

# Part – II (A)

**Business Plan & MYT for 3-Year  
Control Period from FY 2018-19 to FY 2020-21**

**for**

**Distribution Business**

**Submitted by:**

**Energy & Power Department**

**Government of Sikkim**

**November, 2017**

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## LIST OF ABBREVIATIONS

Abbreviation	Description
A&G	Administration & General
ARR	Aggregate Revenue Requirement
CAGR	Compound 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
FAC	Fuel Adjustment Costs
FDR	Fixed Deposits Receipts
FY	Financial Year
GFA	Gross Fixed Assets
HP	Horse Power
HT	High Tension
SSERC	Sikkim State Electricity Regulatory Commission
KV	Kilovolt
KVA	KilovoltAmps
kWh	kilo Watt hour
LT	Low Tension
LTC	Leave Travel Concession
MU	Million Units
MVA	Million Volt Amps
MW	Mega Watt
O&M	Operation & Maintenance
PLF	Plant Load Factor
PLR	Prime Lending Rate
R&M	Repairs and Maintenance
RoE	Rate of Return
Rs.	Rupees
S/s	Sub Station
SBI	State Bank of India
T&D	Transmission & Distribution
UI	Unscheduled Interchange



## **1. INTRODUCTION**

### **1.1 Historical Perspective**

The Energy and Power Department, Sikkim (E&PDS) is responsible for power supply in the state of Sikkim. E&PDS has generation capacity of 41.59 MW, comprising of 36.6 MW & 4.992 MW of Hydro & Diesel generation respectively. The power requirements for E&PDS are met through its share from Sikkim Power Development Corporation (SPDC) and Central Sector Power Generation Stations apart from its own generation.

The State of Sikkim is located 114 kms from Siliguri. With a total area of 7096 sq. kms, the State has a population of around 6.08 Lakhs as per 2011 census, spread over towns and villages.

### **1.2 SSERC Formation**

In exercise of the powers conferred by the Electricity Act 2003 the Government of Sikkim constituted an Electricity Regulatory Commission to be known as “Sikkim State Electricity Regulatory Commission” (SSERC) as notified on 15-11-2003.

The Hon’ble Commission is a one-member body designated to function as an autonomous authority responsible for regulation of the power sector in the State of Sikkim. The powers and the functions’ of the Hon’ble Commission are as prescribed in the Electricity Act 2003. The Head Office of the Commission presently is located at Gangtok, Sikkim.

The Sikkim State Electricity Regulatory Commission started to function with effect from 11-04-2011 with the objectives and purposes for which the Commission has been established. Presently the Hon’ble Commission is framing various regulations as mandated in the Electricity Act 2003 to facilitate its functioning.

### **1.3 Multi Year Distribution Tariff Regulations, 2017**

E&PDS’s tariff determination is now governed by “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)(Second Amendment) Regulations, 2017” (referred to as “MYT Regulations, 2017”) notified vide No. 14/SSERC/MYT/AMDT/2015/200 Dated 20.06.2017. The MYT Regulations, 2017 provide a framework for calculating tariffs on a cost-plus basis for a period of three years and allow the licensee to recover operational expenses including depreciation, interest on working capital and debt, and return on equity amongst others. The MYT Regulations, 2017 segregate the items impacting tariffs into controllable and uncontrollable factors. Items that are uncontrollable are passed through to the consumers. Further, the MYT Regulations, 2017 identifies the uncontrollable and controllable parameters as follows:



### **1.3.1 Uncontrollable factors**

The “uncontrollable factors” comprises of the following factors:

- (a) Force Majeure events;
- (b) Change in law, judicial pronouncements and Orders of the Central Government, State Government or Commission;
- (c) Variation in the price of fuel and/ or price of power purchase according to the FPPPA formula approved by the Commission from time to time;
- (d) Variation in the number or mix of consumers or quantities of electricity supplied to consumers;
- (e) Transmission Loss;
- (f) Variation in market interest rates;
- (g) Taxes and Statutory levies;
- (h) Taxes on Income:

### **1.3.2 Controllable factors**

Controllable factors include, but are not limited to the following:

- (a) Variations in capitalization on account of time and/or cost overruns/efficiencies in the implementation of a capital expenditure project not attributable to an approved change in scope of such project change in statutory levies or force majeure events;
- (b) Variation in Interest and Finance Charges, Return on Equity, and Depreciation on account of variation in capitalization, as specified in clause (a) above;
- (c) Variations in technical and commercial losses of Distribution Licensee;
- (d) Variations in performance parameters;
- (e) Variations in working capital requirements;
- (f) Failure to meet the standards specified in the Gujarat Electricity Regulatory Commission (Standard of Performance of Distribution Licensee) Regulations, 2005, except where exempted in



- accordance with those Regulations;
- (g) Variations in labour productivity;
  - (h) Variation in operation & maintenance expenses;
  - (i) Variation in Wires Availability.

#### **1.4 Filing of Business Plan & MYT Petition for 3-Year MYT Control Period from FY 2018- 19 to 2020-21**

E&PDS hereby submits its Business Plan & MYT petition for approval of Multi Year Tariff for the first control period i.e. FY 2018-19 2019-20 & 2020-21. It is being submitted in compliance with the provisions of MYT Regulations, 2017.

## **2. OVERALL APPROACH FOR PRESENT FILING**

### **2.1 Business Plan & MYT Petition for 3-Year MYT Control Period from FY 2018-19 to 2020-21**

E&PDS hereby submits its Business Plan & MYT petition for approval of Multi Year Tariff for the first control period i.e. FY 2018-19, 2019-20 and 2020-21. This Plan& MYT Petition is being submitted in compliance with the provisions of MYT Regulations, 2017. The petitioner is attempting to comply with the various guidelines in the Act and regulations within the limitations of availability of data.

E&PDS is filing the petition based on the past performance and expected changes in each element of cost and revenue for the ensuing year. E&PDS studies the past trends and take cognizance of other internal and external developments to estimate the likely performance during the control period i.e. FY 2018-19, 2019-20 and 2020-21.

### **2.2 Approach for the Filing**

The subsequent sections provide projection for various expenses, the proposed investment plan for the control period and the expected revenue projections.

Projections of various cost components required for determination of Aggregate Revenue Requirement along with the rationale for estimation of such cost, the philosophy adopted by E&PDS for projecting sales, number of consumers and power generation & purchase cost for the control period has been covered in various sections.

For the purpose of projecting the financial & technical parameters, E&PDS considers its actual performance during FY 2013-14, FY 2014-15, FY 2015-16, FY 2016-17 and FY 2017-18 (H1) as base and has projected the figures for the control period with supporting rationales.



### **3. COMPLIANCE OF DIRECTIVES**

In pursuance to the directives issued by the Hon'ble Commission in its Tariff order No. TRP -01/SSERC/2017-18 dated 21.03.2017 regarding the ARR & Tariff for the Year 2017-18, the compliance is submitted as under:-

#### **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:**

It is submitted that the Department has taken steps to improve the revenue collections which includes monthly review of all the divisions. Special revenue drive has also been under taken. Further, as submitted earlier emphasis is more on improving current collection efficiency so that creation of new outstanding is restricted while efforts are being made to recover the old dues. Recovery steps for old defaulting consumers have also been taken. These steps have helped in increasing the revenue collection and improving collection efficiency.

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

The Commission appreciates and notes the efforts being made by the EPDS towards improving losses and improvement of revenue. The Commission feels that the EPDS should continue with its efforts towards loss reductions. The Commission had earlier directed the EPDS to put up a comprehensive note/proposal to the State Government for recovery of the arrears especially from the various State Government Departments/Agencies and also to submit a status report on the status of the outstanding arrears. The EPDS has not complied with the said directive of the Commission. The Commission directs the EPDS to submit a status report on the outstanding arrears to the Commission within a period of two months from the date of this order.

#### **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 31<sup>st</sup> March 2017 against each Department & reminder letter issued from the office of PCE cum Secretary is submitted separately

**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:**

The list of measures taken to mitigate the revenue shortfall on account of T&D losses pertaining to HQ Gangtok are as follows:

1. Metering of all the 11 kV feeders
2. Metering of all the Distribution transformers.
3. Metering of all consumers with special emphasis on large industrial and commercial consumers.
4. Consumer indexing and GIS mapping of consumers and physical assets.
5. Establishment of meter data acquisition system for online monitoring of Distribution transformers and feeders.
6. Integration of billing, metering, GIS system for real time energy audit.

**Commission’s Comments:**

The Commission takes note of the measure undertaken by the EPDS pertaining to HQ Gangtok. The EPDS is directed to initiate similar measures to cover other parts of the State. A report/note on the proposals/master plan prepared/conceived by the EPDS along with the time frame for implementing the proposal/pan may be submitted to the Commission within a period of 3 (three) months from the date of this order.

**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 31<sup>st</sup> October 2017 is submitted separately. Both the DDUJGY & IPDS are in tendering stages.



**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:**

Metering of all feeders from 66kV to 11kV has been completed in Gangtok HQ area. All the distribution transformers have been metered too.

**Commission’s Comments:**

The Commission appreciates the efforts made by the EPDS towards metering of all feeders from 66KV to 11 KV in Gangtok HQ area. The EPDS needs to take up similar exercise in all the District Headquarters and Major towns in a phased manner and ultimately try and cover all smaller towns and villages in the State. The EPDS is directed conduct surveys to assess the T&D losses and identify the areas where losses are high and thereafter take immediate steps to reduce the losses in those high loss making areas identified during the survey.

**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.

**Directive 5:**

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

**Compliance:**

It is submitted that EPDS is conducting review meetings & field visits. Further, advises given by the Hon’ble Commission in this regard are also been considered and worked upon.



**Commission's Comments:**

The Commission feels that the EPDS take regular review meetings and field visits. Issue(s) likely to hinder timely completion of the Projects need to be taken up head on and ensure that the projects don't remain stagnated. Regular coordination meetings with the line Departments and the developers need to be conducted.

**Compliance:**

A senior officer in the rank of Chief Engineer who is by supported by legal & technical subordinates is helping the Independent Power Producers to sort out issues wherever possible.

**Directive 6:**

"The Commission observes that despite specific directives having been issued with regard to maintenance of Asset and Depreciation Register, it is regretted that the EPDS has not complied with the orders. The EPDS is hereby directed to ensure that appropriate action is taken and the requisite Document submitted to the Commission latest by the 30<sup>th</sup> September, 2013.

**Compliance:**

It is submitted that the as directed EPDS has already compiled the Fixed Asset & Depreciation register since inception. Assets of all the divisions have been updated. The details are now being reconciled with the Accounts and the updated FAR upto FY 2015-16 shall be made available within April, 2016. Thereafter, yearly updating would be done regularly and submitted to the Hon'ble Commission.

**Commission's Comments:**

The EPDS has not updated the Assets and Depreciation Register since the year 2014-15 although the Commission had issued directives to do so. The EPDS has failed to submit the details upto FY 2015-16 in April, 2016 as committed earlier. The EPDS is directed to take immediate action for updating the Assets and Depreciation Register and submit the same to the Commission by 30<sup>th</sup> June, 2017.

**Compliance:**

The asset and depreciation register has been updated till 2016-2017. The copy of same is submitted separately.

**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:**

As submitted in reply to the directive 6 above, EPDS is in the process of reconciling the FAR details with accounts and it may require some adjustments/rectifications in FAR as well as Annual Accounts. EPDS shall submit both the Annual Accounts & FAR together.

**Commission's Comments:**

The Commission had been taking a very lenient view and also taken flexible approach while considering the extension of dateline for submission of documents, reports and other data by the EPDS keeping in view the difficulties and limitations the EPDS has as a State Government Department . The Commission is pained to observe that the EPDS has not been abiding by with its own time frame and milestones submitted before the Commission. The Commission directs the EPDS to complete updating its Fixed Assets Register and compilation of Annual Accounts and submit to the Commission without fail by 30<sup>th</sup> June, 2017.

**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

**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:**

It is submitted that EPDS has started maintaining the details as directed by the Hon'ble Commission and the present petition has been submitted based on the same except for category wise analysis of balance outstanding. EPDS is working on the same and the data of balance outstanding shall also be building up shortly.

**Commission's Comments:**

The Commission has taken note of the matter and expects from the EPDS that it shall file the up-to-date details before the Commission at the time of filing of ARR/Tariff Petitions in the future.



**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.

**Directive 9: Replacement of Non-Functional / Defective Meters**

“Section 55 of the Electricity Act makes it mandatory for all consumers to have a meter installed at the place of residence / office. EPDS must ensure that all households in the State be properly metered. EPDS may like to avail of the assistance of the Government Undertakings like State Trading Corporation Sikkim (STCS) and Sikkim State Cooperative Supply and Marketing Federation (SIMFED) for making available standard meters that can be availed of by the consumers at a reasonable price. Metering is a pre-requisite for new service connection and EPDS is directed to complete 100% metering of consumers and shall ensure that no new service connections are provide unless metering is done. Installation of meter shall be a pre-requisite for any new service connection.

The EPDS has 31.00%  
submitted  
report on % of  
defective  
meters as  
follow: Bulk  
supply

HTS	7.23%
LTIS	13.11%
Commercial	11.08%
Domestic	20.42%

The situation is quite alarming. Latest information of non-functional meters may be obtained from the field offices and ensure that data is maintained correctly. Replacement of meters shall be planned on priority wise i.e., meters of Bulk supply, Commercial, Industrial and high value domestic categories to be replaced on priority. In respect of defective meters billing may be done by adopting standard method. The data on defective meters, replacement, and pendency shall be filed with the next petition.

**Compliance:**

- 1) Defective meters within Gangtok HQ are being proactively replaced. Large quantities of electronic meters have already been procured for this purpose and are being utilized to ensure 100% metering.
- 2) The Circle offices under L/R wing have been directed to carry out work on 100% metering on consumer's premises. The work of replacement of defective energy meters have already been taken up by the concerned Circles. The new energy meters have either being self procured by the consumer's or purchased departmentally. The Circle heads have assured that 100% metering works on the various categories of consumer's would be



completed within December, 2017. No new service connection and temporary connection has been released without the installation of energy meters.

**Commission's Comments:**

The EPDS is directed to submit a status report on the targets achieved towards replacement of defective meters so far along with the plan drawn/target set for achieving 100% replacement of such defective meters by 30<sup>th</sup> June, 2017.

**Compliance:**

All unmetered consumers will be covered by DDUJGY & IPDS schemes. As and when these schemes are completed the State will be 100% metered. The status of metered & unmetered consumers as on 31/3/2017 :

Sl. No.	Category of Consumers	Metering Status				Total
		Metered	Unmetered	Metered	Unmetered	
		Nos	Nos	%	%	
1	Domestic Supply	78670	14964	84.02	15.98	93634
2	Commercial Supply	10633	675	94.03	5.97	11308
3	Bulk Supply	1045	469	69.02	30.98	1514
4	LTIS	204	42	82.93	17.07	246
5	HTS	419	41	91.09	8.91	460
6	Public Lighting	7	27	20.59	79.41	34
7	Army Pensioners	601	74	89.04	10.96	675
8	Place of Worship	97	143	40.42	59.58	240
9	Blind	2	1	66.67	33.33	3
	<b>Total</b>	<b>91678</b>	<b>16436</b>			<b>108114</b>

**Directives 12: Interest on Consumer Security Deposit**

“EPDS did not indicate the amount of security deposit collected from the consumers. EPDS is informed that as per the section 47 (4) of Indian Electricity Act 2003, the distribution licensee shall pay interest equivalent to bank rate or more as may be specified by the concerned State Commission on the consumer security deposit.

EPDS is directed to maintain consumer-wise security deposit collected. Such data shall be furnished with the next filing invariably.”

**Compliance:**

**STATEMENT OF SECURITY DEPOSIT SUBMITTED BY INDUSTRIAL CONSUMER**

Sl. No.	Name of Industries	Amount Deposited
1	Sun Pharma Laboratories Phase I	₹ 66,50,000.00
2	Sun Pharma Laboratories Phase II	₹ 75,00,000.00
3	Denzong Albrew (P) Ltd.	₹ 5,26,756.00
4	Golden Cross Pharma Ltd.	₹ 41,76,685.00
5	Torrent Pharmaceuticals Ltd.	₹ 78,72,294.00
6	STP Pharmaceuticals Pvt. Ltd	₹ 3,21,400.00



**Petition for Approval of Business Plan & MYT for 3-Year  
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7	PTS Packers & Providers Pvt. Ltd.	₹ 1,46,488.00
8	M/s Mosh Varaya Infra. Pvt. Ltd. Audit II	₹ 7,13,800.00
9	M/s Mosh Varaya Infra. Pvt. Ltd. Audit I	₹ 7,13,800.00
10	Intas Pharmaceuticals Pvt. Ltd	₹ 18,02,202.00
11	CG Food India Pvt. Ltd	₹ 6,06,928.00
12	Godrej Consumer Products Ltd.	₹ 2,26,534.00
13	Zydus Wellness	₹ 22,66,224.00
14	Ugen Aggregates & Dolomites-I	₹ 2,40,598.00
15	Ugen Aggregates & Dolomites-II	₹ 59,512.00
16	Microlabs Ltd.	₹ 30,59,000.00
17	Sheela Foam Pvt. Ltd	₹ 1,47,482.00
18	Unichem Laboratories Ltd	₹ 6,12,550.00
19	Fles Art Foil Pvt. Ltd	₹ 1,73,180.00
20	Swiss Garnier Genexiaa Sciences	₹ 18,96,574.00
21	Alkhem Lanoratories	₹ 67,41,490.00
22	SIPLA Indoa (P) Ltd	₹ 4,16,490.00
23	SMIT	₹ 18,42,912.00
24	SUN Packmet Pvt, Ltd	₹ 1,13,948.00
25	Zydus Healthcare	₹ 57,57,332.00
26	Sikkim Distilleries Ltd	₹ 2,20,258.00
27	CIPLA Pharmaceuticals Ltd	₹ 77,23,254.00
<b>TOTAL</b>		<b>₹ 625,27,691.00</b>

**Commission's Comments:**

The Commission has noted the details and advises the EPDS to maintain proper records of the Security Deposits and update the details on a regular basis.

**Compliance:**

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

**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 initiatives 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:**

It is submitted that EPDS has been conducting public awareness programs periodically.

**Commission's Comments:**

The Commission advises the EPDS to plan and incorporate the Consumer Awareness/Sensitization programs in coordination with the Food, Civil Supplies & Consumer Affairs Department, Government of Sikkim. This will give the EPDS a wider and a more organized platform to share information with the consumers and general public. The awareness programs of the EPDS can be coincided and conducted with the Consumer Awareness Camps/programs conducted by the Consumer Affairs Department.

**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.

**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:**

It is submitted that unbundling of the Department is under process which shall be done with the approval of the Government in due course. In the meantime steps for improving efficiency by identifying function wise roles & responsibilities has been taken by the Department.

**Commission's Comments:**

The un-bundling of the EPDS has to happen sooner or later for the good of the EPDS. The EPDS is directed to consider taking the services of premier and reputed Institutes/Agencies like the IITs, Administrative Staff College of India etc to carry out a study on the model to be adopted by Sikkim for "way ahead" towards un-bundling of the



EPDS. The consultant/expert so engaged may be asked to study the best practices and successful models being adopted/already adopted by other States and suggest the way ahead for un-bundling of the EPDS.

**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 3<sup>rd</sup> June 2017 at New Delhi and both the notification and record of discussion of the first meeting is submitted separately.

**Directives 15: Energy Efficiency Measures**

Consumers in the state need to be encouraged and motivated to use energy-efficient lighting systems like LED, CFL in the houses, factories etc. Municipal Corporation, Municipalities and Panchayats too need to be sensitised to take steps to provide LED bulbs for street lighting. A programme is to be chalked out to replace the existing lighting with LED lights within a period of 2 to 3 years. Requirements of such lights, type of lighting quality, etc., may be assessed. Also, the investment needs for such a programme may be worked out. A suitable plan of action may be worked out and reported to the Commission by 30<sup>th</sup> June, 2015.

**Compliance:**

Energy Efficiency Measures

1) The Energy & Power Department, Govt. of Sikkim has been notified as the State Designated Agency (SDA) for Energy Conservation in the year 2009. Since then, the Department has been carrying out various activities related to Energy Conservation namely Awareness & Sensitization programmes, Pilot projects, Workshops, and Publicity through print & electronic media etc. under the aegis of the Bureau of Energy Efficiency, Govt. of India. In the last financial year, one of the main target group for awareness & sensitization programme were the student from different Government schools all over the State through formation of Energy Clubs. These clubs are financially supported by the Department. Fourteen schools have formed such clubs and have held competition in painting, power point presentation, skit and models. The theme for these activities was



Energy Conservation. This year onwards the focus on awareness and sensitization programme on Energy Conservation will be towards the elected representatives of both rural & urban bodies. Recently on the 14th May 2016, one such programme was conducted at the Community Centre at Gyalzing where elected representatives of Gyalzing Municipality & Panchayats of nearby wards, students and local gentries were invited. Many such programmes are in the pipeline for this fiscal year.

Some of the recent activities done by the Department are shown in table A

TABLE A Sl. No.	Year	Month	Brief Description of Event/Activity
1	2015-2016	June	330 Nos of houses at Tingmoo, Higdam, Lamaten&Mambro villages in South Sikkim have provided with 2 LED bulbs & 2 LED tube lights along with repair of damaged wiring
August			Establishment of Energy clubs in 14 Govt. schools in the State through financial support of SDA
September			Launching of SDA website "www.sdasikkim.com"
October			3 days workshop on ECBC at Gangtok with resource persons from UNDP & BEE.
December			Appeal to general public for energy conservation through local TV, FM radio, AIR and pamphlets.
February			District level competition between the schools having Energy clubs in skit, power point presentation, models & painting. The theme was Energy Conservation.
2	2016-2017	April	On the 9 <sup>th</sup> of April, a rally of 1000 students was taken out from Deorali till Manan Kendra with placards bearing slogans on how to conserve energy. After the rally, State level competition on skit, power point presentation, model display and



painting was held amongst the district winner of schools having Energy clubs.

May

- a. On 14<sup>th</sup> May, Awareness cum Sensitization programme on Energy Conservation was conducted at Gezing Community Hall. It was attended by councilors of Gezing Municipality, Panchayats of nearby wards, Students and local residents. Prior to this programme a rally of school students was taken out from Community hall to Bazar and then back to community hall.
- b. Awareness programme for Officers and Staff of South circle (Jorethang) on Energy Conservation was held on 20<sup>th</sup> May at Jorethang.

153 Nos of Sodium Vapour Street Lights were replaced with 90 watts LED fittings from zero point (GICI) Gangtok till Krishi Bhawan, Tadong during December 2014. This was taken up from the provision of Demonstration project funded by Bureau of Energy Efficiency, GOI. Also, the ordinary Street Light fittings from zero point, Gangtok towards Ridge park have been replaced with LED fittings prior to the visit of Hon'ble Prime Minister to the State. Remaining 5400 Nos Street light fittings in the State as per data given by electrical circles still require replacement with LED fittings in the State. The Department had moved a proposal for same to the Government in the last fiscal year and the decision is still awaited. Another, option would be to request more fund under Demonstration projects from Bureau of Energy Efficiency and take up one town at a time. The wattage requirement in the State for LED street light fittings would be of 45 watts onwards till 150 watts. At an average rate of Rs 15000.00 per fitting, the fund requirement will be Rs. 810.00 Lakhs.

The existing power demand of Street lights in the State is around 450W. if converted to LED then the power demand is reduced to 200 KW. The annual saving is 0.86 MU.

As of now, the action plan for conversion of street light fittings into LED cannot be communicated to the Hon'ble commission due to unavailability of the source of funding. The Hon'ble commission will be informed as and when some progress is made on this matter.

2) The field Engineers have been directed to sensitize the Public/Consumer's of electricity in the Gram Sabhas being held in their areas for judicious use of energy. The public/consumer's electricity has been advised to use CLF bulbs/ LED lamps instead of conventional incandescent bulbs for saving of energy & low carbon emission. This information has also been apprised to consumers who have applied for new service connection and passed through concerned meter reader to every household in their areas.



**Commission's Comments:**

The Commission appreciates and takes note of the efforts made/steps taken by the EPDS. The directive is partially complied.

**Compliance:**

The State Designated Agency (SDA) under EPDS have been on continuous basis taking up Energy Efficiency measures and the same are highlighted below :

1. State Energy Conservation Fund Rules 2016 was notified on August 2016 for the purpose of promotion and efficient use of Energy and its Conservation in the state of Sikkim. A state Level Steering Committee under the chairmanship of Secretary, Energy & Power Department has been constituted for the purpose of regulating and controlling the fund.

2. Awareness Programme to Councillors of Gangtok Municipal Corporation:  
A awareness programme on Energy Conservation was organised at the Conference Hall of GMC, Deorali on October 2016 to the Councillors and officials of Gangtok Municipal Corporation. All Hon'ble Councillors were requested to highlight this subject for few minute during every ward level meetings.

3. Under the national LED programme, Unnat Jeevan by Affordable LED Appliances (UJALA) scheme was launched in the state by Hon'ble Minister for Energy & Power and Labour Department on February 2017. The scheme covers the replacement of conventional bulbs and street lights with the energy efficient (LED) bulbs and street lights. Under this scheme 9 W LED bulbs and 18 W LED Tube lights are distributed at various locations in the state on upfront payment of Rs. 70/- and Rs. 230/- respectively.

4. Implementation of State Energy Conservation Building Codes (ECBC) - Buildings account for more than 30% of the India's electricity consumption, and the total built space in the country is growing at a tremendous rate. Building more efficient buildings is also a central strategy to achieve India's climate target to reduce emission intensity by 33 to 35 percent from 2005 levels by the year 2030. The Energy Conservation Building Code 2017 (ECBC 2017), developed by BEE has the potential to transform the way buildings are constructed and to unleash significant energy savings. The subject of implementing ECBC in the state was discussed with all technical departments dealing with building construction a Committee chaired by PCE cum Secretary, Energy & Power Department, and members from technical departments has been formed to look upon its various aspects on applicability/scope and necessary modification suitable to local climatic conditions.

5. Awareness programmes on Energy Conservation and its efficient use is organised at Schools and Public gathering to various stakeholders on regular basis. Awareness programme on energy conservation along with distribution of LED bulbs was organised during Phang Labsol at Ravangla and Maghey Mela at Jorethang.

**Demonstration Projects:**

The SDA Sikkim had taken up the demonstration project of Replacement of Conventional bulbs with LEDs Bulbs and tubes of Power Secretariats, Energy & Power Department, with an annual saving as details below:

Power consumed by Conventional Lighting (annually) : 37547.328 kWh



Power consumed by LED Lighting (annually)	:	17701.32 kWh
Total Power saved (annually)	:	19846.008 kWh

October

The SDA Sikkim had taken up the demonstration project of Replacement of Conventional bulbs with LEDs Bulbs and tubes of two schools,(PNG, & Deorali), with an annual saving as details below:

Power consumed by Conventional Lighting (annually)	:	13656.3 kWh
Power consumed by LED Lighting (annually)	:	4376.4 kWh
Total Power saved (annually)	:	9279.9 kWh

#### **Directives 16: Safety against Accidents**

Electrical accidents to departmental personnel, non-departmental personnel may be analysed, together with the causes. Remedial measures to minimise such accidents should be taken at all levels of officers and employees.

Workers who attend to tasks like replacement of fuses, disconnections, reconnections, giving new connections, erection of new lines, etc., have to be provided with safety devices like gloves, gauntlets, insulated shoes, earthing rods, rain coats etc., and it should be ensured that workers use these devices while on work. Danger caution boards need to be fixed at salient points for lines, equipments to caution the public not to touch the equipments and lines.

For stays being provided on lines, guy insulators are to be invariably used at the time of laying of new lines/equipment, to avoid leakage of current through the earth wire.

Details of Accidents that occurred during 2012, 2013, 2014 and 2015 (till date) are indicated below:

<b>Year</b>		<b>Departmental</b>	<b>Others</b>		<b>Total</b>
<b>Fatal</b>		<b>Non-Fatal</b>	<b>Fatal</b>		<b>Non-Fatal</b>
2012	3	1	-	-	4
2013	3	4	-	1	8
2014	6	2	1	-	9
2015	-	-	1	-	1
<b>Total</b>	<b>12</b>	<b>7</b>	<b>2</b>	<b>1</b>	<b>22</b>

It could be seen that number of accidents are increasing year after year. There is also a rise in the number of fatal accidents to the Departmental staff. It is imperative to analyse the causes of accidents by obtaining investigation reports from the field officers and strict remedial action shall be taken to minimum accidents. EPDS should strive to achieve nil accidents in future.

#### **Compliance:**

Accidents to our personnel as well as to public on account of electricity have been red flagged.

All measures to mitigate such incidents by ensuring safe installation of equipment, proper maintenance of electrical hardware etc. Proper maintenance gear and safety equipment are being issued to field personnel along with training on how to work safely and effectively.



**Commission's Comments:**

The Commission reiterates its directives and directs the EPDS to strictly follow and implement the guidelines/instructions and safety measures as provided in the Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations, 2010 and the Central Electricity Authority (Safety Requirements for Construction, Operation and Maintenance of Electrical Plants and Lines) Regulations, 2011 including subsequent amendments of these Regulations. The Commission advises the EPDS to consider providing life/medical insurance coverage to those employees (linemen and workers) who attend to risky tasks of repair and maintenance of High Voltage lines and power systems.

**Compliance:**

The line staffs have been issued with safety gears in the last fiscal year like harness, insulating boots etc. Also matter of medical insurance, risk allowances have been put forward to the committee constituted by the State Government for pay revision in the month of September 2017.

In the month of February 2017, the State Government notified two officers of the Department to function as Chief Electrical Inspector & Electrical Inspector. The rules associated with the role and duties of the inspectorate is under process for issue of notification and the same will also cover the safety regulation as suggested by the Hon'ble commission. At regular intervals, the field staffs are undergoing in house trainings in collaboration with Central Govt Institutes.

**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 said information is available in the Departments official website "[www.powerdepartmentofsikkim.com](http://www.powerdepartmentofsikkim.com)" and all the officers at the district level are also well aware of it. Above forum is regularly submitting the quarterly status report on the functioning of CGRF to the office of Ombudsman, Sikkim State Electricity Regulatory Commission headquartered at Deorali, Gangtok, Sikkim.

After establishment of CGRF in the department only one consumer grievance were received in the month of March, 2016 and, as per provisions of the SSCRC lodge, the case has been amicably settled to the full satisfaction of the consumer.

In order to spread the information at the grass root level and to provide ease and comfort of lodging the grievance, the Energy & Power Department has submitted a proposal to the Government for constituting of such redressal forums at all the four districts of Sikkim with the incumbent Superintending Engineer as Chairperson and an officer of the civil



society/ Account section as member. The Energy & Power Department is awaiting the approval of the said proposal for its implementation in the State.

**Commission's comments:**

The Commission has noted the submissions of the EPDS and directs it to complete the setting up of CGRFs in all the districts at the earliest.

**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.

**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:**

It is submitted that EPDS has taken steps regarding the awareness programs on the role, functions including the procedure for filing of grievances by the consumers and public before the CGRF, Ombudsman and Consumer Grievance Cell. However, specific steps as directed by the Hon'ble Commission shall be taken up.

**Commission's comments:**

The EPDS need to ensure timely setting up of the CGRFs in all the four districts and make use of all possible platforms like Gram Sabhas, public awareness meetings etc. to sensitize and inform the public about the roles, functions and procedure for redressal of consumer grievances.

**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.



**Directive 20: Proper Monitoring of IPP Projects**

In the ARR petition submitted it has been observed that the State is importing Power from central Generating Stations to meet part of its requirements as well as to trade the surplus power available with the State Utility after meeting its own requirements. The quantum of Power being imported could be reduced if the State properly monitors the implementation of the power projects given out to the Independent Power Producers (IPPs) as some of them have been unduly delayed. With the timely construction of the ongoing Power projects, the State would be getting the free power entitled to it, which would be more than sufficient to not only meet its own requirements but there would be sufficient excess power available for trading. The implementation of the Power Projects can only be expedited through proper monitoring and imposing penalties as per clause 4.7 of the Implementation Agreement signed with each of the IPPs who had been awarded the Power projects.

**Compliance:**

The directive is being complied.

**Commission's comments:**

The EPDS is directed to conduct co-ordination meetings with the line Departments as well as the Project developers on a regular basis to assess the progress of the project implementation. The line Department and the Developers have to make coordinated efforts for resolving issues likely to delay project implementation. The directive is partially complied.

**Compliance:**

A senior officer in the rank of Chief Engineer who is by supported by legal & technical subordinates are helping the Independent Power Producers to sort out issues wherever possible. However, stalled and delayed hydro electric projects in the State are mostly due to cost overrun and subsequent funding issues.

**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<sup>2</sup>/Day); Namchi is 4.79 KWh/M<sup>2</sup>/Day) and Gangtok 2.89 KWh/M<sup>2</sup>/Day). The annual average insolation 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:**

It is submitted that EPDS is making all efforts for development of Renewable Energy in the state by utilizing its full potential.



**Commission's comments:**

The EPDS needs to focus on development of Renewable Projects especially Small Hydropower Projects to enhance its own generation capacity. Development of small hydropower projects and other renewable projects like solar, wind etc. is important in order to meet the huge Renewable Energy Generation target set by the Government of India.

**Compliance:**

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

**Directives issued in the FY 2016-17 Tariff Order**

**Directive 1: Improving Own Generation**

The own generation from the various Powerhouses of the EPDS has seen a decline over the years and it is seen that most of the Powerhouses were non-operational for considerable

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

**Compliance:**

The Department is making efforts for improving own generation.

**Commission's comments:**

Not much improvement is seen in the own generation of the EPDS. Suitable plan and outlay of fund for repair and maintenance of existing small hydropower projects like Meyongchu and Rabomchu Small HEPs. No capacity addition has been done by the EPDS since last many years and as such it needs to identify viable small HEPs and set a realistic target and implement the projects in a time and cost bound manner.

**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.

**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:**

**Commission's comments:**

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

**Compliance:**

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

**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:**

It is submitted that EPDS shall take the steps as suggested by the Hon'ble Commission and report accordingly.

**Commission's comments:**

The Commission reiterates the directives and advises the EPDS to avoid engaging additional manpower except in exigencies.

**Compliance:**

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

**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:**

It is submitted that EPDS is taking steps to increase the contribution of renewable energy sources in its consumption. Efforts for increasing solar generation including rooftop solar are also being taken up. The statement showing RPO compliance report as per renewable energy purchase obligation for the FY 2013-14 to FY 2015-16 furnished and attached hereunder for reference.

**Commission's comments:**

The EPDS being an Obligated Entity for Renewable Purchase Obligation (RPO), it is bound to comply with the RPO targets for solar and non-solar notified by the Commission. The EPDS must take suitable actions to fulfill the Renewable Energy target set by the Government of India. The EPDS is directed to prepare detailed proposal for setting up of Roof Top Solar on various Government Buildings taking advantage of the various subsidies and incentives being provided by the Government of India. EPDS also needs to take suitable action for notifying the State Solar Policy and to facilitate development of Roof Top solar by private players and individuals.

**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.

**Directive 5: Filing of MYT Petition**

The Commission has already issued the SSERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2013 vide Gazette Notification No. 204 Dated 21<sup>st</sup> May, 2014 as per the guidelines of the Central Electricity Regulatory Commission. The said Multi Year Tariff Regulations had become effective from 1<sup>st</sup> April, 2015. The EPDS is directed to file the next tariff petition in accordance with the said Regulations.



**Compliance:**

It is submitted that FY 2017-18 for which the petition is being filed is the last year of the control period as provided in the MYT regulations, therefore the requirement of the MYT Regulation to project the sales, purchase, T&D loss trajectory, components of ARR & investment plan for the period of three years cannot be complied with and also the objective of the MYT Regulation is not fulfilled. It is therefore requested that the Hon'ble Commission may kindly allow EPDS to file the petition for the FY 2017-18 as per the Sikkim State Electricity Regulatory Commission (Terms and Conditions for determination of Tariff) Regulations, 2012. EPDS shall file the Tariff Petition as per the MYT Regulation in the next FY when the new control period is notified.

**Commission's comments:**

The EPDS is directed to mandatorily file the petition under MYT regime from F.Y 2018-19 onwards as per the MYT control period to be notified by the Commission. In order to ensure timely filing of the MYT petition fulfilling the requirements of MYT Regulations, the EPDS is directed to take necessary action to prepare the statements, documents, compilation of data etc. required for filing petition under MYT regime well in advance. Proper segregation of accounts, Fixed Assets Register, Audited Accounts etc. will be prepared so as to ensure timely and correct filing of the MYT petition in the future.

**Compliance:**

The EPDS will abide by the direction given by the Hon'ble commission in regard to filing of MYT with effect from 2017-2018 onwards.

**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:**

It is submitted that the Department has taken steps to identify the high loss areas and corrective measures has also been taken. Further, based on the analysis of feedback Feeder/DT metering has also been carried out. However, comprehensive energy audit is yet to be conducted. EPDS shall take steps for the same and report to the Hon'ble Commission.

**Commission's comments:**

The EPDS is directed to conduct the energy auditing in a time bound manner. A time frame for conducting the auditing may be set and a compliance report may be submitted to the Commission by 30<sup>th</sup> June, 2017.



**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.

**Fresh Directives (FY 2017-18)**

**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 Private 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 Renewable 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.

**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.

**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.



**Directive 4: Checking of un-metered temporary connections**

Most of the works at construction sites, both private and government are nowadays done using electrically operated tools and equipments both in urban and rural areas. Masons, Carpenters, welders and other akin trades use electrical tools like saws, rod cutters, planers, welding machines etc. by drawing power directly from the overhead lines without proper permission from the EPDS and without any meter. The consumption of electricity on account of such activities is considerably high and is un-accounted. The EPDS needs to strictly check such un-authorized and un-metered drawal of power. Strict instructions need to be issued to the lineman and field engineers for issuing construction power and installing Energy Meters at site during the period of works.

**Compliance:**

For the very purpose of checking such activities the Department has constituted flying squad comprising of senior officers of the Department. In addition to this all officers and staff dealing with revenue related activities have been instructed to be vigilant and carry out regular field visits.



## **4. AGGREGATE REVENUE REQUIREMENT FOR CONTROL PERIOD I.E. FY 2018-19, 2019-20 AND 2020-21**

This section outlines the Aggregate Revenue Requirement of the E&PDS for control period i.e. FY 2018-19, 2019-20 AND 2020-21, which takes into consideration:

- i. Actual Performance in FY 2013-14, FY 2014-15, FY 2015-16, FY 2016-17;
- ii. Estimated Performance for FY 2017-18 based on the Actual performance for the period 01.04.2017 to 30.09.2017;
- iii. Projection based on the Actual performance in FY 2013-14, FY 2014-15, FY 2015-16, FY 2016-17 and estimated performance in FY2017-18;
- iv. Principles outlined in Tariff Regulations of SSERC.

Past trends have been taken into cognizance in case of certain elements as deemed necessary. The present section has been structured in the following manner:

- Determination of Energy Requirement
  - Sales Projections
  - Loss Trajectory
  - Energy Balance
- Proposed Capital Expenditure and capitalization
  - Scheme wise details
    - Capital Expenditure
    - Asset Capitalisation
- Determination of the Aggregate Revenue Requirement
  - Power Generation/Purchase Costs
  - Transmission Charges
  - Operation and Maintenance Expenses
  - Depreciation
  - Interest charges (including interest on working capital)
  - Provision for Bad and Doubtful Debts
  - Return on Equity

### **5.1 Energy Requirement**

The energy requirement of the license area is determined based on the expected sales in the area during the period under consideration and the expected distribution losses in the network. Accordingly, the energy requirement projected by the E&PDS for the control period i.e. FY 2018-19, 2019-20 AND 2020-21 is as given in the succeeding paragraphs.



### 5.1.1 Approach for Sales Projection

The consumer base of E&PDS consists of Domestic, Commercial and Industrial, consumers. Sales mix is primarily dominated by Industrial HT & LT, Domestic consumers, followed by Commercial consumers. Thus, the sales forecast would completely depend on the sales expected in the Domestic & Commercial Category.

The sales forecast is based on the trends observed in the sales pattern of various categories over the past years, new developments on account of Government Policies, Socio economic changes, industrial growth etc. that would affect consumption across various categories of consumers. In addition to this, the growth trend in number of consumers and connected load have been taken as guiding factors in arriving at the requirement of demand and energy. The total consumption w.r.t total sales for Domestic, Industrial & Commercial consumers may be summarized as:

Category	%
Domestic	29.91
Commercial	12.27
Industrial both HT & LT	48.68
Bulk	8.16

### 5.1.2 Category wise Sales Forecast

Based on the methodology outlined above, the projected energy sales of various categories of consumers for FY 2018-19, 2019-20 & 2020-21 are given below:

**Table 5.1: Projected Energy Sales – FY 2018-19, 2019-20 & 2020-21**  
(In MU's)

Category	2016-17 (Actual)	2017-18 (Estimated)	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
Domestic	96.74	101.58	111.74	120.67	127.91
Commercial	39.68	40.47	42.90	45.47	47.75
Public Lighting	0.26	0.27	0.28	0.29	0.31
Temporary Supply	2.92	1.50	1.60	1.70	1.80
HT Industrial Consumers	156.16	171.78	180.36	189.38	198.85
LT Industrial Consumers	1.31	1.32	1.43	1.54	1.64
Bulk Supply	26.40	27.72	31.05	34.15	36.88
<b>Total</b>	<b>323.47</b>	<b>344.63</b>	<b>369.36</b>	<b>393.22</b>	<b>415.14</b>



### 5.1.3 Number of Consumers

The forecast of number of consumers is based on the trends observed in the connections pattern of various categories over the past years, new developments on account of Government Policies, Socio economic changes, industrial growth, etc. that would affect consumption across various categories of consumers. The number of consumers estimated for the FY 2018-19, 2019-20 & 2020-21 are tabulated below:

**Table 5.2: No. of Consumers – FY 2018-19, 2019-20 & 2020-21**

Category	2016-17 (Actual)	2017-18 (Estimated)	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
Domestic	94552	96443	98372	100339	102346
Commercial	11308	11534	11765	12000	12240
Public Lighting	34	34	35	34	35
Temporary Supply	-	-	-	-	-
HT Industrial Consumers	460	469	479	488	498
LT Industrial Consumers	246	251	256	262	268
Bulk Supply	1514	1544	1575	1606	1638
<b>Total</b>	<b>108114</b>	<b>110276</b>	<b>112482</b>	<b>114729</b>	<b>117025</b>

### 5.1.4 Distribution Losses

E&PDS has been trying to reduce the distribution losses during recent years. E&PDS submits that the system improvement works executed every year under the plan schemes have also contributed to the reduction of distribution losses. However, it may also be noted that reduction of distribution losses may not be possible beyond a certain level due to topographical conditions and technical limitations. The distribution losses in the E&PDS distribution network have been in the range of approximately 30% to 35% in the past. For the purpose of FY 2018-19, 2019-20 and 2020-21, the losses have been retained at 24% to 18%.

### 5.1.5 Energy Requirement & Sources of Power Purchase

Accordingly, the energy requirement for E&PDS is estimated based on the retail sales projections, grossed up by estimated loss levels. The energy balance expected for the FY 2018-19, 2019-20 & 2020-21 is as given below:



**Table 5.3: Energy Requirement – FY 2018-19, 2019-20 & 2020-21**

Energy Balance	2016-17 (Actual)	2017-18 (Estimated)	Control Period (Projections)		
			2018-19	2019-20	2020-21
<b>ENERGY REQUIREMENT</b>					
Energy Sales within State	323.47	344.63	369.36	393.22	415.14
Sales Outside State	478.88	473.98	491.88	482.88	471.87
Total Energy Sales	802.35	818.61	861.23	876.09	887.01
Overall T & D Losses %	30.61	27.43	23.84	20.72	18.60
Overall T & D Losses (MUs)	142.67	130.27	115.64	102.78	94.86
Total Energy Requirement	945.02	948.88	976.87	978.87	981.87
<b>ENERGY AVAILABILITY</b>					
Power Purchase from CGS/UI etc.	944.91	944.91	944.91	944.91	944.91
Less: Overall Pool Loss	8.03	8.03	8.03	8.03	8.03
Generation	8.14	12.00	40.00	42.00	45.00
Total Energy Availability	945.02	948.87	976.87	978.87	981.87
<b>ENERGY SURPLUS/(GAP)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

The energy requirement of E&PDS is mainly met from power purchase from Central Generating Stations or from other sources/ open market/ power exchanges etc.

The expected power procurement sources for FY 2018-19 are provided in the table below:



Table: Table 5.4 Power Purchase Sources

Sl. No.	Source	2016-17 (Actual)	2017-18 (Estimated)	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
	<b>Central Sector</b>					
1	BSTPP, NTPC	30.18	30.18	30.18	30.18	30.18
2	FSTPP, NTPC	113.07	113.07	113.07	113.07	113.07
3	FSTPP -III, NTPC	0.00	0.00	0.00	0.00	0.00
4	KHSTPP-I, NTPC	63.97	63.97	63.97	63.97	63.97
5	KHSTPP-II, NTPC	21.63	21.63	21.63	21.63	21.63
6	TSTPP, NTPC	153.89	153.89	153.89	153.89	153.89
7	KBUNL					
8	RANGIT-III, NHPC	4.34	4.34	4.34	4.34	4.34
9	TEESTA -V, NHPC	31.87	31.87	31.87	31.87	31.87
	<b>Others</b>					
10	CHUKHA, PTC	45.62	45.62	45.62	45.62	45.62
11	WBSEDCL	52.65	52.65	52.65	52.65	52.65
12	SPDC	27.09	27.09	27.09	27.09	27.09
13	UI /Deviation	40.02	40.02	40.02	40.02	40.02
14	Free Power	360.56	360.56	360.56	360.56	360.56
	<b>TOTAL</b>	<b>944.91</b>	<b>944.91</b>	<b>944.91</b>	<b>944.91</b>	<b>944.91</b>

## 5.2 Capital Expenditure & Capitalisation

E&PDS has undertaken significant capital expenditure during FY 2016-17 & FY 2017-18 and has plans to implement schemes for development of infrastructure during FY 2018-19, 2019-20 & 2020-21. The infrastructure of E&PDS is insufficient to cater to the present load and hence to meet the increasing demand, capital expenditure is absolutely necessary.

The objective of incurring the capital expenditure is to continue the up-gradation and strengthening of the distribution network to meet the desirable standards of performance and provide better network reliability and sustainable performance to the consumers of E&PDS.

The capital expenditure plan envisaged will also assist in reducing system losses. The details of the capital expenditure schemes proposed in FY 2018-19, 2019-20 & 2020-21 are outlined in Format- 14.

## 5.3 Aggregate Revenue Requirement for E&PDS

Based on the provisions of the Tariff Regulations, the estimate for the Aggregate Revenue Requirement (ARR) would consist of the following elements:



- Power Generation/Purchase Costs
- Transmission Charges
- Operation and Maintenance Expenses
- Depreciation
- Interest and Finance charges on Loan Capital
- Interest on working capital
- Bad debts written off if any
- Return on Equity

The above Aggregate Revenue Requirement is netted off for Non-Tariff Income for determining the net ARR for E&PDS.

### **5.3.1 Power Generation/Purchase**

#### **5.3.1.1 Source of Power**

E&PDS has 14 own generating stations which contributes to energy requirement of the state. Balance requirement of power is met from purchase from Central/State Generating Stations or from other sources/ open market/ power exchanges etc. The present power availability of E&PDS is as listed below:

**Table 5.5: Power Allocation**

Sl. No.	Source	Capacity	Allocation	
		MW	%	MW
	<b>Central Sector</b>			
1	BSTPP, NTPC	1320	1.52%	20.06
2	FSTPP, NTPC	1600	1.63%	26.08
3	FSTPP-III, NTPC	840	1.55%	13.02
4	KHSTPP-I, NTPC	1500	0.33%	4.95
5	KHSTPP-II, NTPC	1000	2.40%	24.00
6	TSTPP, NTPC	195	0.55%	1.08
7	KBUNL			
8	RANGIT-III, NHPC	60	13.33%	8.00
9	TEESTA -V, NHPC	510	13.19%	67.27
	<b>Others</b>			
10	CHUKHA, PTC	270	2.22%	6.00
11	WBSEDCL	50	20.00%	10.00
	<b>TOTAL</b>	<b>7345</b>		<b>159.31</b>



### **5.3.2 Assumption for Power Purchase Projection**

The merit order dispatch principles are typically adopted when determining the power purchases 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 its disposal. Accordingly, E&PDS has considered purchase of the entire power available from all the possible sources during the period to meet the demand to the extent possible.

Power Purchase cost is a function of the energy requirement and price of available power from the different sources for meeting the energy requirement. The energy requirement of E&PDS for FY 2018-19, 2019-20 & 2020-21 is proposed to be met from central generating stations and external power purchase.

Power purchase cost for FY 2018-19, 2019-20 & 2020-21, is determined on the following parameters:

- The quantum of power allocated to E&PDS from central generating station is based on the declared allocation;
- Power purchases from the CGS stations are accounted at the net energy availability at E&PDS periphery;
- PLF is assumed same as per FY 2016-17;

#### **5.3.2.1 Power Purchase from CGS Stations**

E&PDS has projected that the quantum of power purchase from CGS stations will be based on the firm & infirm allocations. The details of the computation of power purchases from CGS stations are provided in Format-D3 & D4 of the formats submitted along with the filing.

#### **5.3.2.2 External Power Purchase/ Other Sources**

Based on the Energy balance and trend of energy requirement during peak demand period it is estimated that in addition to the firm as well as infirm allocation of power from various CGS, there will be shortfall of energy requirement for FY 2018-19, FY 2019-20 & FY 2020-21. This additional energy requirement has to be met from external power purchase source/other sources in order to meet the present demand of the consumers. E&PDS has been continuously experiencing similar shortfall of power in the past which was met through Unscheduled Interchange (UI) as there was no alternate source of power available. This scenario is likely to continue in the period of FY 2018-19, FY 2019-20 & FY 2020-21 also till E&PDS gets additional allocation from CGS. Power purchase cost including inter-state transmission charges has been projected by considering cost escalation of 5.98% YOY based on WPI.

Detailed power station wise units and cost is provided in the Format – D4. Considering the above the Hon'ble Commission is requested to allow the power purchase costs as



estimated by E&PDS for FY 2018-19, 2019-20 & 2020-21. Summary of the power purchase cost is provided in the table below:

**Table 5.6: Summary of E&PDS Power Purchase Expenses**

(Rs. Crores)

Power Purchase Summary					
	2016-17	2017-18	2018-19	2019-20	2020-21
<b>Units</b>	944.91	944.91	944.91	944.91	944.91
<b>Cost</b>	213.51	226.25	239.75	254.07	269.24

Year	Total	Solar	Non-Solar
2016-2017	5 %	0.75 %	4.25%
2017-2018	14.25 %	4.75 %	9.50 %
2018-2019	17 %	6.75 %	10.25 %

Further the said notification states that the Renewal Power Obligation will on total consumption of electricity by an obligated entity excluding consumption from hydro sources of power.

**RENEWAL POWER OBLIGATION FOR FY 2016-17 to FY 2020-21**

The consumption in the State for the respective years and total hydro power available is given in the table below. Therefore, as seen, all the consumption in the State for the FY 2016-17 to FY 2020-21 was met from hydro sources, there by implying no Renewal Power Obligation for the FY 2016-17 to FY 2020-21 for EPDS.

**Hydro Power available to EPDS & RPO compliance for the FY 2016-17 to 2020-21**

Sl.No	Name of Generating Station	FY 16-17 (Actual)	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
1	60 MW Rangit HEP, NHPC	43.51	43.51	43.51	43.51	43.51
2	510 MW Teesta, Stage V, NHPC	353.27	353.27	353.27	353.27	353.27
3	Chuka ( PTC )	45.62	45.62	45.62	45.62	45.62
4	Ramam, WBSedcl	52.65	52.65	52.65	52.65	52.65
5	Lachung, Rongli & Magley ,SPDC	27.09	27.09	27.09	27.09	27.09
6	EPDS	8.14	12.00	40.00	42.00	45.00
7	Total Hydro generation available	530.28	534.14	562.14	564.14	567.14
8	Total consumption Including T&D – RPO Requirement	466.14	474.9	485	496	510
9	<b>Balance ( 8-9)</b>	<b>64.14</b>	<b>59.24</b>	<b>52.14</b>	<b>44.14</b>	<b>33.14</b>



### 5.3.3 Own Generation

Details own Generating Stations with Installed Capacity is provided in the table below:

**Table 5.7: Details own Generating Stations**

Sl. No.	Name of Station	Capacity (MW)
<b>Hydro</b>		
1	LLHP	12
2	JPH	2.1
3	Rimbi-I	0.6
4	Rimbi-II	1
5	Rothak	0.2
6	Rongnichu	2.5
7	Chaten	1
8	Meyongchu	4
9	Kalez	2
10	Lachung	0.2
11	Rabomchu	3
<b>Diesel</b>		
1	DPH, Gangtok	4
2	DPH LLHP, Ranipool	0.992

### Summary of units generated

The Generation forecast is based on the plant availability. Accordingly generation for FY 2017-18, FY 2018-19, 2019-20 & 2020-21 is estimated.

**Table 5.8: Projected Power Generation**

Sl. No.	Particulars	2016-17	2017-18	2018-19	2019-20	2020-21
1	2	3	4	5	6	7
1	Units Generated	8.14	12.00	40.00	42.00	45.00

#### 5.3.3.1 Cost of Generation:

Cost of generation of SHPs owned by E&PDS is arrived at on the basis of projected net generation at the HEPs and per unit tariff determined as per SSERC (Terms and Conditions for Determination of Tariff from Renewable Energy sources) 2012. Petition for the approval of the same is submitted as Part -IV of this submission. Cost of



Generation from SHPs owned by E&PDS arrived as per the above is provided in the table below.

**Table 5.9: Cost of Generation**

(Rs. Crores)

Sl. No.	Particulars	2018-19	2019-20	2020-21
1	2	3	4	5
1	Cost of Generation	21.02	21.55	22.11

Cost of fuel cost in respect of generating units at Gangtok & Ranipool is provided below:

**Table 5.10: Cost of Fuel**

(Rs. Crores)

Sl. No.	Particulars	2016-17	2017-18	2018-19	2019-20	2020-21
1	2	5	6	7	8	9
1	Cost of Fuel	0.17	0.18	0.18	0.18	0.18

Considering the above, the Hon'ble Commission is requested to allow the cost of generation/fuel as projected by E&PDS for FY 2018-19, 2019-20 & 2020-21.

#### **5.3.4 Transmission and Other Charges**

Inter-state transmission charges has been projected along with the power purchase cost discussed in para 5.3.2.2 above and in Format- D4.

The intra-state transmission system is being operated & maintained by E&PDS and transmission charges has been calculated as per The 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, 2017 and attached in Part III of the petition. Details of Annual Transmission charges are provided in the table below.



**Table 5.11: Intra- State Transmission Charges**

(Rs. Crores)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	2	3	4	5
1	Intra State Transmission Charges	63.95	77.22	83.06

#### 5.4 Operation and Maintenance Expenses

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

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

It is submitted that the E&PDS 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.

Accordingly, details of Employee Expenses, Administration & General Expenses & Repairs & Maintenance Expenses are provided in the subsequent sections.

##### 5.4.1 Employee Expenses

The expense head of employee cost consists of salary and allowance, bonus, Leave Travel Concession (LTC) & Honorarium etc. E&PDS has projected the employee cost in accordance with the methodology described in the para 4.4. It is therefore kindly requested that Hon'ble Commission may approve the employee expenses as projected.

**Table 5.12: Employee Expenses**

(Rs. Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	2	3	4	5
1	Employee Expense	79.14	83.37	87.79



## **5.4.2 Administration and General Expenses**

A&G expenses comprise of the following broad subheads of expenditure, viz.

- Domestic Travelling Expenses
- Office Expenses
- Legal, Regulatory & Consultancy Fees
- Insurance etc.

The Administration & General (A&G) expenses include computerization, communication, Travelling & Conveyance, Rent, Professional and technical fees, etc. E&PDS has projected the A&G expenses in accordance with the methodology described in the para 4.4. It is therefore kindly requested that Hon'ble Commission may approve the A&G expenses as projected.

**Table 5.13: A&G Expenditure**

(Rs. Crores)

<b>Sl. No.</b>	<b>Particulars</b>	<b>2018-19 (Projected)</b>	<b>2019-20 (Projected)</b>	<b>2020-21 (Projected)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	Admin & General Expense	0.84	0.84	0.88

## **5.4.3 Repairs and Maintenance Expenses**

E&PDS has been undertaking various Repairs and Maintenance activities as a step towards improvement of systems, reduction in breakdowns, reduction in response time and increasing preventive maintenance.

E&PDS has projected the R&M expenses in accordance with the methodology described in the para 4.4. It is therefore kindly requested that Hon'ble Commission may approve the A&G expenses as projected.

**Table 5.14: Repairs and Maintenance Expenses**

(Rs. Crores)



Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	2	3	4	5
1	Repair & Maintenance Expense	19.50	20.31	21.18

#### 5.4.4 O&M Expenditure as a whole

The overall O&M Expenditure are tabulated below:

**Table 5.15: O&M Expenditure**

(Rs. Crores)

Sl. No.	Particulars	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	Employee Expense	79.14	83.37	87.79
2	Repair & Maintenance	19.50	20.31	21.18
3	Admin & General	0.84	0.84	0.88
4	<b>Total Operation &amp; Maintenance Expenses</b>	<b>99.48</b>	<b>104.52</b>	<b>109.85</b>

It is submitted that E&PDS is now gearing up for meeting the operational requirement of servicing existing and additional new consumers in line with the Standards of performance which the licensees have to adhere to. Hence there would be an increase in O&M expenditure to support full-fledged distribution business operations.

#### 5.5 Gross Fixed Assets

E&PDS has projected the Gross Fixed Asset in accordance with the Regulation 25 of 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, 2017.

It is submitted that opening value of gross fixed assets (GFA) for 2016-17 has been taken from Fixed Asset Register as on 31.03.2016 and the same has been increased by addition of assets during the FY 2016-17 and estimated addition during FY 2017-18. Thereafter, planned additions during 2018-19, 2019-20 & 2020-21 have been considered and accordingly, GFA has been computed for FY 2018-19, 2019-20 & 2020-21.

It is further submitted that the assets of the utility has been segregated on the basis of function i.e Generation, Transmission & Distribution. Since, Tariff of Generation



&Transmission is being considered separately from the FY 2018-19 the assets has also been considered accordingly. The Assets and corresponding depreciation reflected in the Format -6 is only for the distribution function.

## **5.6 Depreciation**

E&PDS has projected the depreciation in accordance with the Regulation 31 of The 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, 2017.

It is submitted that opening value of gross fixed assets (GFA) & opening accumulated depreciation for 2016-17 has been taken from Fixed Asset Register as on 31.03.2016. Further, depreciation for FY 2016-17 has been calculated at the rates prescribed in the regulations on addition of assets during the FY 2016-17 and estimated addition during FY 2017-18. Thereafter, planned additions during 2018-19, 2019-20 AND 2020-21 have been considered for the calculating the depreciation for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 respectively.

The table below indicates the depreciation calculated for the assets of the distribution function and the same has been considered while projecting the ARR for the FY 2016-19, FY 2019-20 & FY 2020-21. Details of category wise Assets & Depreciation is provided in the Format – 6. Summary of Year wise depreciation is depicted in the table below:

**Table 5.16: Depreciation**

**(Rs. Crores)**

<b>Sl. No.</b>	<b>Particulars</b>	<b>2016-17 (Actuals)</b>	<b>2017-18 (Estimated)</b>	<b>2018-19 (Projected)</b>	<b>2019-20 (Projected)</b>	<b>2020-21 (Projected)</b>
1	Depreciation	14.64	16.84	17.94	18.84	19.29

## **5.7 Interest and Financial Charges**

Regulation 28 of The SSERC (Multi Year Tariff) Regulations, 2017 provides the methodology for calculation of the Debt-Equity Ratio. It provides that 30% of the capital employed shall be considered as equity and balance 70% is to be considered as loan. The regulation provides for normative loan irrespective of actual loan availed by the utility. Repayment of loan and interest are also to be considered on normative basis.

In this regard it is submitted that the E&PDS being a Government Department, the



entire capital employed till date has been funded through fund infusion by the Government inform of budgetary support which are generally in the nature of grants. Therefore, the financial principal of debt-equity ratio of 70:30 as provided in Regulation 28 read with Regulation 30 may not be applicable to the E&PDS.

In view of the above, E&PDS has not claimed interest & finance charges. However, the same shall be claimed based on the actual loan & interest for the period at the time of True-up.

## **5.8 Interest on Working Capital**

The E&PDS has computed the Interest on Working Capital for FY 2018-19, 2019-20 & 2020-21 in accordance with the Regulation 32.3 of The 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, 2017.

As per the Regulations, for the purpose of computation of normative working capital and Interest on working capital, the components of working capital are as follows:

- (a) Operation and maintenance expenses for one month; plus
- (b) Maintenance spares at one (1) per cent of the historical cost escalated at 6% from the date of commercial operation; plus
- (c) Receivables equivalent to two (2) months of the expected revenue from charges for use of Distribution wires at the prevailing tariffs; minus
- (d) Amount, if any, held as security deposits under clause (b) of sub-section (1) of Section 47 of the Act from Distribution system users except the security deposits held in the form of Bank Guarantees;

Interest is required to be calculated at a rate equal to the State Bank Advance Rate (SBAR) as on 1<sup>st</sup> April of the financial year in which the Petition is filed.

Interest on working capital has been calculated accordingly and detailed in the table below:

**Table 5.17: Interest on Working Capital**

**( Rs.Crores)**



<b>Sl. No.</b>	<b>Particulars</b>	<b>2018-19 (Projected)</b>	<b>2019-20 (Projected)</b>	<b>2020-21 (Projected)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	O&M Expenses for one month	8.29	8.71	9.15
2	Maintenance spares @ 1% plus escalation @ 6 % per annum	5.27	5.97	6.53
3	Receivables equivalent to 2 months's revenue	75.35	81.17	85.84
<b>4</b>	<b>Total Working Capital</b>	<b>88.91</b>	<b>95.85</b>	<b>101.53</b>
5	Less: Security Deposit of Consumers	0.00	0.00	0.00
<b>6</b>	<b>Net Working Capital</b>	<b>88.91</b>	<b>95.85</b>	<b>101.53</b>
7	SBI Advance Rate as on 01.04.2017	12.80%	12.80%	12.80%
<b>8</b>	<b>Interest on Working Capital</b>	<b>11.38</b>	<b>12.27</b>	<b>13.00</b>

The Hon'ble Commission is requested to kindly approve the interest on working capital as proposed.

## **5.9 Bad Debts**

Regulation 68.8 of 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, 2017 provides that bad debts actually written off may be allowed as a pass through in the ARR. E&PDS is not proposing any provision for bad debts and the same shall be claimed on actual during true-up exercise.



### **5.10 Return on Equity**

Regulation 28 of The 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, 2017 read with Regulation 29 provides the methodology for calculation of the Debt Equity Ratio and Return on Equity. It provides that 30% of the capital employed shall be considered as equity and balance 70% is to be considered as loan.

In this regard it is submitted that the E&PDS being a Government Department, the entire capital employed till date has been funded through fund infusion by the Government in form of budgetary support which are generally in the nature of grants and aids through financial institutions under various schemes like APDRP, RGGVY etc.

In view of the above, the financial principal of debt-equity ratio of 70:30 and return on equity thereon as provided in regulation 28 read with regulation 29 may not be applicable to the E&PDS. Therefore E&PDS has not considered return on equity while computing the ARR.

### **5.11 Non-Tariff Income**

Regulation 69 of 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, 2017 provides that the Non-tariff income shall be deducted from the ARR in calculating the Tariff. Non- tariff income includes revenue from of Meter Rent, Meter testing Charge, disconnection/Reconnection Charge and other departmental charges. The Non- tariff income for the FY 2018-19, 2019-20 & 2020-21 has been projected considering the above. Accordingly, Non-tariff income for the FY 2018-19, 2019-20 & 2020-21 is provided in the table below.

**Table 5.18: Non- Tariff Income**

**(Rs.Crores)**

<b>Sl. No.</b>	<b>Particulars</b>	<b>2018-19 (Projected)</b>	<b>2019-20 (Projected)</b>	<b>2020-21 (Projected)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	Non Tariff Income	1.59	1.62	1.65



### 5.12 Aggregate Revenue Requirement

Based on the above estimates and projections, the ARR for E&PDS for FY 2018-19, 2019-20 & 2020-21 works out as under:

**Table 5.19: Aggregate Revenue Requirement**

(Rs.Crores)

Sl. No.	Item of Expense	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	2	3	4	5
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	21.02	21.55	22.11
4	Employee Costs	79.14	83.37	87.79
5	R&M Expenses	19.50	20.31	21.18
6	Adm. & Gen. Expenses	0.84	0.84	0.88
7	Depreciation	17.94	18.84	19.29
8	Advance Against Depreciation	0.00	0.00	0.00
9	Interest Charges	0.00	0.00	0.00
10	Interest on Working Capital	11.38	12.27	13.00
11	Return on Equity	0.00	0.00	0.00
12	Income Tax	0.00	0.00	0.00
13	Transmission Charges (Intra State)	63.95	77.22	83.06
<b>14</b>	<b>Total Revenue Requirement</b>	<b>453.70</b>	<b>488.64</b>	<b>516.72</b>
15	Less: Non Tariff Income	1.59	1.62	1.65
<b>16</b>	<b>Net Revenue Requirement (14-15)</b>	<b>452.11</b>	<b>487.02</b>	<b>515.07</b>
17	Revenue from Tariff	196.89	207.81	218.20
18	Revenue from Outside State Sale	95.78	95.94	96.10
<b>19</b>	<b>Gap (16-17-18)</b>	<b>159.45</b>	<b>183.27</b>	<b>200.77</b>
20	Revenue Surplus Carried Over	0.00	0.00	0.00
21	Additional revenue from proposed tariff	3.30	2.73	2.10
22	Regulatory Asset	-	-	-
<b>23</b>	<b>Energy Sales (MU)</b>	<b>369.36</b>	<b>393.22</b>	<b>415.14</b>

### 5.13 Revenue at Existing Tariff and Gap

Based on the Aggregate Revenue Requirement and net revenue from existing tariffs for FY 2018-19, 2019-20 & 2020-21, the resultant GAP is as shown in the table below:



Table 5.20: Revenue at Existing Tariff & GAP

**(Rs.Crores)**

Sl. No.	Particulars	2016-17 (Actuals)	2017-18 (Estimated)	2018-19 (Projected)	2019-20 (Projected)	2020-21 (Projected)
1	2	3	4	5	6	7
1	Revenue from Sale of Power	173.44	179.57	196.89	207.81	218.20
2	Revenue from Surplus power sales (Outside State)	86.31	86.46	95.78	95.94	96.10
3	Total Revenue at Existing Tariff	259.75	266.03	292.67	303.75	314.30
4	Net Annual Revenue Requirement	322.76	341.09	452.11	487.02	515.07
5	<b>(Gap)/ Surplus</b>	<b>-63.02</b>	<b>-75.06</b>	<b>-159.45</b>	<b>-183.27</b>	<b>-200.77</b>
6	Covered by Previous year's surplus carried over	0.00	0.00	0.00	0.00	0.00
7	Additional Revenue at Proposed Tariff	0.00	0.00	3.30	2.73	2.10
	<b>Net (GAP)/Surplus</b>	<b>-63.02</b>	<b>-75.06</b>	<b>-156.15</b>	<b>-180.54</b>	<b>-198.67</b>

## 6. TARIFF PROPOSAL FOR FY 2018-19

E&PDS in the previous sections has discussed the estimated performance for the control period based on the past years performances and certain assumptions explained at appropriate places to determine the Aggregate Revenue Required for the period.

### 6.1 Recovery of Revenue Gap for FY 2018-19

The estimated gap for FY 2018-19, 2019-20 & 2020-21 has been computed by deducting the ARR from revenue at existing tariff as detailed in Para 5.13 above.

E&PDS does not propose to recover the entire Gap as these 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. E&PDS being a Government Department funded by budgetary support from State Government it proposes to absorb the unrecovered gap.

In view of the above the tariff proposal for FY 2018-19 for individual categories is given below along with the comparison of existing and proposed energy charges.



**Table 6.1 - Existing v/s Proposed Tariff**

Sl. No.	Category of Consumers	Existing Rate Paisa/KWH	Proposed Rate Paisa/KWH
1	2	3	4
<b>1</b>	<b>Domestic</b>		
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
<b>2</b>	<b>Commercial</b>		
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
<b>3</b>	<b>Public lighting</b>		
	Rural Areas	270	270
	Urban Areas	500	500
<b>4</b>	<b>Industrial</b>		
<b>A</b>	<b>HT</b>		
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>B</b>	<b>LT (Rural)</b>		
a)	Up to 500 units	250	350
b)	501 - 1000 units	440	
c)	1001 & above	580	585
<b>C</b>	<b>LT (Urban)</b>		
a)	Up to 500 units	528	575
b)	501 - 1000 units	616	
c)	1001 & above	713	715
<b>5</b>	<b>Bulk supply</b>		
a)	LT	606	606
b)	HT	657	660

## 6.2 Revenue at Proposed Tariff

Based on the tariff proposed above, following is the summary of the additional revenue



at the proposed tariff rates.

**Table 6.2: Additional Revenue**

(Rs.Crores)

Sl. No.	Particulars	2018-19 (Projected)
1	2	3
1	Additional Revenue from Proposed Tariff	3.30

### 6.3 Impact of Tariff on Consumers

The revenue gap and the average tariff hike proposed are presented in the table below:

**Table 6.3: Impact of Tariff Hike**

Sl. No.	Particulars	Units	FY 2018-19	
			Existing	Proposed
1	2	3	4	5
1	ARR for FY 2018-19	Rs. Crores	453.70	453.70
2	Revenue from tariff for FY 2018-19		196.89	200.19
3	Revenue from sale of surplus power for FY 2018-19	Rs. Crores	95.78	95.78
4	<b>Total Revenue</b>		292.67	295.96
5	Gap (1 - 2 - 3)	Rs. Crores	161.04	157.74
6	<b>Sales within State</b>	MU's	369.36	369.36
7	<b>Sale of Surplus power through Trading/UI</b>	MU's	491.88	491.88
8	<b>Total Sales</b>		861.23	861.23
9	Average Cost of Supply within state (1-3) / 6 x 10	Rs. per kWh	9.69	9.69
10	Average Revenue (2 / 6 x 10)	Rs. per kWh	5.33	5.42
11	Pure Gap (9-10)	Rs. per kWh	4.36	4.27
12	<b>Average Hike in Tariff</b>			0.09
13	<b>Hike in Tariff %</b>			1.68%

Hence, it is submitted that the average tariff required to recover the gap attributable to FY 2018-19 is Rs. 4.50 but keeping in view the resultant burden on the consumers, the proposed hike has been restricted to Rs. 0.09 per unit.

It is prayed to the Hon'ble Commission that considering the above submissions, the tariff proposal of E&PDS for FY 2018-19 may kindly be approved.



## **7. 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:**

<b>Units Consumption</b>	<b>Paisa per kWh (Unit)</b>
Up to 100	170
101 to 200	370
201 to 400	460
Consumption exceeding 400 units	500

**(c) Monthly Minimum Charge:**

<b>Details</b>	<b>Rate (In ₹ )</b>
Single Phase Supply	40.00
Three Phase Supply	200.00

**(d) Monthly Rebate (if paid within due date):** 5% on Energy Charges  
*(Due date shall be 10 days which shall be reckoned from the date of issue of the bill)*

**(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. 500 dated 26.11.2014 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 200	450	
201 to 400	600	
Consumption exceeding 400 units	640	
<b>Demand Charges</b> - 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 as mentioned above	₹ 100/KVA/Month plus energy charges as mentioned 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  
*(Due date shall be 10 days which shall be reckoned from the date of issue of the bill)*

**(e) Annual Surcharge (charge on the gross arrear outstanding every March end):** 10%



### III LOW TENSION INDUSTRIAL SUPPLY(LTIS):

#### Type of Consumer:

Power supply to the industries like poultry, Agriculture load ,fabrication and sheet metal works or any other units of such kind under small-scale industries having connected load not exceeding 25 kVA in total. In the event of exceeding connected load beyond 25 kVA, the Demand charge at the following rates shall be imposed.

**(a) Nature of service:**

Low Tension AC 430/230 volts, 3 phase/single phase, 50 cycles/Sec (Hz)

**(b) Rate:**

Units Consumption Area	Paisa per kWh	
	Rural	Urban
Upto 1000	350	575
1001 & Above	585	715
<b>Demand Charge</b> - 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 mentioned above	₹ 100/kVA/Month plus energy charge as mentioned 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  
*(Due date shall be 10 days which shall be reckoned from the date of issue of the bill)*

**(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. In case recorded maximum demand exceeds the contract demand for three consecutive months the demand charges will be payable on the basis of installed capacity of the transformer.

*Energy meters are compulsorily to be installed on HT side of all transformers having capacity equal to or above 200KVA. 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 as transformation loss.*

**(b) Rate:**

Units Consumption	Charges
Up to 100 kVA Demand Charge Plus Energy Charge	₹ 200/kVA/Month + 350 Paisa/Unit
101 to 250 kVA Demand Charge Plus Energy Charge	₹ 250/kVA/Month + 400 Paisa/Unit
251 to 500 kVA Demand Charge Plus Energy Charge	₹ 290/kVA/Month + 470 Paisa/Unit
501 kVA & above 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  
(Due date shall be 20 days which shall be reckoned from the date of issue of the bill)

(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)	606
HT (11kV or 66 kV)	660

**(c) Monthly Minimum Charge:**

LT (430/230 Volts)	₹ 200 /kVA/month of Sanction Load
HT (11kV or 66 kV)	₹ 200/kVA/month of Sanction Load

(d) **Monthly Rebate (if paid within due date):** 2% on Energy Charges  
(Due date shall be 20 days which shall be reckoned from the date of issue of the bill)

(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 charge, surcharge, 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 lightpoints A) up to 100 units B) Above 101units (ii) Having 4 to 6 light points. A) up to 150units B) Above 151units (iii) Having 7 to 12 light points A) up to 300units B) Above 301units (iv) Having 13 and more light points A) up to 500units B) Above 501units  <b>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 the Head of Place of worship.</b>	Domestic rate is applicable.

Minimum charges, surcharges, and rebate etc. will be applicable as per domestic supply category.

**IX PUBLIC LIGHTING ENERGY CONSUMPTIONCHARGES**

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.

**(a) Rate:**

Category	Rate
<b>Rural Areas</b>	270 Paisa/KWH
<b>Urban Areas</b>	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**

### **1. 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/Three phase	₹ 200
ii)	Other Metering Instruments	₹ 250

## **XIV DISCONNECTION & RECONNECTION**

(i)	DS and CS category	₹ 150.00
(ii)	LTIS, HTS & BS category	₹ 250.00

Replacement of meters or shifting the position of meter boards etc., can be entertained exclusively on the specific written request by the consumer against a payment of ₹100.00 each time which does not include the cost of materials and labour Payment.



#### **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 each 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 end. 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 neither the meter, main cut-out or metering equipments nor allow the same to remain in any position where the employees are prohibited from entering into or where there is difficulty of access for employees.

**d. Application/Notice before connection**

The consumer must submit an application for new service connection or should apply for additional power supply well in advance for domestic and commercial purpose. 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 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 be submitted for 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 head lines 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 equipment 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 Departmental equipment 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 mal practice:-

(a) Exceeding 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 box which is open to the consumer for inspection. 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 non-receipt of his bill and in such representation, a copy will be supplied to him.

### **XXVI DISCONNECTION 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 number and should quote the same 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 card of the Department are allowed to replace those fuses. Consumers are not allowed to replace those fuses and they will render themselves shall be 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. Whosoever 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:**

$$\text{Sanctioned load (kW)} \times 6 \text{ hrs} \times 30 \text{ days} \times 60/100$$

**2. Other Consumers:**

$$\text{Sanctioned load (kW)} \times 8 \text{ hrs} \times 30 \text{ days} \times 60/100$$