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	O & M Expenses for 1 month	8.29	8.71	9.15
2	Maintenance Spares @1% plus esclation @ 6% per annum	5.27	5.97	6.53
3	Receivables equivalent to 2 month's Revenue	75.35	81.17	85.84
4	**Total Working Capital**	**88.91**	**95.85**	**101.52**
5	Less: Security Deposit of Consumers	-	-	-
6	**Net Working Capital**	**88.91**	**95.85**	**101.52**
7	Rate of Interest as on 01.04.2017	12.80%	12.80%	12.80%
8	**Interest on Working Capital**	**11.38**	**12.27**	**13.00**

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 7.42: Interest on Working Capital approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	O & M Expenses for 1 month	7.80	8.27	8.76
2	Maintenance Spares @1% plus esclation @ 6% per annum	-	-	-
3	Receivables equivalent to 2 month's Revenue	52.23	53.52	54.90
4	**Total Working Capital**	**60.03**	**61.79**	**63.67**
5	Less: Security Deposit of Consumers	-	-	-
6	**Net Working Capital**	**60.03**	**61.79**	**63.67**
7	Rate of Interest as on 01.04.2017	12.80%	12.80%	12.80%
8	**Interest on Working Capital**	**7.68**	**7.91**	**8.16**

The Commission approves the Interest on Working Capital at ₹ 7.68 Crores, ₹ 7.91 Crores & ₹ 8.16 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. 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 1st MYT control period.

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 1st MYT control period.

7.22 Non-Tariff Income

The EPDS has projected a Non-Tariff Income ₹ 1.59 Crores, ₹ 1.62 Crores & ₹ 1.65 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

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.

In view of the above the Non-Tariff Income as proposed by EPDS is provisionally approved subject to revision based on the details of meters to be provided with the next filing.

The Commission approves the Non-Tariff Income at ₹ 1.59 Crores, ₹ 1.62 Crores & ₹ 1.65 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively, as projected by the EPDS.

7.23 Revenue from Existing Tariff

The EPDS has projected revenue from sale of energy with existing tariff at ₹ 196.89 Crores, ₹ 207.81 Crores & ₹ 218.20 Crores within the states for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. Further, the EPDS has projected revenue from outside state sale at ₹ 131.08 Crores, ₹ 132.44 Crores & ₹ 133.80 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

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 7.43: Revenue at Existing Tariff as approved by the Commission for FY 2018-19

Sl. No.	Particulars	Energy Sales (In MUs)	Average Rate (₹/Kwh)	Amount (₹ in Crores)
1	Domestic	111.74	2.58	28.83
2	Commercial	42.90	5.61	24.08
3	Public Lighting	0.28	4.26	0.12
4	Temporary Supply	1.60	7.53	1.21
5	HT Industrial	196.20	6.31	123.86
6	LT Industrial	1.43	6.61	0.95
7	Bulk Supply	31.05	6.54	20.30
8	**Total sales within State**	**385.20**	**5.17**	**199.34**
9	Sales Outside State	427.94	2.66	114.04
10	**Total Sales (8+9)**	**813.14**	**3.85**	**313.38**

EPDS has not provided the details of category wise / slab wise connected load / contracted demand of consumers for all the categories. EPDS is directed to furnish the category wise / slab wise connected load / contracted demand of consumers of all the categories along with the next petition. The revenue figures shall be accordingly reviewed.

The Commission approves revenue from sale of energy with existing tariff at ₹ 199.34 Crores on sale of 385.20 MUs within the state at an average rate of ₹ 5.17/kWh & ₹ 114.04 Crores on sale of 427.94 MUs from outside State sale at an average rate of ₹ 2.66/kWh for the FY 2018-19.

7.24 Aggregate Revenue Requirement (ARR) and Gap

The Aggregate revenue requirement and gap projected by EPDS for the FY 2018-19, FY 2019-20 & FY 2020-21 are furnished in table below.

Table 7.44: Aggregate Revenue Requirement projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
1	Cost of Fuel	0.18	0.18	0.18
2	Cost of Generation	17.60	18.04	18.51
3	Cost of Power Purchase	239.75	254.07	269.24
4	Intra State Transmission Charges	40.73	42.09	43.87
5	Employee Costs	79.14	83.37	87.79
6	Repair & Maintenance Expenses	19.50	20.31	21.18
7	Administrative and General Expenses	0.84	0.84	0.88
8	Depreciation	17.94	18.84	19.29
9	Interest Charges	-	-	-
10	Interest on Working Capital	10.80	11.43	12.06
11	Return on NFA/Equity	-	-	-
12	**Total Revenue Requirement**	**426.48**	**449.17**	**473.00**
13	Less: Non Tariff Income	1.59	1.62	1.65
14	**Net Revenue Requirement**	**424.89**	**447.55**	**471.35**
15	Revenue from Tariff	196.89	207.81	218.20
16	Revenue from Sale Outside the State	131.08	132.44	133.80
17	**Gap**	**96.92**	**107.30**	**119.35**

Based on the approvals of the above projections, the ARR & Gap of EPDS for the 1st MYT control period works out as detailed in Table below:

Table 7.45: Aggregate Revenue Requirement approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	Cost of Fuel	0.18	0.18	0.18
2	Cost of Generation	18.48	18.83	19.19
3	Cost of Power Purchase	222.89	236.22	250.50
4	Intra State Transmission Charges	40.80	42.60	44.51
5	Employee Costs	78.78	83.51	88.52
6	Repair & Maintenance Expenses	13.95	14.78	15.67
7	Administrative and General Expenses	0.85	0.90	0.95
8	Depreciation	16.41	19.28	21.35
9	Interest Charges	-	-	-
10	Interest on Working Capital	7.68	7.91	8.16
11	Return on NFA/Equity	-	-	-
12	**Total Revenue Requirement**	**400.01**	**424.21**	**449.03**
13	Less: Non Tariff Income	1.59	1.62	1.65
14	**Net Revenue Requirement**	**398.42**	**422.59**	**447.38**

Accordingly, the Commission approves the Aggregate Revenue Requirement at ₹ 398.42 Crores, ₹ 422.59 Crores & ₹ 447.38 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

7.25 Revenue Gap for the FY 2018-19

Based on the Aggregate Revenue Requirement and revenue from existing tariffs for FY 2018-19, the resultant GAP is as shown in the table below.

Table 7.46: Approved Revenue at Existing Tariff & Gap

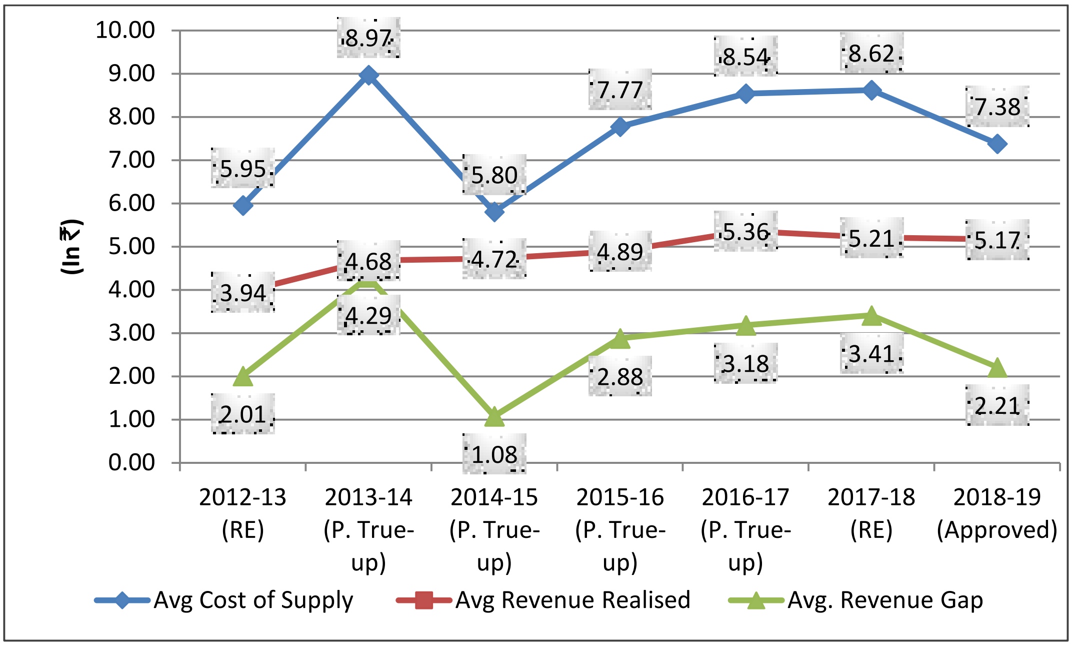
(₹ in Crores)

Sl. No.	Particulars	FY 2018-19
1	**Net Revenue Requirement**	**398.42**
2	Revenue from Tariff	**199.34**
3	Revenue from Sale Outside the State	**114.04**
4	**Gap**	**85.05**
5	Energy Sales within the State	**385.20**
6	Energy Sales outside the State	**427.94**
7	**Average Cost of Supply ₹/Kwh**	**7.38**

The Revenue gap of ₹ 85.05 Crores has been arrived at on the basis of the approved data for the FY 2018-19. The Revenue Gap is about 21.35% of the net Revenue Requirement. The average cost of supply per unit for the FY 2018-19 is ₹ 7.38 & average revenue from tariff is ₹ 5.17. The average revenue gap per unit is ₹ 2.21.

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 2018-19

As seen from para 7.25 above, there is a revenue gap of ₹ 85.05 Crores during the FY 2018-19 which is 21.35% of net ARR for the FY 2018-19. The existing tariff was fixed with effect from 01.04.2018.

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 1.55% 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 ₹ 3.08 Crores as detailed in Table 7.47 below:

Table 7.47: Revenue from revised Tariff approved by the Commission for FY 2018-19

Sl. No.	Category	Energy Sales (In MUs)	Total (₹ in Crores)
1	Domestic (DLT)		
a)	Up to 50 units	42.82	4.71
b)	51 to 100 units	27.07	6.34
c)	101-200 units	18.13	6.62
d)	201 to 400 units	14.59	6.67
e)	401 & above	9.12	4.50
	Total	**111.74**	**28.83**
2	Commercial (CLT)		
a)	Up to 50 units	6.41	2.12
b)	51 to 200 units	9.16	5.13
c)	201 to 400 units	13.13	7.88
d)	401 & above	14.21	9.09
	Total	**42.90**	**24.22**
3	Public lighting		
a)	Rural Areas	0.09	0.03
b)	Urban Areas	0.19	0.10
	Total	**0.28**	**0.12**
4	**Temporary**	**1.60**	**1.21**
5	Industrial		
A	HT		
a)	HT (AC) above 3.3 KV		
b)	Upto 100 KVA	37.78	17.23
c)	100 - 250 KVA	37.92	18.86
d)	250- 500 KVA	48.95	31.99
e)	500 KVA & above	71.56	58.47
	Total HT	**196.20**	**126.55**
B	LT (Rural)		
a)	Up to 500 units	0.47	0.16
b)	501 - 1000 units	0.32	0.14
c)	1001 & above	0.50	0.29
	Total	**1.29**	**0.69**
C	LT (Urban)		
a)	Up to 500 units	0.05	0.03
b)	501 - 1000 units	0.04	0.03
c)	1001 & above	0.05	0.04
	Total	**0.14**	**0.30**
	Total LT (B+C)	**1.43**	**0.99**
	Total Industrial (A+B+C)	**197.63**	**127.54**
6	Bulk supply		
a)	LT	2.82	1.85
b)	HT	28.22	18.66
	Total	**31.05**	**20.51**
7	**Grand Total**	**385.20**	**202.42**

With the revision of tariff, the EPDS will generate additional revenue of ₹ 3.08 Crores. Thereby, the revenue gap is calculated to ₹ 81.97 Crores (i.e. ₹ 85.05 Crores – ₹ 3.08 Crores), which the EPDS shall meet by improving internal efficiency.

The Commission, accordingly, approves revenue from revised tariffs at ₹ 202.42 Crores with the energy sales of 385.20 MUs. The Revenue gap has been reduced to ₹ 81.97 Crores as against ₹ 85.05 Crores (approved in Para 7.25) and has been arrived on the basis of the approved data for the FY 2018-19.

8. MULTI YEAR AGGREGATE REVENUE REQUIREMENT FOR THE FY 2018-19 TO FY 2020-21 FOR TRANSMISSION FUNCTION, COMMISSION'S ANALYSIS AND DECISIONS

8.1 Introduction

EPDS submitted petition for approval of Multi Year Transmission Tariff for the 1st MYT control period of FY 2018-19 to FY 2020-21 in accordance with SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulation, 2013, Multi Year Tariff (First Amendment) Regulations, 2015 and Multi Year Tariff (Second Amendment) Regulations, 2017. For the purpose of projecting the financial and technical parameters EPDS has considered its actual performance during the past years as base and has projected the data for the control period.

8.2 Capacity allocation and Energy Requirement

The energy requirement for EPDS is the range of 900 MUs to 1000 MUs P.A. as projected for the FY 2018-19 to FY 2020-21. The EPDS has owns twelve (12) hydroelctric power stations of total installed capacity of 35.70 MWs and two (2) diesel generation stations of installed capacity of 4.99 MWs. So, the EPDS has to draw power to meet the energy requirement from central sector generating stations, from whom it has a share of 189.38 MW as detailed in table below. Apart from the allocation from the central sector generating stations & own generation, EPDS has to resort to additional power purchases through exchange (IEX) etc.

Table 8.1: Power Availability (Other than Own Generation)

Sl. No.	Source	Capacity (In MWs)	Allocation	
			(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**	**7,160.00**		**189.38**

Table 8.2: Power Availability from Own Generation

Sl. No.	Name of Projects	Installed Capacity (In MWs)
	Hydro	
1	Lower Lhagap Hydel Power (LLHP)	12.00
2	Jali Power House (JPH)	2.10
3	Rimbi-I	0.60
4	Rimbi-II	0.10
5	Rothak	0.20
6	Rongnichu	2.50
7	Chaten	1.00
8	Meyongchu	4.00
9	Upper Rongnichu Hydel Project (URHP)	8.00
10	Kalez	2.00
11	Lachung	0.20
12	Rabomchu	3.00
	Diesel	
13	Diesel Power House Gangtok	4.00
14	DPH LLHP, Ranipool	0.99
	Total	**40.69**

Table 8.3: Allocated Transmission Capacity

Sl. No.	Name of Projects	Installed Capacity (In MWs)
1	Power allocation from CGS	189.38
2	Own Generation Installed Capacity of EPDS	40.69
3	**Total allocated transmission capacity**	**230.07**

The Commission approves total transmit power within the State at 230.07 MWs for the 1st MYT control period through owns transmission network.

8.3 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 transmission losses may not be possible beyond a certain level due to topographical conditions and technical limitations. Further, EPDS stated that the EPDS is currently not equipped to measure the exact energy flowing into and out of the state grid at various levels due to the in adequate metering equipment. **So the transmission loss have been considered at 3% for the control period**.

8.4 Aggregate Revenue Requirement

Based on the provisions of the Regulations 57.1 of SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulation, 2013, the estimate for Aggregate Revenue Requirement (ARR) will comprise of the following elements.

- Return on Equity (ROE);
- Interest and Finance charges on Loan Capital;
- Depreciation;
- Interest on working capital and deposits from Transmission System Users;
- Operation and maintenance expenses;
- Contribution to contingency reserve, if any;

The above Aggregate Revenue Requirement (ARR) is netted off with the following elements for determining the net ARR.

- Non-Tariff Income;
- Revenue from short-term transmission charges projected on the basis of latest audited figures; and

8.5 Operation & Maintenance Expenses

Operation & Maintenance expense comprise of the following heads of expenditure viz.

- Employee Expenses
- Administration & General Expenses
- Repairs & Maintenance Expenses

EPDS had stated that it is an integrated utility carrying out the three functions of Generation, Transmission & Distribution and the complete segregation of function wise accounts has not been done yet. However, the O&M expenses has been projected based on the functional segregation of staff & expenses.

The Regulations 57.6 of SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulation, 2013, provides as follows.

a) The Operation and Maintenance expenses including insurance shall be derived on the basis of the average of the actual Operation and Maintenance expenses for the actual last three years, subject to prudence check by the Commission.

b) The average of such operation and maintenance expenses shall be considered as operation and maintenance expenses for the financial year ended March 31, 2017 and shall be escalated at the escalation factor of 6% to arrive at operation and maintenance expenses for FY 2017-18.

c) The O&M expenses for each subsequent year will be determined by escalating the base expenses determined above for FY 2017-18, at the escalation factor of 6% to arrive at permissible O&M expenses for each year of the Control Period.

So, the Commission has considered the O&M Expenses as per availablility of the data/details & the details are provided in the subsequent sections of this Tariff Order**.**

8.6 Employee Cost

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

Table 8.4: Employee Strength

Sl. No.	Particulars	2016-17 (Actuals)	2017-18 (Estimated)	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Generation	373	370	384	384	384
2	Transmission	746	739	768	768	768
3	Distribution	2610	2586	2687	2687	2687
4	Total	3729	3695	3839	3839	3839

EPDS has projected employee cost for the FY 2018-19, FY 2019-20 & FY 2020-21 for transmission function as shown in the table below:

Table 8.5: Employee Cost furnished by EPDS

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Employee Expenses	22.64	23.88	25.18

EPDS has stated that employee cost include salaries, allowances, Bonus, Leave Travel Cocession (LTC) & Honorarium etc. EPDS stated that it is an integrated utility carrying out the three functions of Generation, Transmission & Distribution and the complete segregation of function wise accounts has not been done yet. However, the Employee Cost has been projected based on the functional segregation of staff & expenses.

Commission's Analysis:

The Commission has considered the approved cost for the FY 2017-18 for EPDS as a whole at ₹ 106.19 Crores and adjusted the same on account of revised projection of number of employees. Further, escalation @ 6% (as per MYT Regulation) has been considered for projecting the employee cost for the 1st MYT control period over the employee cost of the FY 2017-18 as approved in this Tariff Order. Further, the funstionwise segregration of the cost has been considered as per actual no. of employee provided by the EPDS for the FY 2016-17. Accordingly, after considering the above factors, the employee cost are approved by the Commission for the 1st MYT control period as shown in table below.

Table 8.6: Employee Cost approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	Employee Expenses	22.64	23.88	25.18

The Commission therefore approves the employee cost at ₹ 22.64 Crores, ₹ 23.88 Crores & ₹ 25.18 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively, as projected by the EPDS.

8.7 Administrative and General Expenses

The EPDS has projected Administrative and General Expenses at ₹ 0.27 Crores, ₹ 0.27 Crores & ₹ 0.33 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. The Administrative and General Expenses include Domestic Travelling Expenses, Office Expenses, Legal, Regulatory & Consultancy Fees & Insurance etc. The details of expenses projected by the EPDS are furnished in Table below:

Table 8.7: Administrative and General Expenses projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Administration & General Expenses	0.27	0.27	0.33

Commission's Analysis:

The Commission has considered the approved cost for EPDS as a whole for the FY 2017-18 at ₹ 1.14 Crores and adjusted the same on account of revised projection of number of employees. Further, escalation @ 6% (as per MYT Regulation) has been considered for projecting the Administration & General Expenses for the 1st MYT control period over the Administration & General Expenses of the FY 2017-18 as approved in this Tariff Order. Further, the funstionwise segregration of the cost has been considered as per actual no. of employee provided by the EPDS for the FY 2016-17. Accordingly, after considering the above factors, the Administration & General Expenses are approved by the Commission for the 1st MYT control period as shown in table below.

Table 8.8: Administration & Generation Expenses approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	Administration & General Expenses	0.24	0.26	0.27

The Commission therefore approves the Administrative and General Expenses at ₹ 0.24 Crores, ₹ 0.26 Crores & ₹ 0.27 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

8.8 Repairs and Maintenance Expenses

The EPDS has projected at ₹ 4.65 Crores, ₹ 4.71 Crores & ₹ 5.05 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively towards Repair and Maintenance Expenses. The detail of expenses projected by EPDS are furnished in table below:

Table 8.9: Repair and Maintenance Expenses projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Repair & Maintenance Expenses	4.65	4.71	5.05

Commission's Analysis:

The Commission has considered the approved cost for EPDS as a whole for the FY 2017-18 at ₹ 21.80 Crores and adjusted the same on account of revised projection of value of Gross Fixed Assets. Further, escalation @ 6% (as per MYT Regulation) has been considered for projecting the Repair and Maintenance Expenses for the 1st MYT control period over the Repair and Maintenance Expenses of the FY 2017-18 as approved in this Tariff Order. Further, the funstionwise segregration of the cost has been considered as per actual value of GFA provided by the EPDS for the FY 2016-17. Accordingly, after considering the above factors, the Repair and Maintenance Expenses are approved by the Commission for the 1st MYT control period 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 8.10: Repair and Maintenance Expenses approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	Repair & Maintenance Expenses	7.99	8.47	8.98

The Commission therefore approves the Repair and Maintenance Expenses at ₹ 7.99 Crores, ₹ 8.47 Crores & ₹ 8.98 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

8.9 Capital Investment

The EPDS has proposed a Capital Investment of ₹ 777.76 Crores, ₹ 466.49 Crores & ₹ 155.50 Crores during the FY 2018-19, FY 2019-20 & FY 2020-21 respectively, are furnished in the table below:

Table 8.11: Investment Plan projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	NLCPR Schemes	0.25	0.00	0.00
2	State Share of NLCPR Schemes	0.03	0.00	0.00
3	Comprehencive Scheme	777.48	466.49	155.50
4	**Grand Total**	**777.76**	**466.49**	**155.50**

Commission's Analysis:

As seen from the above, The Commission has directed to EPDS to revise the Investment Plan except works regarding PGCIL which to be completed in future. Accordingly, the EPDS has revised the cost of Capital Expenditure. It is seen that the Petitioner has not submitted the detailed investment plan 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.

5 *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.*

6 *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:*

(e) *Upto 2.5% of original capital cost in case of coal based/lignite fired generating stations;*
(f) *Upto 4.0% of original capital cost in case of gas turbine/combined cycle generating stations;*
(g) *Upto 1.5% of original capital cost in case of hydro-generating stations; and*
(h) *Upto 1.5% of original capital cost in case of Transmission Licensee and Distribution Licensee.*

8 *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.*

9 *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

1 *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 above 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 1st MYT control period. The petitioner is directed submit the same along with scheme wise detail breakup for the ensuing year as well as for the past FYs with next filings.

In view of the above the Commission provisionally approves the capital investment of ₹ 0.25 Crores for the each FY of the control period.

8.10 Gross Fixed Assets (GFA)

The EPDS has stated that the opening GFA for the FY 2017-18 has been taken from the assets register and works capitalised during the 1st MYT control period have been added and the GFA computed, as detailed in Table below:

Table 8.12: Gross Fixed Assets Movement

(₹ in Crores)

Sl. No.	Year	Opening Balance	Addition during the year	Closing Balance
1	FY 2018-19	402.62	777.76	1180.38
2	FY 2019-20	1180.38	466.49	1646.87
3	FY 2020-21	1646.87	155.50	1802.37

Commissions Analysis:

In the absence of audited accounts the opening GFA as on 01.04.2016, furnished by the EPDS cannot be taken into consideration for the purpose of allowing depreciation or return on equity etc.

8.11 Depreciation

The EPDS has projected depreciation of ₹ 33.17 Crores, ₹ 44.15 Crores & ₹ 47.81 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively. 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 details are in table below:

Table 8.13: Depreciation projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Depreciation	33.17	44.15	47.81

Commission's Analysis:

As discussed earlier, the depreciation on the opening GFA cannot be considered. The funstionwise segregration of the opening GFA has been considered as per actual value of GFA provided by the EPDS for the FY 2016-17. Further, depreciation has been considered on the amount of actual closing balance at the end of the FY 2016-17 and estimated additions during the FY 2017-18 and 50% of the amount to be capitalised during the each FY of the 1st MYT control period at and average depreciation rate of 5.28%, as detailed in Table below:

Table 8.14: Depreciation approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	Opening GFA	160.58	160.83	161.08
2	Additions during the Year	0.25	0.25	0.25
3	Closing GFA	160.83	161.08	161.33
4	Average GFA	160.71	160.96	161.21
5	Rate of depreciation	5.28%	5.28%	5.28%
6	**Depreciation**	**8.49**	**8.50**	**8.51**

The Commission therefore approves the Depreciation at ₹ 8.49 Crores, ₹ 8.50 Crores & ₹ 8.51 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

8.12 Interest and Finance Charges

The EPDS has not projected interest and finance charges during the 1st MYT control period.

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 each FY of the 1st MYT control period.**

8.13 Interest on Working Capital

The EPDS has projected interest on working capital at ₹ 3.22 Crores, ₹ 4.21 Crores & ₹ 4.68 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively on normative basis as per regulation 57.5 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 1st April of the respective year i,e. 01.04.2017.

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

Table 8.15: Interest on Working Capital projected by EPDS

(₹ in Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	O & M Expenses for 1 month	2.30	2.40	2.55
2	Maintenance Spares @1% plus esclation @ 6% per annum	12.20	17.59	20.20
3	Receivables equivalent to 2 month's Revenue	10.66	12.87	13.84
4	**Total Working Capital**	**25.16**	**32.86**	**36.59**
5	Less: Security Deposit of Consumers	-	-	-
6	**Net Working Capital**	**25.16**	**32.86**	**36.59**
7	Rate of Interest as on 01.04.2017	12.80%	12.80%	12.80%
8	**Interest on Working Capital**	**3.22**	**4.21**	**4.68**

Commission's Analysis:

As per Regulation 57.5 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 Table below:

Table 8.16: Interest on Working Capital approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	O & M Expenses for 1 month	2.57	2.72	2.87
2	Maintenance Spares @1% plus esclation @ 6% per annum	1.70	1.71	1.71
3	Receivables equivalent to 2 month's Revenue	6.95	7.26	7.58
4	**Total Working Capital**	**11.23**	**11.68**	**12.16**
5	Less: Security Deposit of Consumers	-	-	-
6	**Net Working Capital**	**11.23**	**11.68**	**12.16**
7	Rate of Interest as on 01.04.2017	12.80%	12.80%	12.80%
8	**Interest on Working Capital**	**1.44**	**1.50**	**1.57**

The Commission approves the Interest on Working Capital at ₹ 1.44 Crores, ₹ 1.50 Crores & ₹ 1.57 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

8.14 Return on Equity

The EPDS has not projected Return on Equity during the 1st MYT control period.

Commissions Analysis:

Regulation 57.2 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.**

8.15 Non-Tariff Income

The EPDS has stated that it is an integrated utility and the function wise segregated NTI is not available. Further, maximum NTI relates to the distribution function hence, the entire NTI has been considered in computing the ARR of distribution function. Accordingly, EPDS has not considered Non-Tariff Income for computing the ARR of the transmission function for the FY 2018-19, FY 2019-20 & FY 2020-21.

Commission's Analysis:

The EPDS had not claimed any Non-Tariff Income for Transmission Utility. Based on the above, **the Commission has not considered any Non-Tariff Income for the 1st MYT control period for Transmission Function.**

8.16 Aggregate Revenue Requirement (ARR) and Gap

Based on the approvals of the above projections, the ARR of EPDS for the 1st MYT control period works out as detailed in Table below:

Table 8.17: Aggregate Revenue Requirement approved by the Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	Operation Maintenance Expenses			
a	Employee Costs	22.64	23.88	25.18
b	Administrative and General Expenses	0.24	0.26	0.27
c	Repair & Maintenance Expenses	7.99	8.47	8.98
2	Depreciation	8.49	8.50	8.51
3	Interest Charges	-	-	-
4	Interest on Working Capital	1.44	1.50	1.57
5	Return on NFA/Equity	-	-	-
6	**Total Revenue Requirement**	**40.80**	**42.60**	**44.51**
7	Less: Non Tariff Income	-	-	-
8	**Net Revenue Requirement**	**40.80**	**42.60**	**44.51**

The Net Annual Revenue Requirement for Transmission Function at ₹ 40.80 Crores, ₹ 42.60 Crores & ₹ 44.51 Crores for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

8.17 Transmission Charges

The EPDS has calculated the transmission charges in accordance with the regulations 60 of SSERC MYT Regulations, 2013 as detailed in table below.

Table 8.18: Transmission Charges projected by EPDS

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	ARR (₹ in Crores)	63.95	77.22	83.06
2	Total power allocation (In MWs)	218.69	218.69	218.69
3	**Total Energy Transferred at Dist. Periphery (Mus)**	**501.55**	**512.93**	**527.40**
4	**Transmission Charges (₹/MW/Day)**	**8,011.59**	**9,673.65**	**10,405.46**
5	**Transmission Charges (₹/Kwh)**	**0.33**	**0.40**	**0.43**

Commission's Analysis:

The EPDS had calculated Transmission Charges on energy available of district periphery instead of total allocation of power. The approved transmission charges by the Commisssion are furnished in table below:

Table 8.19: Transmission Charges approved by the Commission

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	ARR (₹ in Crores)	40.80	42.60	44.51
2	Total power allocation (In MWs)	230.07	230.07	230.07
3	**Transmission Charges** (₹/MW/Month)	**1,47,772.97**	**1,54,312.67**	**1,61,224.91**
4	**Transmission Charges** (₹/MW/Day)	**4,858.29**	**5,073.29**	**5,300.55**
5	**Transmission Charges** (₹/Kwh)	**0.29**	**0.30**	**0.32**

The Commission approves the Transmission Charges at ₹ 0.29/kWh, ₹ 0.30/kWh & ₹ 0.32/kWh for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

9. AGGREGATE REVENUE REQUIREMENT FOR THE FY 2018-19 TO FY 2020-21 FOR GENERATION FUNCTION, COMMISSION'S ANALYSIS AND DECISIONS

9.1 Introduction

The EPDS tariff determination is now governed by SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulation, 2013. Further, the Regulation 36.1 of MYT Regulation, 2013 provide as follows:

"The regulations specified in this chapter shall apply for determining the tariff for supply of electricity to a Distribution Licensee from conventional sources of generation and hydro generation stations of capacity more than 25 MW:

Provided that determination of tariff for supply of electricity to a Distribution Licensee from Renewable Energy sources of generation shall be in accordance with terms and conditions as stipulated in the relevant regulations/orders of the Commission."

The Sikkim State Electricity Regulatory Commission in exercise of powers conferred under Section 61 and 86 read with Section 181 of the Electricity Act, 2003 (36 of 2003), and all other powers enabling it in this behalf, issued Sikkim State Electricity Regulatory Commission (Terms and Conditions for determination of Tariff for Generation from Renewable Energy Sources) Regulations, 2017. Regulation 3 of the these Regulations provides as follows:

"These regulations shall apply in all cases where tariffs, for supply of electricity from Renewable Energy Sources and Non-fossil Fuel based co-generating stations to the distribution licenses within the state of Sikkim, is to be determined by the Commission under Section 62 of the Act.

Provided that in cases of wind, small hydro projects, biomass power based on Rankine cycle, non-fossil fuel based cogeneration projects, solar PV, Solar Thermal power projects, Biomass gasifier and Biogas power project, these regulations shall apply subject to the fulfillment of eligibility criteria specified in Regulation 4 of these regulations."

Further, Regulation 4(2) defining the eligibility criteria for applicability of the Renewable Energy sources regulations provides that these regulations shall apply to the Small Hydro Project with installed capacity lower than or equal to 25 MW. The extract of the regulation is reproduced below:

"Small hydro Project – located at the sites approved by State Nodal Agency / State Government using new plant and machinery and installed power plant capacity to be lower than or equal to 25 MW at single location."

The EPDS has filed this petition to approve generation ARR under Sikkim State Electricity Regulatory Commission (Terms and Conditions for determination of Tariff for Generation from Renewable Energy Sources) Regulations, 2017 for the FY 2018-19 to FY 2020-21.

The EPDS owns 10 mini hydroelectric power stations below 5 MW, with a total installed capacity of 15.70 MW, one hydroelectric project at Lower Lhagap with installed capacity of 12 MW & one hydroelectric project at Upper Rongnichu with installed capacity of 8 MW, the total installed capacity of 35.70 MW for 12 hydroelectric power stations, as detailed in Table below.

Table 9.1: Installed capacity of own hydro generating stations

Sl. No.	Name of Projects	Installed Capacity (In MWs)	Remarks
1	Lower Lhagap Hydel Power (LLHP)	2 x 6.00	Yet to operated
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
	Total	**35.70**	

Commission’s Analysis:

As verified of the above table, the Commission observed that 4 hydroelectric power stations below 5 MW, with a total installed capacity of 11.10 MW & one hydroelectric project with installed capacity of 12 MW, with a total installed capacity of 23.10 MW are generated or started for operation during the FY 2018-19 to FY 2020-21. Accordingly, the Commission has considered those 5 projects for calculating the Generation Tariff, as detailed in Table below:

Table 9.2: SHP considered by Commission

Sl. No.	Name of Projects	Installed Capacity (In MWs)	Remarks
1	Lower Lhagap Hydel Power (LLHP)	2 x 6.00	Yet to be operational
2	Jali Power House (JPH)	6 x 0.35	Operational
3	Meyongchu	2 x 2.00	Operational
4	Kalez	2 x 1.00	Operational
5	Rabomchu	2 x 1.50	Operational
	Total	**23.100**	

9.2 Capital Cost

Regulation 32 of the SSERC (Terms and Conditions for determination of Tariff for Generation from Renewable Energy Sources) Regulations, 2017 provides that the capital cost of Small Hydro Projects shall be determined as per the normative parameters defined in the regulation. The extract of the regulation is reproduced below:

"(1) The normative capital cost for FY 2018-19 for Small Hydro Projects during first year of control period shall be as follows:

Sl. No.	*Project Size*	*Capital Cost (₹in Lakh/MW)*
1	*Below 5 MW*	*779*
2	*5 MW to 25 MW*	*707*

(2) The capital cost for subsequent years shall be revised for projects to be commissioned in each subsequent year linked to capital cost indexation formula as outlined under Regulation 28."

Further, regulation 33 provides the Capital Cost Indexation Mechanism. The provisions of the regulation are reproduced below:

"The indexed capital cost in case of small hydro projects for each year of the control period shall be notified pursuant to notification of such indexed capital cost for small

hydro projects by Central Electricity Regulatory Commission in accordance with indexation mechanism stipulated under CERC RE Tariff Regulations, 2017."

EPDS has furnished Capital Cost for those 5 projects on the basis of the above calculation method for the FY 2018-19, FY 2019-20 & FY 2020-21, as detailed in table below:

Table 9.3: Capital Cost projected by EPDS

Sl. No.	Name of Station	Installed Capacity (MW)	Capital Cost (₹ in Crores)
1	Lower Lhagap Hydel Power (LLHP)	12.00	86.90
2	Jali Power House (JPH)	2.10	16.73
3	Meyongchu	4.00	31.86
4	Kalez	2.00	15.93
5	Rabomchu	3.00	23.90

Commission's Analysis:

The Commission has considered the SSERC (Terms and Conditions for determination of Tariff for Generation from Renewable Energy Sources) Regulations, 2017 for calculating the capital cost for the Control Period. The details of approved Capital Cost are in table below:

Table 9.4: Capital Cost approved by Commission

Sl. No.	Name of Station	Installed Capacity (MW)	Capital Cost (₹ in Crores)
1	Lower Lhagap Hydel Power (LLHP)	12.00	126.81
2	Jali Power House (JPH)	2.10	24.45
3	Meyongchu	4.00	46.57
4	Kalez	2.00	23.29
5	Rabomchu	3.00	34.93

9.3 Depreciation

As per the EPDS projection, Depreciation has been calculated in accordance with the regulation 19 of the SSERC (Terms and Conditions for Determination of Tariff for Generation from Renewable Energy Sources) Regulations, 2017. Since, depreciation has not been claimed/allowed earlier in respect of the SHPs, FY 2018-19 has been considered as the 1st year for the purpose of calculating depreciation. The provision in the regulation 19 for charging depreciation for the first 12 years at 5.28% per annum and subsequently by spreading the balance (WDV) over the remaining useful life of the asset upto 90% has been considered accordingly. The details of expenses projected by EPDS, are furnished in Table below:

Table 9.5: Depreciation projected by EPDS

(₹ in Crores)

Sl. No.	Name of Station	FY 2018-19	FY 2019-20	FY 2020-21
1	Lower Lhagap Hydel Power (LLHP)	4.56	4.56	4.56
2	Jali Power House (JPH)	0.88	0.88	0.88
3	Meyongchu	1.67	1.67	1.67
4	Kalez	0.84	0.84	0.84
5	Rabomchu	1.25	1.25	1.25

Commission's Analysis:

The Commission has considered the method for calculating Depreciation in accordance with the regulation 19 of the SSERC (Terms and Conditions for Determination of Tariff for Generation from Renewable Energy Sources) Regulations, 2017. Accordingly, after considering the above factors, the Depreciation are approved by the Commission for the control period as shown in table below.

Table 9.6: Depreciation approved by the Commission

(₹ in Crores)

Sl. No.	Name of Station	FY 2018-19	FY 2019-20	FY 2020-21
1	Lower Lhagap Hydel Power (LLHP)	6.03	6.03	6.03
2	Jali Power House (JPH)	1.16	1.16	1.16
3	Meyongchu	2.21	2.21	2.21
4	Kalez	1.11	1.11	1.11
5	Rabomchu	1.66	1.66	1.66

The Commission approves the Depreciation as per the above table for the control period of FY 2018-19 to FY 2020-21.

9.4 Operation & Maintenance Expenses

The EPDS has been projected the Operation and Maintenance Expenses in accordance with the regulation 22 of the SSERC (Terms and Conditions for Determination of Tariff for Generation from Renewable Energy Sources) Regulations, 2017. The same is detailed in Table below:

Table 9.7: Operation & Maintenance Expenses projected by EPDS

(₹ in Crores)

Sl. No.	Name of Station	FY 2018-19	FY 2019-20	FY 2020-21
1	Lower Lhagap Hydel Power (LLHP)	3.02	3.19	3.37
2	Jali Power House (JPH)	0.73	0.77	0.82
3	Meyongchu	1.40	1.48	1.56
4	Kalez	0.70	0.74	0.78
5	Rabomchu	1.05	1.11	1.17

Commission's Analysis:

The Commission observes that the EPDS has not projected the O&M Expenses as per regulation 22 of the SSERC (Terms and Conditions for Determination of Tariff for Generation from Renewable Energy Sources) Regulations, 2017. After considering the all factors as per regulation 22 of the SSERC (Terms and Conditions for Determination of Tariff for Generation from Renewable Energy Sources) Regulations, 2017, the O&M Expenses are approved by the Commission for the control period as detailed in Table below:

Table 9.8: Operation & Maintenance Expenses approved by the Commission

(₹ in Crores)

Sl. No.	Name of Station	FY 2018-19	FY 2019-20	FY 2020-21
1	Lower Lhagap Hydel Power (LLHP)	2.52	2.66	2.82
2	Jali Power House (JPH)	0.61	0.64	0.68
3	Meyongchu	1.16	1.23	1.30
4	Kalez	0.58	0.61	0.65
5	Rabomchu	0.87	0.92	0.97

The Commission approves the Operation & Maintenance Expenses as per the above table for the control period of FY 2018-19 to FY 2020-21.

9.5 Interest and Finance Charges

The EPDS has not projected interest and finance charges during the control period of FY 2018-19 to FY 2020-21.

Commission's Analysis:

Accordingly, the Commission has not considered interest and finance charges during the control period of FY 2018-19 to FY 2020-21.

9.6 Interest on Working Capital

The EPDS has projected Interest on working capital in accordance with the regulation 21 of the SSERC (Terms and Conditions for Determination of Tariff for Generation from Renewable Energy Sources) Regulations, 2017, on requirement of:

- Operation & maintenance expenses for one month;
- Receivables equivalent to 2 (Two) months of energy charges for sale of electricity calculated on the normative Capacity Utilistaion Factor (CUF);
- Maintenance Spare @ 15% of operation & maintenance expenses;

The rate of interest on working capital has been considered as per State Bank Advance Rate (SBAR) as on 1st April of the respective year i,e. 01.04.2017.

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

Table 9.9: Interest on Working Capital projected by EPDS

(₹ in Crores)

Sl. No.	Name of Station	FY 2018-19	FY 2019-20	FY 2020-21
1	Lower Lhagap Hydel Power (LLHP)	0.26	0.27	0.28
2	Jali Power House (JPH)	0.06	0.06	0.06
3	Meyongchu	0.11	0.11	0.12
4	Kalez	0.05	0.06	0.06
5	Rabomchu	0.08	0.09	0.09

Commission's Analysis:

As per Regulation as per 21 of the SSERC (Terms and Conditions for Determination of Tariff for Generation from Renewable Energy Sources) Regulations, 2017, 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 Table below:

Table 9.10: Interest on Working Capital approved by the Commission

(₹ in Crores)

Sl. No.	Name of Station	FY 2018-19	FY 2019-20	FY 2020-21
1	Lower Lhagap Hydel Power (LLHP)	0.27	0.28	0.28
2	Jali Power House (JPH)	0.06	0.06	0.06
3	Meyongchu	0.11	0.12	0.12
4	Kalez	0.06	0.06	0.06
5	Rabomchu	0.08	0.09	0.09

The Commission approves the Interest on Working Capital as per the above table for the control period of FY 2018-19 to FY 2020-21.

9.7 Return on Equity

The EPDS has not projected Return on Equity during the control period of FY 2018-19 to FY 2020-21

Commissions Analysis:

Regulation 22 of the SSERC (Terms and Conditions for Determination of Tariff for Generation from Renewable Energy Sources) Regulations, 2017, provides for Return on Equity at 14% p.a.

The EPDS 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.**

9.8 Aggregate Revenue Requirement (ARR)

The Aggregate Revenue Requirement for the generating function for FY 2018-19 to FY 2020-21 projected by the EPDS as detailed in Table below:

Table 9.11: Projectwise Aggregate Revenue Requirement projected by EPDS

(₹ in Crores)

Sl. No.	Name of Station	FY 2018-19	FY 2019-20	FY 2020-21
1	Lower Lhagap Hydel Power (LLHP)	7.83	8.01	8.21
2	Jali Power House (JPH)	1.67	1.71	1.76
3	Meyongchu	3.18	3.26	3.35
4	Kalez	1.59	1.63	1.68
5	Rabomchu	2.38	2.45	2.51
6	**Total**	**16.65**	**17.06**	**17.51**

Commissions Analysis:

The Commission has approved the Aggregate Revenue Requirement for FY 2018-19, FY 2019-20 & 2020-21 based on approval costs as detailed in table below:

Table 9.12: Projectwise Aggregate Revenue Requirement approved by the Commission

(₹ in Crores)

Sl. No.	Name of Station	FY 2018-19	FY 2019-20	FY 2020-21
1	Lower Lhagap Hydel Power (LLHP)	8.81	8.96	9.13
2	Jali Power House (JPH)	1.83	1.87	1.90
3	Meyongchu	3.48	3.55	3.63
4	Kalez	1.74	1.78	1.81
5	Rabomchu	2.61	2.67	2.72
6	**Total**	**18.48**	**18.83**	**19.19**

Table 9.13: Aggregate Revenue Requirement approved by the Commission

(₹ in Crores)

Sl. No.	Name of Station	FY 2018-19	FY 2019-20	FY 2020-21
1	O&M Expense	5.74	6.07	6.41
2	Return on Equity	0.00	0.00	0.00
3	Interest on Loan	0.00	0.00	0.00
4	Depreciation	12.17	12.17	12.17
5	Interest on Working Capital	0.57	0.59	0.61
6	**Total**	**18.48**	**18.83**	**19.19**

The Commission approves ARR for the generation function for the FY 2018-19, FY 2019-20 and FY 2020-21 at ₹ 18.48 Crores, ₹ 18.83 Crores and ₹ 19.19 Crores respectively.

10. 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 21st March, 2017 for the FY 2017-18, 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 2:

“The status with regard to outstanding billing arrears in respect of consumers, particularly involving Govt. Departments including Public sector Undertakings, Central Govt. / Army establishments, etc., was found to be disturbing. Immediate steps to recover such outstanding arrears need to be taken up on a war footing. The EPDS is directed to consider the option to seek legal remedies under section 56 of the Electricity Act for realization of all unsettled bills”

Compliance:

The matter related with the electricity arrears of various Government Non-Residential buildings was discussed at the highest level in the Government in the month of August 2017 highlighting the observation of the Hon’ble Commission. The Chief Secretary of the State has issued a circular to all Heads of Department as a follow up action where it has been clearly stated that the EPDS will disconnect the power supply of Government Buildings if two months or more electricity bills remains unpaid for the current financial year. As regard to the electricity arrears of the past years, Departments have been directed to reconcile within two months or else the figure shown by EPDS will be validated as the final figure. Once the same is done then the matter of past arrears will be reverted back to the highest forum in the State Government for appropriate course of action. A reminder letter from PCE cum Secretary, Energy & Power Department on this subject was again issued on …….. to all heads of Department. The copy of the circular, consolidated arrear statement up to 31st March 2017 against each Department & reminder letter issued from the office of PCE cum Secretary is submitted separately.

Commission's Comments:

The Commission commends the efforts done by the EPDS for collection of outstanding arrears. The Commission advises the EPDS to follow up the matter so that a conclusive decision is taken by the State Government.

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:

EPDS has been able to tap some fund the Central Government under the flag ship programme of IPDS & DDUJGY in this fiscal year. In both the schemes priority has been given to metering. Consumers & feeder metering will be taken up simultaneously. Here, the Hon'ble Commission may kindly note that under IPDS, EPDS is introducing prepaid metering for the first in the State of Sikkim. In regard to high end consumers remote metering has commenced which is linked with R-APDRP software system for bill generation, RTGS payment etc. The details of HTS consumer covered till 31st October 2017 is submitted separately. Both the DDUJGY & IPDS are in tendering stages.

Commission's Comments:

The Commission takes note of the steps taken by the EPDS and suggests that stronger efforts need to be made by the EPDS for reduction T&D losses. The EPDS needs to give top priority to bring down the T&D losses to the National level.

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:

As the Hon'ble commission is aware that most of the capital intensive schemes are implemented under central mode of funding, metering is an important component of such flagship schemes (DDUGJY and IPDS). In the mean time EPDS has formed flying squads comprising of senior officers who randomly check consumer premises for detection of unauthorised, illegal connection etc. Also this team provides support to the field officers during disconnection drives. A copy of the office order issued in this regard is submitted separately.

Commission's Comments:

The Commission appreciates the steps undertaken by the EPDS and advises the EPDS to continue to work towards metering of all feeders and DTs.

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 and compilation of Annual Accounts has been compiled, however, the figures are being reconciled and the same shall be submitted by 15.01.2018.

Commission's Comments:

The Commission feels that un-bundling of the EPDS is the only way ahead which will pave the way for proper accounting, preparartion of balance sheets and profit & loss statements etc.

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:

Except for Gangtok and Tadong Towns, the billing & data recording etc of sale of electricity is being done manually. Unless all billing centers have automated system for revenue related activities proper and accurate data generation is not possible. The

Department needs to explore funding mechanism to implement the MIS as directed by the Hon’ble commission.

Commission’s Comments:

The Commission has taken note of the matter, Directive is partially complied.

Directive 13: Consumer Awareness/ Sensitisation

EPDS is directed to carry out “Consumer Awareness / Sensitisation’ campaigns so as to educate the consumers and the general public on the various initiates and subsidies announcement by the government and manner of obtaining these benefits.

EDPS is also directed to create awareness and sensitise its employees on the need to be fully aware of various acts, rules & regulations, safety practices etc., EPDS may consider imparting trainings, arrangement workshops etc. for its employees.

Compliance:

As, directed by the Hon’ble Commission, the matter will be taken up with Food, Civil Supplies & Consumer Affairs Department, Govt of Sikkim so that consumer awareness programmes of EPDS can be clubbed and jointly conducted with them.

Commission’s Comments:

Nothing much is being done by the EPDS for consumer awareness. The Commission feels that the EPDS needs to do more for consumers awareness.

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:

A high powered committee has been constituted and notified vide memo no : 22/Home/2017 dated 03/05/2017 for unbundling of power sector in the State of Sikkim. The terms of reference of the committee are:

a. To examine the Power Sector in the State and suggest models for unbundling as a part of power sector reforms.

b. The committee shall devise its own procedure, appoint consultants, appoint subcommittees and call for information as and when required from the concerned Departments/Organizations.

c. The report of the Committee shall to be comprehensive showing complete roadmap of unbundling, time frame of unbundling and any other relevant issues related to unbundling of Power Sector.

d. The Committee shall submit its report within two months from the date of issue of notification.The committee held its first meeting on 3rd June 2017 at New Delhi and both the notification and record of discussion of the first meeting is submitted separately.

Commission's Comments:

The EPDS is directed to keep the Commission updated on the progress achieve towards unbundling.

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 proposal for setting up CGRFs in all the districts in under consultative process as it involves officers of Finance, Revenue and Expenditure Department, Govt of Sikkim as members. As and when the same is concurred by them and approved by the Government, the Hon'ble commission will be intimated.

Commission's comments:

The Commission is pained to note that the CGRFs have not been set up in the other districts of the State even after considerable period of time. The Commission directs the EPDS to vigorously pursue the proposal for early approval by the State Government.

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 advice and suggestion of the Hon'ble commission will be followed after the CGRFs are constituted in all the districts of the State.

Commission's comments:

The Commission finds the EPDS lacking in its efforts towards timely constitution of the CGRFs in all the four districts and conduct of awareness programs on the functioning of the Consumer Grievance Cell. It is advised that in the meanwhile the EPDS should make efforts to speed up setting up of Consumer Grievance Cells in all the four districts .

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/M^2/Day); Namchi is 4.79 KWh/M^2/Day) and Gangtok 2.89 KWh/M^2/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:

The observation of the Hon'ble commission has been noted please.

Commission's comments:

No proposals/plans appears to be in the pipeline for s development of small hydro/wind projects by the EPDS. EPDS should consider setting up of new small hydropower projects to add to its generating capacity.

<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:

Re-assessment of existing small hydro plants is required to see the cost benefit ratio of its continued operation. 8 MW Upper Rognichu HEP has been de-commissioned and as of now the installed capacity has been reduced is 28.60 MW. Major renovation of 12 MW Lower Lagyap Hydel Project is underway and once completed its expected to supply around 40-45 MU annually. Some funds have been provided this fiscal year to restart Rabomchu & Khalez Khola HEPs.

Commission's comments:

The own generation of the EPDS has not improved much. The EPDS need to take up repair/maintenance/renovation works of the powerhouses which will give better output with little investment. Sufficient outlay of funds need to be made for repair and maintenance of those projects which can boost 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 observation of the Hon'ble Commission has been noted please.

Commission's comments:

The EPDS has not complied to the directives of the Commission. The Commission reiterates the directives.

Directive 3: Growing Manpower

The Commission observes that the major contributor towards the annual revenue gap of the EPDS is the ever growing "Employee Cost". The EPDS must take strict measure to check the growing number of its employees. The EPDS is advised to consider deputing its excess manpower to other State Government Departments and make a time bound program to reduce its employee size. The EPDS is directed to work out a plan in consultation with the Department of Personnel & Administrative Reforms and Training, Government of Sikkim.

Compliance:

The observation of the Hon'ble Commission been noted please.

Commission's comments:

The Commission reiterates the directives.

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:

This directive pertains to review of State Building Code and introducing mandatory provisions for installations of rooftop solar projects on all Government Buildings, Pharmaceuticals, Industrial units etc. As of now no such policy exists, SREDA will take steps towards drafting the solar policy and stress the need of such provisions to be included in the State Building Code.

Commission's comments:

The Directive is partially complied.

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:

Unless metering at all voltage level is completed, the energy auditing is not possible. As and when metering under IPDS & DDUGJY is completed, the energy audit will be undertaken.

Commission's comments:

EPDS is directed to make all possible efforts for metering at all voltage levels so that energy auditing can be done.

<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:

Ministry of New and Renewal Energy (MNRE) provides 70 % subsidy to domestic consumers and approximately 60% subsidy as performance based incentive to Government Buildings on bench mark cost of the plant approved by MNRE. SREDA has prepared a plan to undertake the scheme targeting residential buildings for financial year 2017-2018, with proposed capacity of 1(one) Mega Watt peak under net metering as per SSERC regulations. The area of rooftop is not readily available at present and mapping of rooftop space for Government Buildings is expected to be completed, with support from Building & Housing Department by March 2017, as the same has already been initiated by SREDA.

Commission's comments:

The EPDS/SREDA need to take suitable actions towards timely implementation of the roof top solar schemes already approved by the State Government. The EPDS is directed to keep the Commission updated on the status of the implementation of the rooftop solar schemes already approved/sanctioned.

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 observation of the Hon'ble Commission is noted pl.

Commission's comments:

The Directive is partially complied.

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 prepaid metering will be taken up under IPDS as a pilot project in the fiscal year 2017-2018.

Commission's comments:

Prepaid metering will go way long way in reduction of losses and improving revenue collection of the EPDS. The EPDS is directed to furnish the details of the pilot project being implemented under IPDS to the Commission alongwith the midterm review petition.

<u>Fresh Directives (FY 2018-19)</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.

Directive 2: RPO Compliance

The EPDS is directed to place details of its RPO Compliance of last three years in public domain. The details be placed in the official website of the Department for information of public as well as various Ministries, Departments and Agencies.

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 elecrtcity vis-à-vis safety.

11. TARIFF PRINCIPLES AND DESIGN

11.1 Background

(a) The Commission in determining the revenue requirement of EPDS for the 1st MYT control period of FY 2018-19 to FY 2020-21 and retail tariff for the FY 2018-19 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 1st 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. Now, the EPDS had filed its petition before the Hon'ble Commission for the FY 2018-19 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.

11.2 Tariff Proposed by the EPDS and Approved by the Commission

(a) Existing & Proposed Tariff

EPDS in its tariff petition for the FY 2018-19 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 11.1: Existing Tariffs v/s proposed Tariffs for FY 2018-19

Sl. No.	Category of Consumers	Existing Rate Paisa/KWH	Proposed Rate Paisa/KWH
1	2	3	4
1	**Domestic**		
a)	Up to 50 units	110	170
b)	51 to 100 units	234	
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	450
b)	51 to 200 units	561	
c)	201 to 400 units	594	600
d)	401 & above	635	640
3	**Public lighting**		
	Rural Areas	270	270
	Urban Areas	500	500
4	**Industrial**		
A	HT		
a)	HT (AC) above 3.3 KV		
b)	Upto 100 KVA	336	350
c)	100 - 250 KVA	389	400
d)	250- 500 KVA	459	470
e)	500 KVA & above	496	510
B	LT (Rural)		
a)	Up to 500 units	250	350
b)	501 - 1000 units	440	
c)	1001 & above	580	585
C	LT (Urban)		
a)	Up to 500 units	528	575
b)	501 - 1000 units	616	
c)	1001 & above	713	715
5	**Bulk supply**		
a)	LT	606	606
b)	HT	657	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/2018-19/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 11.2: Tariffs approved by the Commission for FY 2018-19

Sl. No.	Category of Consumers	Monthly Minimum Charges (₹/Consumer)	Demand Charges (HT Supply only) (₹/KVA/Month)	Approved Energy Charges (Paisa/KWH)
1	**Domestic**			
a)	Up to 50 units	Single Phase - 40 3 Phase - 200		110
b)	51 to 100 units			234
c)	101-200 units			365
d)	201 to 400 units			457
e)	401 & above			493
2	**Commercial**			
a)	Up to 50 units	Single Phase - 200 3 Phase - 500		330
b)	51 to 200 units			560
c)	201 to 400 units			600
d)	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	350
c)	100 - 250 KVA		250	400
d)	250- 500 KVA		290	470
e)	500 KVA & above		555	510
B	LT (Rural)			
a)	Up to 500 units	120		350
b)	501 - 1000 units			440
c)	1001 & above			580
C	LT (Urban)			
a)	Up to 500 units	200		530
b)	501 - 1000 units			620
c)	1001 & above			715
5	**Bulk supply**			
a)	LT	200		650
b)	HT			660

Details are given in tariff schedule in the Appendix.

(d) Change of Tariff Component

The Commission has approved some changes in clause IV of Tarriff Schedule of this Tariff Order in High Tension Industrial Supply (HTIS). The details are provided in the Appendix of this Tariff Order.

(e) Miscellaneous charges and important conditions of supply

Miscellaneous charges and important conditions of supply furnished by EPDS are examined and approved. These are given in tariff schedule appended as appendix.

This order shall come into force from 01.04.2018 and shall remain effective till revised/ amended by the Commission.

This Order will be placed in the website of the Comission and copies will be sent to the Energy & Power Department, Government of Sikkim, Central Electricity Regulatory Commision and Central Elecrtcity Authority.

The Commission directs the Energy & Power Department, Government of Sikkim to publish the tariff approved by the Commission in two newspapers having wide circulation in the State.

Accordingly,the Case No. MYT/2018-19/P-01/EPDS stands disposed off.

Sd/-

(N. R. Bhattarai)

Chairperson

Place: Gangtok.

Date: 28.03.2018.

12. WHEELING CHARGES

12.1 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 12.1: Allocation Matrix

(In %)

Sl. No.	Particulars	Wire Business	Retail Supply 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 12.2: Segregation of wires and Retail Supply Costs for FY 2018-19

(₹ in Crores)

Sl. No.	Particulars	Approved Total Cost	Wire Business	Retail Supply Business
1	Cost of Fuel	0.18	-	0.18
2	Cost of Generation	18.48	-	18.48
3	Cost of Power Purchase	222.89	-	222.89
4	Intra State Transmission Charges	40.80	40.80	-
5	Employee Costs	78.78	47.27	31.51
6	Repair & Maintenance Expenses	13.95	12.55	1.39
7	Administrative and General Expenses	0.85	0.42	0.42
8	Depreciation	16.41	14.77	1.64
9	Interest Charges	-	-	-
10	Interest on Working Capital	7.68	0.77	6.92
11	Return on NFA/Equity	-	-	-
12	Less: Non Tariff Income	1.59	0.16	1.43
13	**Total**	**398.42**	**116.42**	**282.00**

Table 12.3: Segregation of wires and Retail Supply Costs for FY 2019-20

(₹ in Crores)

Sl. No.	Particulars	Approved Total Cost	Wire Business	Retail Supply Business
1	Cost of Fuel	0.18	-	0.18
2	Cost of Generation	18.83	-	18.83
3	Cost of Power Purchase	236.22	-	236.22
4	Intra State Transmission Charges	42.60	42.60	-
5	Employee Costs	83.51	50.11	33.40
6	Repair & Maintenance Expenses	14.78	13.31	1.48
7	Administrative and General Expenses	0.90	0.45	0.45
8	Depreciation	19.28	17.35	1.93
9	Interest Charges	-	-	-
10	Interest on Working Capital	7.91	0.79	7.12
11	Return on NFA/Equity	-	-	-
12	Less: Non Tariff Income	1.62	0.16	1.46
13	**Total**	**422.59**	**124.44**	**298.15**

Table 12.4: Segregation of wires and Retail Supply Costs for FY 2020-21

(₹ in Crores)

Sl. No.	Particulars	Approved Total Cost	Wire Business	Retail Supply Business
1	Cost of Fuel	0.18	-	0.18
2	Cost of Generation	19.19	-	19.19
3	Cost of Power Purchase	250.50	-	250.50
4	Intra State Transmission Charges	44.51	44.51	-
5	Employee Costs	88.52	53.11	35.41
6	Repair & Maintenance Expenses	15.67	14.10	1.57
7	Administrative and General Expenses	0.95	0.48	0.48
8	Depreciation	21.35	19.21	2.13
9	Interest Charges	-	-	-
10	Interest on Working Capital	8.16	0.82	7.34
11	Return on NFA/Equity	-	-	-
12	Less: Non Tariff Income	1.65	0.17	1.49
13	**Total**	**447.38**	**132.06**	**315.31**

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 2018-19, FY 2019-20 and FY 2020-21 and shown in the table below:

Table 12.5: Wheeling Tariff approved by the Commission

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	ARR for wheeling function approved by the Commission (₹ in Crores)	116.42	124.44	132.06
2	Total sales within State - approved (In MUs)	385.20	427.91	472.24
3	**Wheeling Tariff (₹/Kwh)**	**3.02**	**2.91**	**2.80**

The Commission approves wheeling Tariff at ₹ 3.02/Kwh, ₹ 2.91/Kwh & ₹ 2.80/Kwh for the FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

13. FUEL AND POWER PURCHASE COST ADJUSTMENT

13.1 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

13.2 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:

$$\text{FPPCA (Ps./kWh)} = \frac{Q_c(RC_2 - RC_1) + Q_0(RO_2 - RO_1) + Q_{pp}(R_{Pp2} - R_{pp1}) + V_z + A}{(QP_{g1} + Q_{pp1} + Q_{pp2}) \quad X \quad \left[1 - \frac{L}{100}\right]} \quad X \quad 100$$

Where,

Q_c = Quantity of coal consumed during the adjustment period in Metric Tons (MT).

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

R_{c1} = Weighted average base rate of coal supplied ex-power station coal yard as approved by the Commission for the adjustment period in ₹/MT

R_{c2} = Weighted average base rate of coal supplied ex-power station coal yard for the adjustment period in ₹/MT

Q_o = Actual Quantity of oil (in KL) consumed during the adjustment period or normative oil consumption as per Tariff order whichever is less.

R_{o1} = Weighted average base rate of oil ex-power station (₹/KL) approved by the Commission for the adjustment period.

R_{o2} = Weighted average actual rate of oil ex-power station supplied (₹/KL) during the adjustment period.

Q_{pp} = 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_{pp2} = 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 (₹/kWh)

Q_{pg} = Own power generation (kWh)

Q_{pg1} = Own Power generation (kWh) at generator terminal – approved auxiliary consumption

L = 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_Z = 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.

13.3 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 2018-19

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)									
a)	Up to 50 units	98,372			42.82		1.10	-	4.71	4.71
b)	51 to 100 units	71,385			27.07		2.34	-	6.33	6.33
c)	101-200 units	17,153			18.13		3.65	-	6.62	6.62
d)	201 to 400 units	11,643			14.59		4.57	-	6.67	6.67
e)	401 & above	8,527			9.12		4.93	-	4.50	4.50
	Total	**98,372**	**42.90**		**111.74**			**-**	**28.83**	**28.83**
2	Commercial (CLT)									
a)	Up to 50 units	11,765			6.41		3.30	-	2.12	2.12
b)	51 to 200 units	10,594			9.16		5.60	-	5.13	5.13
c)	201 to 400 units	6,468			13.13		6.00	-	7.88	7.88
d)	401 & above	1,785			14.21		6.40	-	9.09	9.09
	Total	**11,765**	**19.20**		**42.90**			**-**	**24.22**	**24.22**
3	Public lighting									
a)	Rural Areas	7			0.09		3.00	-	0.27	0.27
b)	Urban Areas	28			0.19		5.00	-	0.95	0.95
	Total	**35**	**0.16**		**0.28**			**-**	**0.12**	**0.12**
4	**Temporary**	**-**	**-**		**1.60**			**-**	**1.21**	**1.21**
5	Industrial									
A	HT									
a)	HT (AC) above 3.3 KV									
b)	Upto 100 KVA	479		16,700	37.78	200.00	3.50	4.01	13.22	17.23
c)	100 - 250 KVA	142		12,300	37.92	250.00	4.00	3.69	15.17	18.86
d)	250- 500 KVA	100		25,800	48.95	290.00	4.70	8.98	23.01	31.99
e)	500 KVA & above	51		33,000	71.56	555.00	5.10	21.98	36.49	58.47
	Total HT	**479**	**60.05**		**196.20**			**38.65**	**87.89**	**126.55**
B	LT (Rural)									
a)	Up to 500 units	106			0.47		3.50	-	0.16	0.16
b)	501 - 1000 units	68			0.32		4.40	-	0.14	0.14
c)	1001 & above	30			0.50		5.80	-	0.29	0.29
	Total	**106**		**650**	**1.29**	**120.00**		**0.09**	**0.60**	**0.69**
C	LT (Urban)									
a)	Up to 500 units	150			0.05		5.30	-	0.02	0.02
b)	501 - 1000 units	64			0.04		6.20	-	0.02	0.02
c)	1001 & above	53			0.05		7.15	-	0.03	0.03
	Total	**150**		**900**	**0.14**	**200.00**		**0.22**	**0.07**	**0.30**
	Total LT (B+C)	**256**	**0.74**		**1.43**			**0.31**	**0.68**	**0.99**
	Total Industrial (A+B+C)	**735**	**60.79**		**197.63**			**38.96**	**88.58**	**127.54**
6	Bulk supply									
a)	LT	1,414		85	2.82	200.00	6.50	0.02	1.83	1.85
b)	HT	161		125	28.22	200.00	6.60	0.03	18.63	18.66
	Total	**1,575**	**11.40**		**31.05**			**0.05**	**20.46**	**20.51**
7	**Grand Total**	**1,12,482**	**134.46**		**385.20**			**39.01**	**163.41**	**202.42**

Annexure – 2A

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

Publication Date: 14th February, 2018

Annexure – 2B

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

Publication Date: 28th February, 2018


NEWS

300 patients to benefit from free cataract operation camp at CRH

JAC takes power outage issue to Power secretary

Jio wins best mobile operator service award

'OBITUARY'

District-level workshop on TB control

ADMISSION NOTICE 2018-19

NOTICE

This is for information to the Public that permits for Motor Biking for Tourism purpose in Protected Areas of Sikkim will be issued by Tourism and Civil Aviation Department w.e.f 1st March, 2018.

Hence, all applications are requested to kindly contact Tourism and Civil Aviation Department for the same.

Sd/-
Deputy Secretary-II (Confdl.)
Home Department

Date: 27.2.18

National Entrance Screening Test 2018

NEST 2018

For detailed information on NEST 2018 application procedure and previous years' question papers please visit NEST 2018 website: www.nestexam.in

Application process closes soon!

Application can be made only through online portal.
To apply ONLINE, visit www.nestexam.in

Date of Examination: June 02, 2018 (Saturday) 10:00 am - 1:00 pm

HIGH COURT OF SIKKIM
GANGTOK

NOTICE

SIKKIM STATE ELECTRICITY REGULATORY COMMISSION

NOTICE FOR PUBLIC HEARING

Annexure – 2C

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

Publication Date: 14th February, 2018

गान्तोक, बुधबार, १४ फरवरी, २०१८ — विविध — समय दैनिक- ६

गोरखाल्याण्डको सन्दर्भमा संवैधानिक प्रावधान तथा प्रशासनिक मोडल'-माथि संगोष्ठी

[illegible]

आरीटार निरतिरे धारामा बेटी बचाओ बेटी पढाओ-माथि कार्यक्रम

[illegible]

सांस्कृतिक तथा नृत्य....

[illegible]

चालक लाइसेन्सको निम्ति अब..

[illegible]

श्रीनगरको करन नगरमा २४ घण्टापछि पनि जारी छ भिडन्त

[illegible]

शैक्षिक सत्र २०१८ को लागि मुख्यमन्त्री मेधावी छात्रवृत्ति योजनाका लागि चयनीत विद्यार्थीहरूको सूची

Sr. No	ROLL NO	NAME	SCHOOL	DISTRICT	SEX	CATEGORY
1–50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SIKKIM STATE ELECTRICITY REGULATORY COMMISSION

P. O. Tadong, Sikkim -737102

Tel: (03592)281081, 281088, 280081, Fax. (03592) 281044

Email: sikkim.serc@gmail.com

No. [illegible] Date: [illegible]

NOTICE FOR PUBLIC HEARING

The Energy & Power Department, Government of Sikkim, a deemed licensee engaged in distribution and retail sale [illegible] Business Plan, Aggregate Revenue Requirement (ARR) & Multi Year Tariff for the 3-Year Control Period from F.Y. 2018-19 to F.Y. 2020-21 before the Sikkim State Electricity Regulatory Commission (SSERC). [illegible]

The Energy & Power Department has already issued "Public Notice" on the Petition [illegible] Business Plan, ARR and Tariff proposal. [illegible] Sikkim State Electricity Regulatory Commission (Conduct of Business) Regulations, 2012. [illegible] 2012.

Such Objections or comments shall be submitted in 5 (five) copies [illegible] 737102 on or before 28th February 2018.

The 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
12th March 2018	10.30 AM to 2.30 PM	Meeting Hall, Chintan Bhawan, Gangtok, East Sikkim	All categories of Consumers

Interested public/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/-
Director (Tariff & Technical)
Sikkim State Electricity Regulatory Commission

Annexure – 2D

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

Publication Date: 28th February, 2018

गान्तोक, बुधवार, २८ फरवरी, २०१८ विविध पृष्ठ ६

सालघारी स्कूलमा शिक्षक-अभिभावकमाझ सभा

[illegible]

टाशीडिङमा १ अनि २ मार्चमा बुम्छु पूजा हुने

[illegible]

स्कूल कप्तानमा सीएमएसएस-का विद्यार्थी चयन

[illegible]

पवन दृष्टि परिवारलाई सामग्री प्रदान

[illegible]

क्षयरोग नियन्त्रण एवं उन्मूलन विषय कार्यशाला सम्पन्न

[illegible]

SIKKIM STATE ELECTRICITY REGULATORY COMMISSION

P. O. Tadong, Sikkim -737102

Tel: (03592)281081, 281088, 281081, Fax. (03592) 281044

Email: sikkim.serc@gmail.com

No. [illegible] Date: 12.02.2018

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 Approval of Business Plan, Aggregate Revenue Requirement (ARR) & Multi Year Tariff for the 3 Year Control Period from 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. [illegible]. The Petition can be viewed and downloaded from the SSERC website [illegible] and also from the official website of the Energy & Power Department [illegible] Tariff Proposal 2018-19).

[illegible]

Such 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, [illegible] on or before 25th February 2018.

The 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
12th March, 2018	10.30 AM to 2.30 PM	Meeting Hall, Chintan Bhawan, Gangtok, East Sikkim.	All categories of 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/-
Director (Tariff & Technical)
Sikkim State Electricity Regulatory Commission

Annexure – 2E

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

Publication Date: 14th February, 2018

NeighbourhoodWATCH

SummitTIMES | 14 February 2018 | 5

Kanchanjunga Stadium handed over to WB Govt for renovation

Ford seeks Mamata's help for world tourism centre at Mayapur

CEC Rawat to inspect poll-preparedness in Meghalaya

Chinese Consulate holds 'Spring Festival' in Kolkata

NIA summons three Nagaland CMO officials for questioning

Indian Army chief to meet Nepal's Prez, PM

Arunachal Budget session kicks off from March 9

Ghewa Ceremony

Sincerely,
R. S. Lama
G. S. Lama
Sandeep Lama

SIKKIM CRICKET ASSOCIATION

This is to inform all the members of SCA that AGM and Election of Executive Body will be held at Hotel Sonam Delek, Tibet Road, Gangtok on 25th February 2018 at 11.00 AM sharp.

MR. SONAM PALDEN BHUTIA,
GENERAL SECRETARY,
SIKKIM CRICKET ASSOCIATION.

TOURISM & CIVIL AVIATION
GOVERNMENT OF SIKKIM
PARYATAN BHAWAN, TADONG, GANGTOK.
EAST SIKKIM- 737102.

NOTICE

It is for information for all the Homestay operators/owners (private & Government) that Tourism and Civil Aviation Department, Government of Sikkim is organizing one day Training Programme in all the four districts as per the schedule given below:-

East District: 6th March 2018 at Paryatan Bhawan, Gangtok.
North District: 8th March 2018 at Zilla Panchayat Bhawan, Mangan.
South District: 10th March 2018 at SICB Karfectar, Jorethang.
West District: 12th March 2018 at Zilla Panchayat Bhawan, Gyalshing.

Therefore, all the interested homestay operators/owners may submit their application to the Joint/Deputy Director of Tourism and Civil Aviation of concerned district on or before 24th February 2018 (during office hour) beyond which no application shall be entertained.

The Department shall issue participation certificate to all on completion of said training. However, no TA/DA shall be paid for attending the training programme.

DEPUTY SECRETARY (ADM.)
TOURISM AND CIVIL AVIATION.

SIKKIM STATE ELECTRICITY REGULATORY COMMISSION
P. O. Tadong, Sikkim -737102
Tel: (03592)201081, 281069, 280881, Fax. (03592) 281044
Email: sikkim.serc@gmail.com

Date: 12.02.2018

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 Approval of Business Plan, Aggregate Revenue Requirement (ARR) & Multi Year Tariff for the 3-Year Control Period from 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/2018-19/P-21/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 **(www.powerdepartmentsikkim.com/Tariff Proposal 2018-19)**.

The Energy & Power Department has already issued "Public Notice" on the Petition soliciting objections and suggestions from the consumers and stake holders on the proposed Business Plan, ARR and Tariff proposal. As per the said "Public Notice", 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 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**. The Form SSERC-3 can be downloaded from the website of the SSERC (www.sserc.in/Regulations/ Sikkim State Electricity Regulatory Commission (Conduct of Business) Regulations, 2012.

Such 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 25th February 2018**.

The 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
12th March 2018	10.30 AM to 2.30 PM	Meeting Hall, Chintan Bhawan, Gangtok, East Sikkim	All categories of 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/-
DIRECTOR (TARIFF & TECHNICAL)
SIKKIM STATE ELECTRICITY REGULATORY COMMISSION.

Annexure – 2F

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

Publication Date: 1st March, 2018

CapitalTIMES

SummitTIMES | 01 March 2018 | 3

In conversation with AROGYA...

Forest Minister inaugurates basketball court at Chungthang

Sikkim Winter Theatre Festival concludes

Niyam Tah Yehi Cha staged on 4th day of Winter Theatre Festival

HC pulls up Power Grid Corp for...

SIKKIM STATE ELECTRICITY REGULATORY COMMISSION

P. O. Tadong, Sikkim -737102

Tel: (03592)201051, 201066, 280091, Fax. (03592) 201044

Email: sikkim.serc@gmail.com

No. 318/SSERC/2017-18/65 Date: 13.02.2018

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 Approval of Business Plan, Aggregate Revenue Requirement (ARR) & Multi Year Tariff for the 3-Year Control Period from 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/2018-19/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 (**www.powerdepartmentsikkim.com/Tariff Proposal 2018-19**).

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Sd/-

DIRECTOR (TARIFF & TECHNICAL)

SIKKIM STATE ELECTRICITY REGULATORY COMMISSION.

DIRECTORATE OF TECHNICAL EDUCATION, HRDD, GOVERNMENT OF SIKKIM

PUBLIC AUCTION NOTICE

RURAL MANAGEMENT & DEVELOPMENT DEPARTMENT

GOVERNMENT OF SIKKIM, GANGTOK- 737101

NOTICE INVITING TENDER

APPENDIX

TARIFF SCHEDULE FOR THE FY 2018-19

I. DOMESTIC SUPPLY (DS):

Type of Consumer:

Power supply to private house, residential flats and Government 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)

(b) Rate:

Units Consumption	Paisa per kWh (Unit)
Up to 50	110
51 to 100	234
101 to 200	365
201 to 400	457
Consumption exceeding 400 units	493

(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 200	560	
201 to 400	600	
Consumption exceeding 400 units	640	
Demand Charges - For those establishments whose sanctioned load is more than 25 KVA and does not have independent transformer but run their unit through shared transformers.	**Rural**	**Urban**
	₹ 60/KVA/Month plus energy charges shown above	₹ 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 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**	
Area	**Rural**	**Urban**
Upto 500	350	530
501 to 1000	440	620
1001 & Above	580	715
Demand Charge – for those establishments whose sanction load is more than 25 KVA & does not have independent transformer but run their unit through shared transformers.	₹ 60/kVA/Month plus energy charges as shown above	₹ 100/kVA/Month plus energy charge as shown above

(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 above 3.3 kV.

(a) Nature of supply:

High Tension AC, above 3.3 kV, 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 meters are also allowed to install on LT side of those consumers having transformer capacity less than 200 KVA, but in such case the assessed energy consumption shall be grossed up by 4% to account for the transformation loss .

(b) Rate:

Units Consumption	Charges
Up to 100 kVA Demand Charge Plus Energy Charge	₹ 200/kVA/Month + 350 Paisa/Unit
Above 100 to 250 kVA Demand Charge Plus Energy Charge	₹ 250/kVA/Month + 400 Paisa/Unit
Above 250 to 500 kVA Demand Charge Plus Energy Charge	₹ 290/kVA/Month + 470 Paisa/Unit
Above 500 kVA Demand Charge Plus Energy Charge	₹ 555/kVA/Month + 510 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 above 3.3 kV

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 (11kV or 66 kV)	660

(c) Monthly Minimum Charge:

LT (430/230	₹ 200 /kVA of Sanction Load
HT (11kV or 66	₹ 200/kVA 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 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.**	Domestic rate is applicable.

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. 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.

XII. 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

XIII. TESTING OF METERS

i)	Energy Meters Single Phase	₹ 200
ii)	Other Metering Instruments	₹ 250

XIV. 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.

XV. 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

XVI. 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.

XVII. 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.

XVIII. 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 submit an application for new service connection or should apply for additional supply well in advance for domestic and commercial purposes. In the case of HTS/LTIS/BS consumers, long period notices which may extend to six months or more may be required to enable the Department to make necessary arrangement for such supply, which will be subject to its availability in the system. The Assistant Engineer of the area will issue seven clear days notice to the applicant for inspecting his/her premises to verify the feasibility of providing power supply.

(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.

XIX. 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.

XX. 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.

XXI. 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.

XXII. 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.

XXIII. 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.

XXIV. 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.

XXV. 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.

XXVI. 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.

XXVII. FAILURE OF POWER SUPPLY

The Department shall not be responsible for loss, damage or compensation what so ever out of failure of supply.

XXVIII. 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.

XXIX. 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.

XXX. 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.

XXXI. 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.

XXXII. 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**