



# **TARIFF ORDER**

## **2015-16**

**For**  
**Energy & Power Department,**  
**Government of Sikkim**

**March 2015**

**Sikkim State Electricity Regulatory Commission**  
**Gangtok, Sikkim**

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## ABBREVIATIONS

| Abbreviation | Description                                    |
|--------------|--|
| A&G          | Administration & General                       |
| ARR          | Aggregate Revenue Requirement                  |
| ATE          | Appellate Tribunal For Electricity             |
| CAGR         | Compounded Annual Growth Rate                  |
| CD           | Contract Demand                                |
| CERC         | Central Electricity Regulatory Commission      |
| CGS          | Central Generating Stations                    |
| CoS          | Cost of Supply                                 |
| CPSU         | Central Power Sector Undertakings              |
| Crs          | Crore  |
| D/E          | Debt Equity                                    |
| E&PDS        | Energy & Power Department, Govt. of Sikkim     |
| EHT          | Extra High Tension                             |
| ER           | Eastern Region                                 |
| FAC          | Fuel Adjustment Costs                          |
| FDR          | Fixed Deposits Receipts                        |
| FSTPS        | Farakka Super Thermal Power Station            |
| FY           | Financial Year                                 |
| GFA          | Gross Fixed Assets                             |
| HP           | Horse Power                                    |
| HT           | High Tension                                   |
| SSERC        | Sikkim State Electricity Regulatory Commission |
| KHSTPS       | Kahalgaon Thermal Power Station                |
| KV           | Kilovolt                                       |
| KVA          | Kilo volt Amps                                 |
| kWh          | kilo Watt hour                                 |
| L.T.M.D.     | Low Tension Maximum Demand                     |
| LNG          | Liquefied Natural Gas                          |
| LT           | Low Tension                                    |
| LTC          | Leave Travel Concession                        |
| MU           | Million Units                                  |
| MVA          | Million volt Amps                              |
| MW           | Mega Watt                                      |

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|         |   |
|---------|---|
| NHPC    | National Hydroelectric Power Corporation Ltd.           |
| O&M     | Operation & Maintenance                                 |
| PGCIL   | Power Grid Corporation of India Limited                 |
| PLF     | Plant Load Factor                                       |
| PLR     | Prime Lending Rate                                      |
| PTC     | Power Trading Corporation of India Ltd.                 |
| R&M     | Repairs and Maintenance                                 |
| RoR     | Rate of Return  |
| Rs.     | Rupees  |
| S/s     | Sub Station   |
| SBI     | State Bank of India                                     |
| SERC    | State Electricity Regulatory Commission                 |
| SPV     | Special Purpose Vehicle                                 |
| T&D     | Transmission & Distribution                             |
| TSTPS   | Talcher Super Thermal Power Station                     |
| UI      | Unscheduled Interchange                                 |
| WBSEDCL | West Bengal State Electricity Distribution Company Ltd. |



**Before the**  
**Sikkim State Electricity Regulatory Commission for**  
**the State of Sikkim, Gangtok**

Case No: TR-1/2014

**In the matter of**

Petition for Aggregate Revenue Requirement (ARR) and Retail Tariff for the FY 2015-16 , Provisional True Up for FY 2013-14 and Review for FY 2014-15 filed by the Energy and Power Department, Government of Sikkim, herein after referred to as 'EPDS'---Petitioner.

**Coram**

**Shri.T.T. Dorji.....Chairperson**

**ORDER**

**Date of Order: 31<sup>st</sup> March 2015.**

## **1. BACKGROUND AND BRIEF HISTROY**

The Sikkim State Electricity Regulatory Commission (hereinafter referred to as the 'Commission') came into existence on 15<sup>th</sup> November, 2003 as a one man Commission. The notification constituting the Commission was issued vide Sikkim Government Extraordinary Gazette Notification No. 28/P/GEN/97/524 dated 15.11.2003. The Commission, although constituted in 2003, became operative only in April, 2011, after the Chairperson was appointed on 11<sup>th</sup> April, 2011 on the recommendations of the selection committee vide Home Department Notification No. 34/Home/2011 dated 11.04.2011 in terms of Section 85 of the Electricity Act 2003, hereinafter referred to as the Act. Thereafter, the Secretary and other officials were appointed and the Commission began its work.

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

### **1.1 Energy and Power Department, Government of Sikkim (EPDS)-Filing of ARR and Tariff Petition**

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

EPDS had filed its Petition for approval of the provisional true up for FY 2013-14 and review for FY 2014-15 and Aggregate Revenue Requirement (ARR) and determination of tariff for FY 2015-16, vide its letter No. 5/POW/REV/Nodal/14-15/362 Dated 29<sup>th</sup> November 2014. The petition was received by the Commission on the same day. On detailed examination of the Petition filed by the EPDS, it was found that the EPDS had filed its Petition as per the provisions of the Sikkim State Electricity Regulatory Commission (Conduct of Business)

Regulations, 2012, and Sikkim State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2012.

The Commission had notified 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, 2013 (MYT Regulation) vide Sikkim Government Gazette Notification No.204 dated 21<sup>st</sup> May 2014. Therefore, the MYT Regulations had become effective from the date of its publication in the Sikkim Government Gazette. As such, the MYT Regulations had been made applicable for determination of tariff in all cases from 1<sup>st</sup> April, 2015 onwards.

## **1.2 Interaction with the Petitioner**

In view of the fact that the MYT Regulations had already come into force, the Commission vide its letter dated 837/SSERC/2013-14/122 dated 03.12.2014 directed the PCE cum Secretary of the EPDS to appear before the Commission on 09.12.2014 and show cause as to why the ARR/Tariff Petition filed by it should not be rejected. Accordingly, the PCE cum Secretary of the EPDS alongwith the other officials of appeared before the Commission and made their submissions before the Commission and requested that the ARR/Petition for the single year be accepted. After, hearing the pleadings of the EPDS, the Commission opined that the Commission had issued series of directives in the past to the EPDS on the need to re-structure/un-bundle the EPDS so that the functioning of the Transmission, Distribution and Generation utilities are segregated to ensure better accountability, efficiency and improvement in the services to the consumers. The Commission further observed that the Commission had been stressing on the need for the EPDS to have annual auditing of accounts so as to ensure that audited accounts and proper data required for filing of ARR/Tariff Petition under MYT Regulation are available. The Commission also observed that the EPDS must inculcate and start the habit of complying with the various directives, regulations and notifications issued by the Commission and that the EPDS cannot continue to defer or delay compliance of the directives and notifications. The Commission rejected the plea of the EPDS and directed the EPDS to file the Petition under MYT for three years, i.e., FY 2015-16 to FY 2017-18, duly segregating the Generation, Transmission and Distribution functions.

In compliance to the directives of the Commission, the EPDS filed its fresh Petition under MYT Regulations vide letter No.31/POW/REV/NODAL/14-15/364 dated 16.12.2014 . However, on scrutiny of the fresh petition, the Commission observed several shortcomings and the lack of vital data in the Petition. The Commission also noted that the segregation of accounts and data for the three functions had not been properly done. As such, the Commission made a series of queries to the EPDS through email dated 13<sup>th</sup> January 2015, 20<sup>th</sup> January 2015, 20<sup>th</sup> January 2015 and 23<sup>rd</sup> January 2015 directing the EPDS to furnish its clarifications. The EPDS was also directed to furnish additional data and other information required. The EPDS furnished its replies to the queries and also supplied the additional data/information asked for by the Commission vide its letter No. 5/Power/Rev/Nodal/14-15/E&P/1021 dated 02.02.2015.

The replies, clarifications and additional data/information furnished by the EPDS were examined in detail by the Commission. However, the Commission found the replies and clarifications furnished by the EPDS unsatisfactory and the Commission made the following observations on the MYT Petition of the EPDS:

- The EPDS had not un-bundled and as such segregation of accounts had not been done for Transmission, Distribution and Generation functions.
- Separate audited accounts were not available for Transmission, Distribution and Generation functions. The annual auditing of accounts of the EPDS was still being done by the Office of the Comptroller and Auditor General, Sikkim and no commercial auditing had been done.
- The data and information furnished by the EPDS were found un-realistic considering lack of annual audit and segregation of accounts.

In view of the above facts, the Commission once again summoned the Petitioner and had detailed discussions with the Petitioner on 21<sup>st</sup> February, 2015. The Commission brought forth the various lacunas and the deficiencies observed in the MYT Petition of the EPDS and pointed out that considering the lack of properly segregated and audited accounts, the Commission cannot accept the MYT Petition filed by the EPDS.

The Petitioner (EPDS) submitted that the EPDS being a Government Department, it operates under Government Accounting norms and unlike Boards/Corporations/Companies, the EPDS

does not operate accounts under Double Entry System and as such, the balance sheets, profit & loss accounts etc were not prepared. The Petitioner as such submitted and expressed its inability to submit the required data and requested that the Petition be admitted on a single year basis for FY 2015-16. The Petitioner submitted that process towards un-bundling of the EPDS had been already initiated and the matter is under consideration by the State Government.

After duly considering the submissions made by the Petitioner and the present facts and circumstances, the Commission consented to consider and admit the Petition for the single year FY 2015-16 as already filed by the EPDS.

### 1.3 Admission of the Petition

The Petition filed by the EPDS was admitted on 24<sup>th</sup> February, 2015 and registered as Case No. TR- 1/2014 and the Petitioner was directed to issue public notice, calling for objections/suggestions from the public.

In response to the Commission's communication, the Petitioner issued public notices soliciting objections, comments, views and suggestions from the public.

### 1.4 Public Hearing Process

As per the directive of the Commission, and in accordance with Section 64 of the Act, EPDS published a Public Notice indicating the salient features of its Petition and inviting objections, suggestion, comments and views of the members of the public, consumers and stake holders . The EPDS arranged publication of the public notice in the following newspapers, requesting submission of the objections, suggestion, comments and views latest by 16.03.2015.

- ☐ Sikkim Herald (English )..... 27<sup>th</sup> February 2015.
- ☐ Sikkim Herald (Nepali/Local language) ..... 3<sup>rd</sup> March 2015.

The copies of the public notice published in the above said newspapers are enclosed as **Annexure –I A and IB** to this Tariff Order. The copies of the Petition were also made available for purchase by interested persons from the Head Office of the Petitioner on payment of Rs.

1000/-. The petition filed by the EPDS was also uploaded in the official web site of the Commission.

In response to the public notice issued by the EPDS, the Commission received only 1 (one) written objection on the instant Petition filed by the EPDS. The objection petition was sent to the EPDS with the directive for furnishing its response to the same. The Commission also informed the sole objector about the Public Hearing to be held on 20<sup>th</sup> March 2015 at “Chintan Bhavan”, Gangtok for all categories of consumers and requested him to take part in the Public Hearing.

The details of replies/clarifications furnished by the EPDS on the objections raised are discussed in the relevant sections of this Tariff Order.

### 1.5 Notice for Public Hearing

A public notice was published by the Commission in two consecutive issues of the following leading newspapers, giving due intimation to the general public, interested parties, objectors and the consumers about the public hearing to be held at Gangtok on 20<sup>th</sup> March 2015. Through the Public Notice, the Commission also appealed to the general public and the stake holders to participate in the Public Hearing and that their views will be heard by the Commission. The Public Notice was also uploaded in the official web site of the Commission “[www.sserc.in](http://www.sserc.in)”

- Sikkim Express (English).....4<sup>th</sup> & 5<sup>th</sup> March 2105
- Hamro Prajashakti (Nepali/Local Language).....4<sup>th</sup> & 5<sup>th</sup> March 2105
- Samay Dainik (Nepali/Local Language).....4<sup>th</sup> March 2105

### 1.6 Public Hearing

In accordance with the prescribed guidelines, the Public Hearing was held on 20.03.2014, after adopting the due process of publishing a Public Notice sufficiently in advance. The Chairperson of the Commission, other Officials from the Commission as well as the Officials representing the Petitioner (EPDS) were present in full strength at the designated venue and time to in order to conduct the Public Hearing.

However, neither any individual nor any group participated in the Public Hearing inspite of both the Commission and the EPDS giving wide publicity for the Public Hearing. Even the sole objector who had filed his objections to the Tariff Petition did not participate in the Public Hearing. There was no response from the general public and the consumers to the Public Hearing.

Although there was non-participation by the general public, consumers and the stake holders in the Public Hearing, a general discussion was done in the Public Hearing on the issues raised by the sole objector and the overall power scenario in the State. The participants from the Commission and the EPDS put forth their suggestions and views and suggestions during the discussion. The views and suggestions given by the participants have been taken into consideration while issuing this Tariff Order. The list of officials who attended the Public Hearing and details of the sole objector and the response of the EPDS are briefly narrated in Chapter 4.

### **1.7 Compliance of Directives**

In its previous Tariff Orders, the Commission had issued certain directives to EPDS in the public interest. EPDS has furnished a compliance report on the same. The comments of the Commission on the compliance report, along with fresh directives issued are given in Chapter 8.

### **1.8 Layout of the Order**

This order is divided into Eleven Chapters, as under:

1. First Chapter. This provides the background regarding ARR and Tariff proposal and details of the Public Hearing process.
2. Second Chapter. This contains a summary of ARR and Tariff Proposals and the prayer of the Petitioner.
3. Third Chapter. This provides an overview of the power sector in Sikkim.
4. Fourth Chapter. This contains a brief summary of the objections raised, response of EPDS and the Commission's comments on the same.
5. Fifth Chapter. This deals with the review for FY 2013-14.
6. Sixth Chapter. This deals with the review for FY 2014-15.

7. Seventh Chapter. This contains the Annual Revenue Requirement for FY 2015-16, the Commission's analysis and decisions thereon.
8. Eighth Chapter. This deals with EPDS' compliance of earlier directives, comments of the Commission and fresh directives to EPDS.
9. Ninth Chapter. This discusses the principles of tariff policy and retail supply tariff for FY 2014-15.
10. Tenth Chapter. This deals with the approved Transmission and Wheeling Charges.
11. Eleventh Chapter. This covers the Fuel and Power Purchase Adjustment Mechanism and FPPPA Formula.

### **1.9 State Advisory Committee Meeting.**

The gist of the MYT Petition as well as the Single Year Tariff Petition filed by the EPDS were provided to the Members of the State Advisory Committee (SAC) for perusal. A Meeting of the State Advisory Committee was held in the Commission's Office on 18<sup>th</sup> and 19<sup>th</sup> March 2015. The Committee were briefed on the Provisional Truing Up Petition for F.Y 2013-14, Review of F.Y 2014-15 and ARR and Tariff Proposal for FY 2015-16. The Members of SAC were also briefed on the deficiencies observed in the MYT Petition filed by the EPDS and the lack of vital data and information required for considering the Tariff Petition under MYT regime. The SAC Members were also apprised of the various directives issued by the Commission in the past and the status of their compliance by the EPDS.

The SAC Members felt that the performance of the EPDS in the generation sector needs lot of improvement in order to boost the overall financial health of the EPDS. The Members also stressed on the need to provide reliable and quality power supply to the consumers. The Members opined that the EPDS must take all necessary steps for cutting down the AT&C and T&D losses and felt that the EPDS must take immediate action for un-bundling of the Department. The Members advised that the petition for hike in tariff must be considered keeping in view the public interests and reasonableness of the proposed hike in view of the fact that Sikkim is an energy surplus State. The views and suggestions given by the SAC Members have been given due consideration while issuing this Tariff Order.



## 2. SUMMARY OF AGGREGATE REVENUE REQUIREMENT FOR FY 2015-16

### 2.1 Aggregate Revenue Requirement (ARR)

The Petitioner has submitted the Aggregate Revenue Requirement for FY 2015-16 for meeting its expenses and estimated the revenue with the existing tariff. The projected ARR and Revenue gap are shown in Table 2.1 below:

**Table 2.1: Aggregate Revenue Requirement Projected by EPDS for FY 2015-16**

| Sl. No. | Item of expenses                            | 2014-15<br>(Estimated) | 2015-16<br>(Projected) |
|---------|---|------------------------|------------------------|
| 1       | Cost of fuel                                | 0.19                   | 0.37                   |
| 2       | Cost of power purchase                      | 209.14                 | 209.14                 |
| 3       | Employee Costs                              | 65.20                  | 77.06                  |
| 4       | R&M Expenses                                | 31.66                  | 34.96                  |
| 5       | Administration and General Expenses         | 2.53                   | 2.58                   |
| 6       | Depreciation                                | 38.71                  | 45.63                  |
| 7       | Interest Charges                            | 71.86                  | 77.83                  |
| 8       | Interest on Working Capital                 | 4.04                   | 4.36                   |
| 9       | Return on NFA/Equity                        | 33.43                  | 38.93                  |
| 10      | Income Tax                                  | 0.00                   | 0.00                   |
| 11      | Total Revenue Requirement                   | 456.75                 | 490.85                 |
| 12      | Less: Non-Tariff Income                     | 0.90                   | 0.94                   |
| 13      | Net Revenue Requirement                     | 455.86                 | 489.91                 |
| 14      | Revenue from Tariff                         | 114.52                 | 119.87                 |
| 15      | Revenue from Outside State Sale             | 98.15                  | 98.15                  |
| 16      | Gap   | 243.19                 | 271.90                 |
| 17      | Additional revenue from the proposed tariff | 0.00                   | 15.70                  |

| Sl. No. | Item of expenses | 2014-15<br>(Estimated) | 2015-16<br>(Projected) |
|---------|------------------|------------------------|------------------------|
| 18      | Energy Sales     | 245.44                 | 256.34                 |

## 2.2 TARIFF

In its Petition, EPDS has submitted the proposed Tariffs for FY 2015-16, as detailed in Table 2.2 below:

Table 2.2: Existing Tariffs v/s proposed Tariffs for FY 2015-16

| Sl. No.  | Consumers Categories    | Existing Tariff              |                          | Proposed Tariff              |                                  |                                  |
|----------|-------------------------|------------------------------|--------------------------|------------------------------|----------------------------------|----------------------------------|
|          |                         | Demand Charges Rs/KVA /Month | Energy Charges Paisa/KWH | Demand Charges Rs/KVA/ Month | Energy Charges Paisa/KWH (Rural) | Energy Charges Paisa/KWH (Urban) |
| 1        | 2                       | 3                            | 4                        | 5                            | 6                                |                                  |
| <b>1</b> | <b>Domestic (DLT)</b>   |                              |                          |                              |                                  |                                  |
| a)       | Up to 50 units          |                              | 110                      |                              | 130                              | 175                              |
| b)       | 51 to 100 units         |                              | 225                      |                              | 250                              | 285                              |
| c)       | 101 to 200 units        |                              | 345                      |                              | 380                              | 400                              |
| d)       | 201 to 400 units        |                              | 415                      |                              | 445                              | 475                              |
| e)       | 401 units & above       |                              | 440                      |                              | 470                              | 500                              |
| <b>2</b> | <b>Commercial (CLT)</b> |                              |                          |                              |                                  |                                  |
| a)       | Up to 50 units          |                              | 315                      |                              | 350                              | 400                              |
| b)       | 51 to 200 units         |                              | 490                      |                              | 520                              | 550                              |
| c)       | 201 to 400 units        |                              | 515                      |                              | 545                              | 575                              |
| d)       | 401 units & above       |                              | 540                      |                              | 570                              | 600                              |
| <b>3</b> | <b>Public Lighting</b>  |                              |                          |                              |                                  |                                  |
|          | Rural Areas             |                              | 250                      |                              | 250                              |                                  |
|          | Urban Areas             |                              | 460                      |                              | 460                              |                                  |
| <b>4</b> | <b>Industrial</b>       |                              |                          |                              |                                  |                                  |
| A        | HT                      |                              |                          |                              |                                  |                                  |
| a)       | HT(AC) above 3.3 KV     |                              |                          |                              |                                  |                                  |
| b)       | Up to 100 KVA           | 150                          | 300                      | 175                          | 360                              |                                  |
| c)       | 100 – 250 KVA           | 200                          | 348                      | 225                          | 415                              |                                  |
| d)       | 250 – 500 KVA           | 230                          | 396                      | 250                          | 475                              |                                  |
| e)       | 500 KVA & above         | 450                          | 410                      | 475                          | 495                              |                                  |
| <b>B</b> | <b>LT (Rural)</b>       |                              |                          |                              |                                  |                                  |
| a)       | Up to 500 units         |                              | 235                      |                              | 300                              |                                  |

| Sl. No   | Consumers Categories | Existing Tariff              |                          | Proposed Tariff              |                                  |                                  |
|----------|----------------------|------------------------------|--------------------------|------------------------------|----------------------------------|----------------------------------|
|          |                      | Demand Charges Rs/KVA /Month | Energy Charges Paisa/KWH | Demand Charges Rs/KVA/ Month | Energy Charges Paisa/KWH (Rural) | Energy Charges Paisa/KWH (Urban) |
| b)       | 501 – 1000 units     |                              | 420                      |                              | 460                              |                                  |
| c)       | 1001 units & above   |                              | 545                      |                              | 600                              |                                  |
| <b>C</b> | <b>LT (Urban)</b>    |                              |                          |                              |                                  |                                  |
| a)       | Up to 500 units      |                              | 480                      |                              | 560                              |                                  |
| b)       | 501 – 1000 units     |                              | 550                      |                              | 600                              |                                  |
| c)       | 1001 units & above   |                              | 620                      |                              | 670                              |                                  |
| <b>5</b> | <b>Bulk Supply</b>   |                              |                          |                              |                                  |                                  |
| a)       | LT                   |                              | 540                      |                              | 595                              |                                  |
| b)       | HT                   |                              | 560                      |                              | 615                              |                                  |

### 2.3 Prayers of EPDS

The EPDS has in its Petition prayed for the following:

- To consider and approve the Provisional True-up of expenses for the FY 2013-14.
- To a Review the estimates for FY 2014-15.
- To admit the Petition and Approve the ARR and Tariffs for FY 2015-16.
- To approve category-wise tariff, including fixed/ demand charges submitted by EPDS to meet revenue requirement for FY 2015-16
- To approve the suggestions regarding the tariff philosophy.
- Pass such orders as the Commission may deem fit and proper , keeping in view the facts and circumstances of the case.



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

#### 3.1 Introduction

Sikkim is a remote sensitive landlocked Himalayan State with an area of 7096 SqKm and a population of around 6,10,577 as per 2011 census. Owing to its small size and population, the requirement of power is also limited. The per capita energy consumption in the State was 328.36 KWh for 2013-14. Unlike other States in the Country, Sikkim does not have large or heavy industrial units or factories. There are only a few pharmaceutical units and small scale industries. As such, the major chunk of requirement of power requirement of the State comes from the Domestic Category. However, owing to the increasing economic development of the State, a slight growth in the Industrial category has been observed. The growth in power demand in the recent years are also attributable to the construction power requirements for numerous hydropower projects being constructed in the State. The EPDS is the only utility entrusted with the responsibility of transmission and distribution of electricity in the State of Sikkim. The EPDS is a deemed licensee under the provisions of Electricity Act, 2003, in the State of Sikkim.

The EPDS also own and operates a number of small hydropower projects and diesel generating stations. The EPDS also has a number of micro hydropower projects under execution. Thus the EPDS is also a power generator. Apart from the EPDS, the Sikkim Power Development Corporation Limited (SPDCL), A Government of Sikkim Enterprise also is engaged in the development of small hydropower projects in the State. The SPDCL presently owns and operates 3 (three) small hydropower projects with an installed capacity of 10 MW.

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

Sikkim is endowed with huge hydropower potential and a number of projects are being implemented in the State under Public-Private Partnership and Private Sector. The total hydropower potential of the State is estimated to be around 8000 MW. The various projects allotted are at different stages of development. Some of the projects have already been commissioned, some are at advance stage of construction and others are at survey and investigation stage. As on date, the following projects have been commissioned:

| Sl.No | Name of the Project  | Capacity (MW) | Owner/developer                  |
|-------|----------------------|---------------|----------------------------------|
| 1.    | Teesta Stage -V HEP  | 510           | NHPC Limited.                    |
| 2.    | Rangit Stage-III HEP | 66            | NHPC Limited.                    |
| 3.    | Chuzachen HEP        | 99            | Gati Infrastructure Pvt Limited. |

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

| Sl.No | Name of the Project   | Capacity (MW) | Owner/developer                       |
|-------|-----------------------|---------------|---------------------------------------|
| 1.    | Teesta Stage –III Hep | 1200          | Teesta Urja Limited.                  |
| 2.    | Dikchu HEP            | 96            | Sneha Kinetic Power Projects Pvt Ltd. |
| 3.    | Rangit- IV HEP        | 120           | Jal Power Corporation Ltd.            |
| 4.    | Jorethang Loop HEP    | 96            | DANS Energy Pvt Ltd                   |
| 5.    | Rongnichu HEP         | 96            | Madhya Bharat Power Corpn.Ltd         |
| 6.    | Rangit-II HEP         | 66            | Sikkim Hydropower Ventures Pvt Ltd    |
| 7.    | Tashiding HEP         | 97            | Shiga Energy Private Limited.         |

The State of Sikkim will receive free power from the various hydropower projects @12% after their commissioning for the first 15 years of their operation and from the 16<sup>th</sup> year onwards @ 15% for the entire duration of the agreement period, which is 35 years. The State will get a substantial quantum of free power once all the projects are commissioned.

### 3.3 Transmission and Distribution Network in the State

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

## I. Sub-Stations.

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

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

| Sl.No                    | Description       | Length               |
|--------------------------|-------------------|----------------------|
| <b>EHT Lines</b>         |                   |                      |
| 1.                       | 132 KV            | 14.80 Ckt.Km         |
| <b>HT Lines</b>          |                   |                      |
| 2                        | 66 KV D.C         | 43.80 Ckt.Km         |
| 3                        | 66 KV S.C         | 184.50Ckt.Km         |
| <b>Total 66 KV Lines</b> |                   | <b>227.30 Ckt.Km</b> |
| 4                        | 11 KV / 3 phase   | 242.62 Km            |
| 5                        | 11 KV / 2 phase   | 44.55 Km             |
| <b>Total 11 KV Lines</b> |                   | <b>287.17 Km</b>     |
| <b>LT Lines</b>          |                   |                      |
| 1                        | LT / 3 phase      | 1301.52 Km           |
| 2                        | LT / Single phase | 3581.37 Km           |
| <b>Total LT lines</b>    |                   | <b>4882.89 Km</b>    |

## III. Power Transformers

| Sl.No        | Description   | Quantity (Nos) | Total capacity (MVA) |
|--------------|---------------|----------------|----------------------|
| 10           | 20 MVA        | 1              | 20.00                |
| 11           | 15 MVA        | 1              | 15.00                |
| 12           | 10 MVA        | 3              | 30.00                |
| 13           | 7.5 / 7.0 MVA | 6              | 44.50                |
| 14           | 5 MVA         | 15             | 75.00                |
| 15           | 2.5 MVA       | 16             | 40.00                |
| <b>Total</b> |               | <b>42</b>      | <b>224.50</b>        |

#### IV. Distribution Transformers

| Sl. No.      | Capacity (KVA) | Quantity (Nos) | Total Capacity (KVA) |
|--------------|----------------|----------------|----------------------|
| 1            | 1600           | 0              | 0.00                 |
| 2            | 1500           | 2              | 3000                 |
| 3            | 1000           | 2              | 2000                 |
| 4            | 750            | 10             | 7500                 |
| 5            | 650            | 2              | 1300                 |
| 6            | 630            | 0              | -                    |
| 7            | 615            | 1              | 615                  |
| 8            | 500            | 58             | 29000                |
| 9            | 450            | 1              | 450                  |
| 10           | 400            | 1              | 400                  |
| 11           | 375            | 0              | -                    |
| 12           | 300            | 67             | 21100                |
| 13           | 250            | 20             | 5000                 |
| 14           | 200            | 58             | 11600                |
| 15           | 150            | 30             | 4500                 |
| 16           | 160            | 6              | 960                  |
| 17           | 125            | 1              | 125                  |
| 18           | 100            | 155            | 15500                |
| 19           | 63             | 359            | 22617                |
| 20           | 50             | 10             | 500                  |
| 21           | 25             | 743            | 18575                |
| 22           | 10             | 442            | 4420                 |
| <b>Total</b> |                | <b>1968</b>    | <b>149162</b>        |

#### 3.4 Consumer Profile and Energy Sales

The EPDS was serving about 95000 consumers as on 31<sup>st</sup> March 2014, with an annual consumption of about 237 MU. The category-wise number of consumers and energy sales during 2013-14 are given in Table 3.1 below.



Table 3.1: Consumer profile and Energy Sales during FY 2013-14

| Sl. No. | Consumer Category    | No. of Consumer (Nos.) | %           | Energy Sales (MU) | Energy Sales (%) |
|---------|----------------------|------------------------|-------------|-------------------|------------------|
| 1       | Domestic             | 83854                  | 87.36%      | 8398              | 35.37%           |
| 2       | Commercial           | 10277                  | 10.71%      | 3543              | 14.95%           |
| 3       | LT Industrial (LTIS) | 450                    | 0.46%       | 1.15              | 0.48%            |
| 4       | Public Lighting      | -                      | -           | 0.35              | 0.14%            |
| 5       | Temporary Supply     | -                      | -           | 1.61              | 0.67%            |
| 6       | HT Supply            | 358                    | 0.37%       | 97.11             | 40.91%           |
| 7       | Bulk Supply          | 1045                   | 5.09%       | 17.74             | 7.47%            |
| 8       | <b>Total</b>         | <b>95984</b>           | <b>100%</b> | <b>237.37</b>     | <b>100.00%</b>   |

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

The total Transmission and Distribution (T&D) losses worked out by EPDs for FY 2013-14 is 150.41 MU and percentage loss is 38.79%. The details of T&D losses for 2013-14 are as given in Table 3.2 below:

Table 3.2: T&amp;D Loss Calculation approved by the Commission for FY 2013-14

| Sl. No.  | Particulars                                      | Unit | FY 2013-14    |
|----------|--|------|---------------|
| <b>A</b> | <b>Energy Availability</b>                       |      |               |
| 1        | Own Generation                                   | MU   | 4.70          |
| 2        | Energy Purchased from NTPC                       | MU   | 379.23        |
| 3        | Energy Purchased from WBSEDCL                    | MU   | 56.83         |
| 4        | Total Power Purchase from Eastern Region         | MU   | 436.11        |
| 5        | Transmission Loss in Eastern Region              | %    | 2.34          |
| 6        | Transmission Loss on (4)                         | MU   | 10.20         |
| 7        | Net Energy (4-6)                                 | MU   | 425.91        |
| 8        | Energy Purchase from NHPC                        | MU   | 34.64         |
| 9        | Total Energy from ER and NER                     | MU   | 460.55        |
| 10       | Transmission Loss in North Eastern Region        | %    | 2.99          |
| 11       | Transmission Loss on (9)                         | MU   | 13.77         |
| 12       | Net Energy (9-11)                                | MU   | 446.77        |
| 13       | Energy Purchased from PTC                        | MU   | 40.25         |
| 14       | Energy Purchased from SPDC                       | MU   | 12.67         |
| 15       | UI Purchases                                     | MU   | 5.28          |
| 16       | Free Energy                                      | MU   | 314.32        |
| 17       | <b>Total Energy Available (1+12+13+14+15+16)</b> | MU   | <b>823.99</b> |
| 18       | Less: Energy Sale to outside State               | MU   | 436.21        |
| 19       | Net Energy available for sale within the State   | MU   | 387.78        |
| 20       | Energy Sales wit in the State                    | MU   | 237.37        |
| 21       | T&D Loss (19-20)                                 | MU   | 150.41        |
| 22       | T&D Loss   | %    | 38.79         |

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

### 3.6 Demand and Supply Position

The power demand of the State was about 100 to 110 MW during FY 2013-14. The allocation from various Central Generating Stations (CGS), Chukka (PTC) and share in Ramam HEP in West Bengal is about 159 MW, as detailed in Table 3.3 below.

**Table 3.3: Power Allocation from CGS and other sources**

| Name of Generating Station | Installed Capacity (MW) | Share (%) | Share (MW)    |
|----------------------------|-------------------------|-----------|---------------|
| Teesta V HEP, NHPC         | 510                     | 13.19%    | 67.27         |
| Rangit HEP, NHPC           | 60                      | 13.33%    | 8.00          |
| Chukka HEP, PTC            | 270                     | 2.22%     | 5.99          |
| FSTPP, NTPC                | 1600                    | 1.63%     | 26.08         |
| KHSTPP-I, NTPC             | 840                     | 1.55%     | 13.02         |
| KHSTPP-II, NTPC            | 1500                    | 0.33%     | 4.95          |
| TSTPP, NTPC                | 1000                    | 2.40%     | 24.00         |
| Ramam HEP, WBSEDCL         | 50                      | 20%       | 10.00         |
| <b>Total</b>               |                         |           | <b>159.31</b> |

### 3.7 Power Supply

#### (a) Own Generation

EPDS has fourteen own hydro and two diesel generating stations with a total installed capacity of 40.692 MW, of which 35.7 MW is hydro and 4.992 MW, diesel generation. The details of the generation stations owned by the EPDS and their present status are as detailed in Table 3.4 below:

**Table 3.4: EPDS' own installed capacity**

| Sl. No | Name of Projects                | Installed Capacity (MW) | Remarks   |
|--------|---------------------------------|-------------------------|---|
|        | <b>Hydro</b>                    |                         |   |
| 1      | Lower Lhagap Hydel Power (LLHP) | 2 x 6.00=12.00          | Machines shutdown, consequent to the earthquake in 2011 |
| 2      | Jali Power House (JPH)          | 6 x 0.35=2.10           |   |
| 3      | Rimbi-I                         | 3 x 0.20=0.6            |   |
| 4      | Rimbi-II                        | 2 x 0.50=1.0            |   |
| 5      | Rothak                          | 2 x 0.10=0.2            | Power house abandoned                                   |
| 6      | Rongnichu                       | 5 x 0.50=2.5            | Failure of water conductor system                       |
| 7      | Chaten                          | 2 x 0.05=0.1            | Power house abandoned                                   |

|    |                                      |                 |  |
|----|--------------------------------------|-----------------|--|
| 8  | Meyongchu                            | 2 x 2.00=4.0    | Less generation due to disturbances caused by Road Damage  |
| 9  | Upper Rongnichu Hydel Project (URHP) | 4 x 2.00=8.00   | No Generation due to failure of the water conductor system |
| 10 | Kalez                                | 2 x 1.00=2.0    | Less generation due to damage of water conductor           |
| 11 | Lachung                              | 2 x 0.10=0.20   | Power house abandoned                                      |
| 12 | Rabomchu                             | 2 x 1.50=3.0    |  |
|    | <b>Diesel</b>                        |                 |  |
| 13 | Diesel Power House Gangtok           | 4 x 1.00=4.0    |  |
| 14 | DPH LLHP, Ranipool                   | 4 x 0.248=0.992 | Under shut down due to the earthquake in 2011              |
|    | <b>Total</b>                         | <b>40.692</b>   |  |

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

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

**(b) Power purchase**

The EPDS purchases power from various Central Generating Stations and other sources for meeting its energy requirements. The different sources of power and quantum of power purchased during FY 2013-14 and the average unit cost of energy purchased is given in Table 3.5 below:

**Table 3.5: Power Purchase from Central Generating Stations and other sources during FY 2013-14**

| Sl. No      | Generating Station         | Power Purchased (MU) | Cost of Power (Rs. Crore) | Average Cost (Rs/kWh) |
|-------------|----------------------------|----------------------|---------------------------|-----------------------|
| <b>NTPC</b> |                            |                      |                           |                       |
| 1           | FSTPP – I                  | 102.95               | 53.55                     | 5.20                  |
| 2           | FSTPP – II                 | 0.00                 | 0.21                      | -                     |
| 3           | KHSTPP I                   | 84.31                | 35.68                     | 4.23                  |
| 4           | KHSTPP II                  | 26.04                | 11.85                     | 4.55                  |
| 5           | TSTPP                      | 165.93               | 41.93                     | 2.53                  |
|             | <b>Total</b>               | <b>379.23</b>        | <b>143.23</b>             | <b>3.78</b>           |
| <b>NHPC</b> |                            |                      |                           |                       |
| 6           | Rangit – III               | 7.59                 | 1.52                      | 2.00                  |
| 7           | Teesta – V                 | 27.05                | 10.29                     | 3.80                  |
|             | <b>Sub total</b>           | <b>34.65</b>         | <b>11.81</b>              | <b>3.41</b>           |
| 8           | PTC (Chukka HEP)           | 40.25                | 7.45                      | 1.85                  |
| 9           | SPDC                       | 12.67                | 4.31                      | 3.40                  |
| 10          | WBSEDCL                    | 56.88                | 6.90                      | 1.21                  |
|             | <b>Sub-Total</b>           | <b>109.80</b>        | <b>18.66</b>              | <b>1.70</b>           |
| 11          | UI Purchases               | <b>5.28</b>          | 0.95                      | <b>1.80</b>           |
| 12          | Free Power                 | 314.32               | -                         | -                     |
| 13          | Rebate/ Other Charges      | -                    | 2.08                      | -                     |
| 14          | PGCIL Transmission Charges | -                    | 32.41                     | -                     |
|             | <b>Total</b>               | <b>843.27</b>        | <b>209.14</b>             |                       |

### 3.8 Energy Balance

The supply and demand scenario during FY 2013-14 is given in Table 3.6 below:

**Table 3.6: Energy Balance of EPDS for FY 2013-14**

| Sl. No.   | Particulars                               | Unit | FY 2013-14    |
|-----------|---|------|---------------|
| <b>A</b>  | <b>Energy Requirement</b>                 |      |               |
| 1         | Energy Sales                              | MU   | 237.37        |
| 2         | T&D Loss                                  | %    | 38.79         |
| 3         | T&D Loss                                  | MU   | 150.43        |
| 4         | Energy Requirement                        | MU   | 387.80        |
| <b>B</b>  | <b>Energy Availability</b>                |      |               |
| 5         | Own Generation                            | MU   | 4.70          |
| 6         | Energy Purchased from NTPC                | MU   | 379.23        |
| 7         | Energy Purchased from WBSEDCL             | MU   | 56.88         |
| 8         | Total Power Purchase from Eastern Region  | MU   | 436.11        |
| 9         | Transmission Loss in Eastern Region       | %    | 2.34          |
| 10        | Transmission Loss on (8)                  | MU   | 10.20         |
| 11        | Net Energy (8-10)                         | MU   | 425.91        |
| 12        | Energy Purchase from NHPC                 | MU   | 34.64         |
| 13        | Total Energy from ER and NER              | MU   | 460.55        |
| 14        | Transmission Loss in North Eastern Region | %    | 2.99          |
| 15        | Transmission Loss on (13)                 | MU   | 13.77         |
| <b>16</b> | <b>Net Energy (13-15)</b>                 | MU   | <b>446.78</b> |

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| Sl. No. | Particulars                                    | Unit      | FY 2013-14    |
|---------|--|-----------|---------------|
| 17      | Energy Purchased from PTC                      | MU        | 40.25         |
| 18      | Energy Purchased from SPDC                     | MU        | 12.67         |
| 19      | UI Purchases                                   | MU        | 5.28          |
| 20      | Free Energy                                    | MU        | 314.32        |
| 21      | <b>Total Energy Available</b>                  | <b>MU</b> | <b>824.00</b> |
| 22      | Less: Energy Sale to outside State             | MU        | 436.21        |
| 23      | Net Energy Available for sale within the State | MU        | 387.80        |

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

This Chapter deals with the Objection raised against the proposed ARR and Tariff Petition and the response of the Petitioner (EPDS) to the objections and the comments of the Commission on the objections and the responses.

As required by the relevant sections of the Electricity Act, 2003, a Public Notice was issued by the Petitioner soliciting views, comments, objections and suggestions from the general public and stake holders latest by 16<sup>th</sup> March 2015. The Public Notice had been published in two local newspapers for the information of the general public and stake holders. The Commission thereafter issued a Public Notice appealing the general public and stake holders to participate in the Public Hearing to be held on 20<sup>th</sup> March 2015 .

In response to the Public Notice issued by the Petitioner (EPDS) , the Commission received only one written objection petition. In spite of wide publicity for attending the Public Hearing, there was no participation by the general public or stake holders in the Public Hearing held on 20<sup>th</sup> March 2015.

The sole objection received was forwarded to the EPDS with the directive to furnish its responses to the objections raised. The Commission also informed and requested the sole objector to attend the Public Hearing. However, the objector did not participate in the Public Hearing.

The details of the sole objector are as follows:

|   | <b>Name and Address of the Objector</b>   |
|---|---|
| 1 | Shri. Kharga Bahadur Gurung, S/o Late K.B.Guring, R/o Upper Sichey, Gangtok, East Sikkim. |

A gist of the views expressed and concerns raised by the Objector, response of the EPDS and comments of the Commission is given hereunder:

- ☐ The EPDS has not complied with the provisions of the Electricity Act, 2003 and Regulations issued and directives given by the SSERC especially with regards to need to un-bundle and restructure the Department.
- ☐ That the EPDS need to make ample efforts towards metering of all consumers in order to achieve efficiency in billing and revenue collection.
- ☐ That the T& D loss projection of 44% in the ARR for FY 2015-16 by the EPDS is very alarming. The EPDS has not completed metering of feeders and no energy auditing has also been carried out.

- ☐ That the quantum of “own generation” of the EPDS is very poor which could be attributed to lack of required technical expertise. As required by the Electricity Act, 2003, there is need to have a separate utility for Generation Functions in order to improve efficiency in generation.
- ☐ That the quantum of free power being received by the State is quite huge and as such the EPDS should consider and restrict purchase power from outside sources. EPDS need to consider meeting the power requirements from the free power and own generation rather than procuring power from outside sources to avoid the burden of wheeling and transmission charges.
- ☐ The per unit employee cost and per KWh repair and maintenance cost projected by the EPDS is considerably high. As such, there is need for the EPDS to curtail its excess manpower and rationalize its expenses on the employee cost as well R&M expenses.
- ☐ The EPDS must segregate its functioning for Transmission, Distribution and Generation functions so as to ensure proper accountability, efficiency and correct projections of its revenue requirement, energy sales, etc in the ARR.
- ☐ That there should be proper accounting and management of the “power trading” business and power procurement to ensure that the consumers are not unnecessarily burdened. The EPDS needs to make efforts to get the best market deals for power sale and purchase.
- ☐ The Objector’s main concerns are transparency, accountability and performance aspects of the EPDS apart from the need for proper, systematic and realistic projection of data/figures in the ARR/Tariff Petition.

### **Response of the Petitioner (EPDS)**

The reforms in the Electricity Sector as mandated by the Electricity Act, 2003 involves policy decisions to be taken by the State Government. The EPDS has already initiated steps for restructuring of the Department by appointing three Principal Chief Engineers to head the three functions of Generation, Transmission and Generation. The EPDS has taken steps to reduce losses and rationalize the deployment of employees to maximize output and reduce costs. EPDS has been taking up Repair and Maintenance of its own projects after damages caused by natural calamity so as to improve generation and plant efficiency.

### **Comments and Observations of the Commission:**

The issues raised by the Objector are of serious nature and the EPDS should ensure that steps are taken to rectify the same.

While determining the Tariff, the Commission has given due consideration to all the suggestions, views expressed and concerns raised by the Objector in the light of the provisions under Section 61

of the Electricity Act,2003, the National Electricity Policy, the National Tariff Policy and principles and guidelines laid down in the Regulations framed by the Commission.

**List of Participants in the Public Hearing Held on 20<sup>th</sup> March 2013 at Gangtok, East Sikkim.**

|  | <b>Name</b>              | <b>Designation</b>       | <b>Organization/Department</b>              |
|--|--------------------------|--------------------------|---|
|  | Shri. P.B.Subba          | PCE cum Secretary        | Energy & Power Department, Govt. Of Sikkim. |
|  | Shri. S.K.Pradhan        | Secretary                | SSERC                                       |
|  | Shri. N.R.Bhattarai      | Principal Chief Engineer | Energy & Power Department, Govt. Of Sikkim. |
|  | Shri.Jigme D.Denzongpa   | Sr.Legal Officer         | SSERC                                       |
|  | Shri.K.B.Kunwar          | Chief Engineer           | Energy & Power Department, Govt. Of Sikkim. |
|  | Shri.P.T.Bhutia          | Chief Engineer           | Energy & Power Department, Govt. Of Sikkim. |
|  | Shri.L.B.Rai             | Director (Accounts)      | Energy & Power Department, Govt. Of Sikkim. |
|  | Shri. A.B. Rai           | Addl.Chief Engineer      | Energy & Power Department, Govt. Of Sikkim. |
|  | Shri. K.K.Pradhan        | Addl.Chief Engineer      | Energy & Power Department, Govt. Of Sikkim. |
|  | Shri.Dilip Pradhan       | Addl.Chief Engineer      | Energy & Power Department, Govt. Of Sikkim. |
|  | Shri.P.M.Sharma          | Addl.Chief Engineer      | Energy & Power Department, Govt. Of Sikkim. |
|  | Shri. D.N Khatiwada      | Superintending Engineer  | Energy & Power Department, Govt. Of Sikkim. |
|  | Shri.Bikash Deokota      | Superintending Engineer  | Energy & Power Department, Govt. Of Sikkim. |
|  | Shri. Palchen D.Chaktha  | Director(Tech)           | SSERC                                       |
|  | Shri. Sonam P.Bhutia     | Assistant Director       | SSERC                                       |
|  | Shri.Binoy Rai           | Jr. Accountant           | SSERC                                       |
|  | Mrs. Yangzom Bhutia      | Computer Operator        | SSERC                                       |
|  | Miss.Hishey Donka Bhutia | Computer Operator        | SSERC                                       |



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## 5. PROVISIONAL TRUE UP FOR FY 2013-14

### 5.1 Preamble

The Commission had approved the ARR and Tariffs for FY 2013-14 vide its Order dated 30.3.2013, based on the projected data submitted by the EPDS. Now, the EPDS has submitted proposals for provisional True up for FY 2013-14, duly furnishing the actuals for the year 2013-14, stating that these are as per the provisional accounts prepared by them.

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

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

The EPDS has not submitted the audited accounts for FY 2013-14. Therefore, true up cannot be done. EPDS has stated that though the Accounts are not audited, the data furnished for FY 2013-14 are the actuals and Provisional True up may be done with regard to the actuals. However, the Commission considers it appropriate to carry out True up with reference to the figures approved in the Tariff Order of FY 2013-14 and the actuals now made available by the EPDS. This is discussed in the succeeding paragraphs.

### 5.2 Energy Demand (Sales)

The energy sales approved by the Commission, vide its Tariff Order for FY 2013-14, the actual sales given by EPDS, as per provisional accounts in ARR petition for FY 2015-16 and

now approved by the Commission, are summarised in Table 5.1 below.

**Table 5.1: Energy Sales approved by Commission for FY 2013-14**

| Particulars      | (MU)                          |                                     |                            |
|------------------|-------------------------------|-------------------------------------|----------------------------|
|                  | As Approved by the Commission | Actuals as per Provisional Accounts | Now approved by Commission |
| Domestic         | 104.00                        | 83.98                               | 83.98                      |
| Commercial       | 45.00                         | 35.43                               | 35.43                      |
| Public Lighting  | 3.00                          | 0.35                                | 0.35                       |
| Temporary Supply | 0.30                          | 1.61                                | 1.61                       |
| HT Industrial    | 93.21                         | 97.11                               | 97.11                      |
| LT Industrial    | 10.00                         | 1.15                                | 1.15                       |
| Bulk Supply      | 16.00                         | 17.74                               | 17.74                      |
| <b>Total</b>     | <b>271.51</b>                 | <b>237.37</b>                       | <b>237.37</b>              |

**The Commission now approves energy sales for FY 2013-14 at 237.37 MU, as per the actuals furnished by EPDS.**

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

The Commission in its Order for FY 2013-14, had fixed the target of T&D Losses at 46% for FY 2013-14. The EPDS in its ARR & Tariff Petition for FY 2015-16, has stated that the actual T&D Losses during FY 2013-14 is 40.89% as per provisional accounts.

#### Commission's Analysis

The EPDS has considered sales outside the state, while calculating T&D Losses within the state. This process is not correct, as the sales outside the state will have an effect only at the state's periphery, T&D Losses within the state will have no impact on sales outside the state. As such, sales outside the state should not be considered for the purpose of calculation of T&D Losses within the state.

UI purchases are considered for calculation of inter-state pool losses. Here also, since the UI purchases take place at the state periphery, inter-state pool losses have no effect on UI purchases. Hence the Petitioner's calculation of T&D loss cannot be taken as correct.

As per the weekly loss scheduling of ERLDC from 2.4.2012 to 31.3.2013, the average pool loss during the above period was 2.73%. As such, the inter-state transmission loss (pool loss) for the FY 2012-13 has been considered at 2.73% and T&D Loss, when recalculated, is as

shown in Table 5.2 below:

**Table 5.2: T&D Loss calculation for FY 2013-14 as approved by the Commission**

| S. No.   | Particulars                                     | Units | FY 2013-14 |
|----------|---|-------|------------|
| <b>A</b> | <b>Energy Availability</b>                      |       |            |
| 1        | Own Generation                                  | MU    | 4.70       |
| 2        | Power Purchase from CGS                         |       | 843.27     |
| 3        | Pool Loss                                       | %     | 2.73       |
| 4        | Pool Loss on (2)                                | MU    | 23.02      |
| 5        | Sales to Trading                                | MU    | 436.21     |
| 6        | Energy available at State Periphery (1+2-4 – 5) | MU    | 388.74     |
| 7        | Sales within the state                          | MU    | 237.37     |
| 8        | T&D Loss (6-7)                                  | MU    | 151.37     |
| 9        | T&D Loss (8/6)*100                              | %     | 38.94      |

The Commission now approves T&D Loss at 37.43% for FY 2013-14

#### 5.4 Own Generation

The

Commission in its Tariff Order for FY 2013-14 had approved Own Generation for the EPDS at 21.17 MU. Now, the EPDS has furnished actual own generation was 4.70 MU during the year 2013-14.

**The Commission now approves Own Generation of EPDS during FY 2013-14 at 4.70 MU, as per actuals furnished by EPDS.**

#### 5.5 Power Purchase

The Commission in its Tariff Order dated 30.3.2013 had approved the power purchase quantity of 597 MU. Now, the EPDS has furnished actuals for FY 2013-14 at 528.95 MU including UI Purchase of 5.28 MU and free power of 314.32 MU in ARR and Tariff Petition for FY 2015-16, as detailed in Table below:

**Table 5.3: Power Purchase by EPDS approved by the Commission during FY 2013-14**

| Sl. No.  | Stations      | Approved by the Commission in Tariff Order dated 30.3.2013 | Actuals furnished by EPDS (MU) | Now approved by the Commission |
|----------|---------------|--|--------------------------------|--------------------------------|
| 1        | 2             |  | 3                              |                                |
| <b>1</b> | <b>NTPC</b>   |  |                                |                                |
|          | a) FSTPP      | 185  | 102.95                         | 102.95                         |
|          | b) KHSTPP-III | -  | -                              | -                              |
|          | c) KHSTPP-I   | 78   | 84.31                          | 84.31                          |
|          | d) KHSTPP-II  | 28   | 26.04                          | 26.04                          |
|          | e) TSTPP      | 170  | 165.93                         | 165.93                         |
| <b>2</b> | <b>NHPC</b>   |  |                                |                                |

|          |                      |               |               |               |
|----------|----------------------|---------------|---------------|---------------|
|          | a) RANGIT-III        | 4             | 7.59          | 7.59          |
|          | b) TEESTA-V          | 30            | 27.05         | 27.05         |
| <b>3</b> | <b>Other Sources</b> |               |               |               |
|          | a) PTC               | 40            | 40.25         | 40.25         |
|          | b) WBSEDCL           | 40            | 56.88         | 56.88         |
|          | c) SPDC              |               | 12.67         | 12.67         |
|          |                      |               |               |               |
| 4        | UI Purchase          | 22            | 5.28          | 5.28          |
|          | Free Power           | 304.11        | 314.32        | 314.32        |
|          |                      |               |               |               |
|          | <b>Total</b>         | <b>901.11</b> | <b>843.27</b> | <b>843.27</b> |

The Commission now approves power purchase of 843.27 MU, including UI purchase of 5.28 MU and free power of 314.32 MU during FY 2013-14, as per the actuals furnished by EPDS.

## 5.6 Energy Balance

The details of energy requirement and availability approved by the Commission for FY 2013-14 and the actuals furnished by the EPDS, and now approved by the Commission, are presented in Table below:

**Table 5.4: Energy Balance Approved by the Commission for FY 2013-14**

| Sl. No. | Item                          | Approved by the Commission in Tariff Order dated 30.3.2012 | Actuals furnished by EPDS | Now approved by the Commission |
|---------|-------------------------------|--|---------------------------|--------------------------------|
| I       | Energy Requirement            |  |                           |                                |
| 1       | Energy Sales MU               | 271.51   | 237.37                    | 237.37                         |
| 2       | Sales outside the state       | 91.49  | 436.21                    | 436.21                         |
| 3       | Total Sales                   | 363.00   | 673.58                    | 673.58                         |
| 4       | T&D Loss (%)                  | 46.00  | 40.89                     | 38.94                          |
| 5       | T&D Loss MU                   | 231.29   | 164.19                    | 151.37                         |
| 6       | Energy Requirement (3+5) (MU) | 502.80   | 837.77                    | 824.95                         |
| II      | Energy Availability           |  |                           |                                |
| 7       | Own Generation (MU)           | 21.17  | 4.11                      | 4.70                           |
| 8       | Energy Purchase (MU)          | 879.11   | 822.58                    | 837.99                         |
| 9       | UI Purchases (MU)             | 22.00  | 10.49                     | 5.28                           |
| 10      | Pool Loss %                   | 4.00%  |                           | 2.73                           |
| 11      | Pool Loss on (MU)             | 35.16  | 53.00                     | 23.02                          |

| Sl. No. | Item  | Approved by the Commission in Tariff Order dated 30.3.2012 | Actuals furnished by EPDS | Now approved by the Commission |
|---------|---|--|---------------------------|--------------------------------|
| 12      | Energy available at the State Periphery (7+8+9-11) (MU) | 887.12   | 784.19                    | 824.95                         |
| 13      | Energy Requirement (MU)                                 | 502.80   | 784.19                    | 815.55                         |
| 14      | Surplus Power (12-13) (MU)                              | 384.32   | -                         | 9.40                           |

### 5.7 Fuel Cost

EPDS is having 12 hydro generating stations, with a total installed capacity of 35.70 MW, and 2 diesel-generating stations, with a total installed capacity of 4.992 MU. The fuel cost approved by the Commission in the Tariff Order for FY 2013-14, actuals furnished by EPDS and the cost now approved by the Commission are given in Table 5.5 below:

**Table 5.5: Fuel Cost approved by the Commission for during FY 2013-14**

| Sl. No. | Item         | Approved by the Commission in tariff order dated 30.3.2013 | Actuals furnished by EPDS | Now approved by the Commission |
|---------|--------------|--|---------------------------|--------------------------------|
|         |              | <b>Fuel Cost</b>   | <b>Fuel Cost</b>          | <b>Fuel Cost</b>               |
| 1       | Hydel        | -  | -                         | -                              |
| 2       | Diesel       | 0.32   | 0.17                      | 0.17                           |
|         | <b>Total</b> | <b>0.32</b>  | <b>0.17</b>               | <b>0.17</b>                    |

**The Commission now approves the fuel cost of Rs. 0.17 Crore for FY 2013-14, as per actuals furnished by EPDS**

### 5.8 Power Purchase Cost

The Power Purchase Cost approved by the Commission for FY 2013-14, and the actuals furnished by the EPDS and now approved by the Commission are furnished in Table 5.6 below:

**Table 5.6: Power Purchase Cost approved by the Commission for FY 2013-14**  
The (Rs. Cr)

| Sl. No. | Item                | Approved by the Commission in Tariff Order dated 30.03.2013 | Actuals furnished by EPDS | Now approved by the Commission |
|---------|---------------------|---|---------------------------|--------------------------------|
| 1       | Power Purchase Cost | 212.30  | 209.14                    | 209.14                         |

**The Commission now approves power purchase cost of Rs 209.14 Cr for FY 2013-14, as per actuals furnished by EPDS.**

### **5.9 Employee Cost**

The Commission vide its Order dated 30.3.2013, had approved employee cost at Rs 79.03 Crore for FY 2013-14. The EPDS has furnished actuals at Rs 47.51 Cr for FY 2013-14.

**The Commission, accordingly, now approves Rs 47.51 Crore towards employee cost for FY 2013-14, as per actuals furnished by EPDS.**

### **5.10 Repairs and Maintenance Expenses**

The Commission vide its Order dated 30.3.2013 had approved R&M expenses of Rs. 17.00 crore for FY 2013-14. The EPDS has furnished actual R&M expenses of Rs 40.88 Cr for FY 2013-14.

**The Commission accordingly now approves Rs 40.88 Crore towards R&M expenses for FY 2013-14, as per actuals furnished by EPDS.**

### **5.11 Administrative and General Expenses**

The Commission vide its Order dated 30.3.2013 had approved Rs 3.71 Crore towards Administrative and General Expenses for FY 2013-14. The EPDS has furnished actuals at Rs. 2.58 Crore for FY 2013-14.

**The Commission now approves Rs 2.58 Cr towards Administration & General Expenses for FY 2013-14, as per actuals furnished by EPDS.**

### **5.12 Capital Investment and Capitalisation during FY 2013-14**

Capital investment and capitalisation during FY 2013-14 approved by the Commission, vide its Order dated 30.3.2013 and actuals furnished by EPDS and now approved by the

Commission are furnished in Table below:

**Table 5.7: Capital Investment and Capitalisation approved by the Commission for FY 2013-14 (Rs. Cr)**

| Sl. No | Item                               | Approved by the Commission in tariff order dated 30.3.2013 for FY 2013.14 | Actuals furnished by EPDS for FY 2013-14 | Now approved by the Commission for FY 2013-14 |
|--------|------------------------------------|---|--|---|
| 1      | Opening Balance of CWIP            | -   | 63.30                                    | 63.30   |
| 2      | Capital Investment during the year | 100.97  | 104.68                                   | 104.69  |
| 3      | Total                              | 100.97  | 167.99                                   | 167.99  |
| 4      | Capitalisation during the year     | 100.97  | 102.26                                   | 102.26  |
| 5      | Closing Balance                    | -   | 65.73                                    | 65.73   |

**The Commission now approves the capital investment of Rs 104.69 Crore and capitalisation of Rs 102.26 Crore during FY 2013-14 as per actual furnished by EPDS.**

### 5.13 Gross Fixed Assets

The Commission in its Tariff Order dated 30.3.2013 had approved the value of gross fixed assets at Rs. 271.39 Crore at the end of FY 2013-14. The EPDS in its ARR and Tariff Petition for FY 2015-16, EPDS has stated that the value of gross fixed assets are taken from the Asset Registers, as detailed in Table below:

**Table 5.8: Gross Fixed Assets during 2013-14**

| Sl. No. | Item                      | Amount (Rs. Cr) |
|---------|---------------------------|-----------------|
| 1       | Opening Balance           | 654.41          |
| 2       | Additions during the year | 102.26          |
| 3       | Closing Balance           | 756.67          |

#### Commission's Analysis

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

## 5.14 Depreciation

The EPDS in its Review Petition has furnished depreciation of Rs 33.94 Crore for the year 2013-14.

### Commission's Analysis

The EPDS has not furnished the calculation at which the amount of depreciation has been arrived at. The Commission in its tariff order dated 30.3.2014 had approved a depreciation of Rs 11.66 Crore for FY 2013-14 on the Opening GFA of Rs. 170.42 Cr and proposed capitalization during FY 2013-14 at Rs.100.97 Cr at the rate of 5.28%. Now, the EPDS has stated that Rs 102.26 Crores were capitalised during FY 2013-14. The depreciation on this capitalised amount of Rs 102.36 Cr is shown in the Table below:

**Table 5.9: Depreciation for 2013-14 approved by the Commission**

| (Rs. Cr) |                                       |        |
|----------|---------------------------------------|--------|
| Sl. No.  | Item                                  | Amount |
| 1        | Opening Balances GFA as on 01.04.2013 | 98.47  |
| 2        | Additions during the year 2013-14     | 102.26 |
| 3        | Closing Balance to end of 01.04.2014  | 200.73 |
| 4        | Average GFA                           | 149.60 |
| 5        | Rate of Depreciation                  | 5.28%  |
| 6        | Depreciation                          | 7.89   |

**The Commission accordingly now approves a depreciation of Rs 7.89 Crore for FY 2013-14.**

## 5.15 Interest and Finance Charges

The EPDS has furnished interest and finance charges at Rs 58.40 Cr during the year 2013-14.

### Commission's Analysis

The Commission in its Tariff Order dated 30.3.2013 had not approved any interest and finance charges.

EPDS has not shown any loans and interest . No interest is allowed in Tariff Order for FY 2013-1. The Commission therefore, does not consider any interest.

## 5.16 Interest on Working Capital

The EPDS has not claimed any interest on working capital for FY 2013-14.



**Commission's Analysis**

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

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

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

**Table 5.10: Interest on Working Capital now approved for FY 2013-14**

| Sl. No. | Item                        | Total Cost<br>Rs / Cr | Amount required for<br>working capital<br>(Rs. Cr) |
|---------|-----------------------------|-----------------------|--|
| 1       | O&M Expenses                |                       |  |
|         | (a) Employee Cost           | 47.51                 | 3.96   |
|         | (b) R&M Expenses            | 40.88                 | 3.41   |
|         | (c) Adm & Gen Expenses      | 2.58                  | 0.22   |
| 2       | Maintenance of spares       | -                     | -  |
| 3       | Receivables                 | 111.01                | 18.50  |
| 4       | Total                       |                       | 26.09  |
| 5       | SBI PLR as on 1.4.2012      | %                     | 14.45%   |
| 6       | Interest on working capital |                       | 3.77   |

**The Commission now approves interest on working capital at Rs. 3.77 Crore for FY 2013 -14.**

### 5.17 Return on Equity

EPDS has claimed Rs. 29.63 Crore towards return on equity for FY 2013-14.

#### Commission's Analysis

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

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

### 5.18 Non-Tariff Income

EPDS has projected a non-tariff income at Rs. 0.86 Crore during the year 2013-14.

#### Commission's Analysis

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

- Meter /metering equipment/service line rentals
- Service charges
- Customer charges
- Revenue from late payment surcharge
- Recoveries on account of theft and pilferage of energy
- Miscellaneous receipts.
- Interest on staff loans and advances

- Interest on advances to suppliers
- Income from other business
- Income from staff welfare activities
- Excess found on physical verification of stores
- Interest on investments fixed and call deposits and bank balances
- Prior period Income.

Keeping in view the above types of income the Commission had approved a Non-Tariff income of Rs. 2.4 0Cr in the Tariff Order. EPDS now submits a Non -Tariff Income of Rs. 0.86 Cr as the actuals.

**The Commission therefore considers Rs. 0.86 Crore towards Non -Tariff Income for FY 2013-14, as per the actuals reported.**

### 5.19 Revenue from Existing Tariffs for FY 2013-14

Revenue from existing tariffs approved by the Commission for FY 2013-14 in the Tariff Order dated 30.3.2013, and actuals furnished by the EPDS and now approved by the Commission are furnished in the Table below:

**Table 5.11: Revenue from the existing Tariff for FY 2013-14 approved by Commission**

| Sl. No. | Item              | Approved by the Commission In TO dated 30.03.2013 |               | Actuals furnished by EPDS |              | Now approved by the Commission |              |
|---------|-------------------|---|---------------|---------------------------|--------------|--------------------------------|--------------|
|         |                   | Energy Sales MU                                   | Amount Rs. Cr | Sales (MU)                | Amt (Rs. Cr) | Energy Sales (MU)              | Amt (Rs. Cr) |
| 1       | Within the State  | 271.59  | 101.66        | 237.37                    | 111.01       | 237.37                         | 111.01       |
| 2       | Outside the State | 91.49   | 33.57         | 436.21                    | 98.15        | 436.37                         | 58.15        |
| 3       | Total             | 363.08  | 135.23        | 673.58                    | 209.18       | 673.58                         | 209.16       |

The Commission now approves revenue from existing tariff at Rs 209.16 Cr for FY 2013-14.

## 5.20 Aggregate Revenue Requirement (ARR) for FY 2013-14

The ARR for FY 2013-14 approved by the Commission in its Tariff Order for F Y 2013-14, actuals furnished by the EPDS and now approved by the Commission are furnished in the Table below:

**Table 5.12: Aggregate Revenue Requirement approved by the Commission for FY 2013-14**

(Rs. Cr)

| Sl. No. | Item                       | Approved by the Commission | Actuals furnished by EPDS | Now approved by the Commission |
|---------|----------------------------|----------------------------|---------------------------|--------------------------------|
| 1       | Cost of Fuel               | 0.32                       | 0.17                      | 0.17                           |
| 2       | Cost of Power Purchase     | 212.30                     | 209.14                    | 209.14                         |
| 3       | Employee Costs             | 79.03                      | 47.51                     | 47.51                          |
| 4       | R&M Expenses               | 17.00                      | 40.88                     | 40.88                          |
| 5       | Admn & Gen. Expenses       | 3.71                       | 2.58                      | 2.58                           |
| 6       | Depreciation               | 11.66                      | 33.94                     | 7.89                           |
| 7       | Int & Fin Charges          | -                          | 69.47                     | -                              |
| 8       | Int on W.C.                | -                          | -                         | 3.77                           |
| 9       | Return on Equity           | -                          | 29.63                     | -                              |
| 10      | Total ARR                  | 324.02                     | 437.17                    | 311.94                         |
| 11      | Less: Non Tariff Income    | 2.40                       | 0.86                      | 0.86                           |
| 12      | Net ARR                    | 321.62                     | 436.32                    | 311.08                         |
| 13      | Revenue from Tariff        | 101.66                     | 111.01                    | 111.01                         |
| 14      | Revenue from outside sales | 33.57                      | 98.15                     | 98.15                          |
| 15      | Gap                        | 186.39                     | 227.16                    | 101.92                         |

Provisional True up for FY 2013-14 indicates that the revenue gap has been reduced to Rs. 101.92 Crore, as against Rs. 186.39 Crore approved in the Tariff Order for FY 2013-14.

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## 6. REVIEW FOR FY 2014-15

### 6.1 Preamble

The Commission had approved the ARR and Tariffs for FY 2014-15 in its order dated 15.04.2015 based on the projected data furnished by the EPDS. Now the EPDS has submitted proposals for review of FY 2014-15 duly furnishing data based on the revised estimates for FY 2014-15.

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

- (a) The Commission shall undertake a Review of the expenses and revenues approved by the Commission in the Tariff Order. While doing so, the Commission shall consider variation between approvals and revised estimates / pre actuals of sale of electricity, income and expenditure for the relevant year and permit necessary adjustments / charges in case such variations are for adequate and justifiable reasons. Such an exercise shall be called ‘Review’.
- (b) After audited accounts of a year are made available the commission shall under take similar exercise as above with reference to the final actual figures as the audited accounts. This exercise with reference to the audited accounts shall be called ‘Truing up’. The Truing up for any year will ordinarily not be considered after more than one year after ‘Review’.
- (c) The Commission considers it appropriate and fair to revisit and review the approvals granted by it in the Tariff Order for FY 2013-14, with reference to the Revised Estimates now made available by the EPDS, but without altering the principles and norms adopted earlier. These matters are discussed in the succeeding paragraphs.

### 6.2 Energy Demand (Sales)

Vide its Tariff Order dated 15.04.2015, the Commission had approved energy sales of 264 MU within the state for FY 2014-15, as against 255.79 MU projected by EPDS.

The EPDS in its Review Petition for FY 2014-15 has submitted the estimated sales considering

actual for a certain period and estimate for the balance period.

Accordingly comparative statement of category-wise energy sales approved by the Commission for FY 2014-15, estimate by EPDS and approved by the Commission are shown in Table below:

**Table 6.1: Energy Sales approved by the Commission for FY 2014-15**

| Item                    | (MU)   |                  |                                |
|-------------------------|--|------------------|--------------------------------|
|                         | As Approved by the Commission in TO for FY 2014-15 | Revised Estimate | Now approved by the Commission |
| Domestic                | 84.00  | 87.49            | 87.49                          |
| Commercial              | 46.00  | 36.45            | 36.45                          |
| Public Lighting         | 1.00   | 0.36             | 0.36                           |
| Temporary Supply        | 1.00   | 1.65             | 1.65                           |
| HT Industrial Consumers | 111.00   | 100.02           | 100.02                         |
| LT Industrial Consumers | 2.00   | 1.18             | 1.18                           |
| Bulk Supply             | 19.00  | 18.28            | 18.28                          |
| Sales within State      | 264.00   | 245.44           | 245.44                         |

**The Commission now approves energy sales for FY 2014-15 at 245.44 MU as against RE of 264.00 MU approved in the Tariff Order.**

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

The Commission in its order of FY 2014-15 had fixed the target of T&D Losses at 36% for FY 2014-15. EPDS in its Review Petition for FY 2014-15, EPDS has stated that the estimated T&D Losses during FY 2014-15 are at 40%.

#### Commission's Analysis

The EPDS has considered sales outside the State while calculating T&D Losses within the State, which is not correct. T&D Losses within the State have no impact on sales outside the State. As such, outside sales cannot be considered for the purpose of calculation of T&D Losses within the state.

UI purchases are considered in calculation of inter-state pool losses. Here also as the UI purchases will take place at the State periphery, inter-state pool losses have no effect on UI

purchases. T&D loss calculation cannot be taken as correct.

Further as per weekly loss scheduling of ERLDC for from 1.4.2013 to 16.3.2014, the average pool loss during the above period was 2.30%. As such, the pool loss for the year 2014-15 is considered at 2.30% and T&D Loss are as shown as detailed in Table below:

**Table 6.2: T&D Loss calculation during FY 2014-15**

| S. No. | Item   | UoM | FY 2014-15 |
|--------|--|-----|------------|
| 1      | Own Generation                                   | MU  | 6.00       |
| 2      | Power Purchase from                              | CGS | 843.27     |
| 3      | Pool Loss  | %   | 2.30       |
| 4      | Pool Loss  | MU  | 5.11       |
| 5      | UI Purchases                                     | MU  | -          |
| 6      | Sales to Trading                                 | MU  | 436.21     |
| 7      | Energy available at State Periphery (1+2 – 4 -6) | MU  | 407.97     |
| 8      | Sales within the state                           | MU  | 245.44     |
| 9      | T&D Loss (7-8)                                   | MU  | 162.53     |
| 10     | T&D Loss (9-7)/100                               | %   | 39.84%     |

**The Commission now approves T&D Loss for FY 2014-15 at 39.84%.**

#### **6.4 Own Generation**

At present, EPDS is having 12 small Hydro generating stations with a total installed capacity of 35.70 MW and 2 diesel generating stations with a total installed capacity of 4.99 MW. Out of the 12 generating stations, only 7 stations are operational as on date with an installed capacity of 20.70 MW.

The Commission in its Tariff Order for FY 2014-15 had approved own generation at 10.05 MU. The EPDS has furnished revised estimate of own generation at 6.00 MU for FY 2014-15.

**The Commission now approves Own Generation during FY 2014-15 at 6.00 MU, as per RE furnished by the EPDS.**

#### **6.5 Power Purchase**

The Commission in its Tariff Order dated 15.04.2014 had approved power purchase quantity at 809.81 MU. The EPDS has furnished RE for FY 2014-15 at 820.31 MU including UI

Purchases of 10.49 MU and free power of 304.11 MU in Review Petition for FY 2014-15 as detailed in Table below:

**Table 6.3: Power Purchase by EPDS approved by the Commission for FY 2014-15**

| Sl. No. | Stations      | (MU)  |                  |                                     |
|---------|---------------|---|------------------|-------------------------------------|
|         |               | Approved by the Commission in tariff order for FY 2014-15 | Revised Estimate | Now approved by the Commission (MU) |
| 1       | 2             | 3   | 4                | 5                                   |
| 1       | NTPC          |   |                  |                                     |
|         | a) FSTPP      | 122.32  | 102.95           | 102.95                              |
|         | b) KHSTPP-III |   |                  |                                     |
|         | c) KHSTPP-I   | 75.22   | 84.31            | 84.31                               |
|         | d) KHSTPP-II  | 30.41   | 26.04            | 26.04                               |
|         | e) TSTPP      | 160.91  | 165.93           | 165.93                              |
|         |               |   |                  |                                     |
| 2       | NHPC          |   |                  |                                     |
|         | a) RANGIT-III | 4.23  | 7.59             | 7.59                                |
|         | b) TEESTA-V   | 26.38   | 27.05            | 27.05                               |
|         |               |   |                  |                                     |
| 3       | Other Sources |   |                  |                                     |
|         | a) PTC        | 34.71   | 40.25            | 40.25                               |
|         | b) WBSEDCL    | 47.11   | 56.88            | 56.88                               |
|         | c) SPDC       | 4.41  | 12.67            | 12.67                               |
|         |               |   |                  |                                     |
| 4       | UI Purchase   | -   | 5.28             | 5.28                                |
|         | Free Power    | 304.11  | 314.32           | 314.32                              |
|         |               |   |                  |                                     |
|         | <b>Total</b>  | <b>809.81</b>   | <b>843.27</b>    | <b>843.27</b>                       |

**The Commission now approves power purchase of 843.27 M including UI purchase of 5.28 MU and free power of 314.32 MU during FY 2014-15 as per RE furnished by EPDS.**

## 6.6 Energy Balance

The details of energy requirement and availability projected by the EPDS and approved by the Commission for FY 2014-15 and now approved by the Commission are furnished in Table



below:

**Table 6.4: Energy Balance approved by the Commission for FY 2014-15**

| (MU)      |  |   |                  |                                |
|-----------|--|---|------------------|--------------------------------|
| Sl. No.   | Stations                                       | Approved by the Commission for FY 2013-14 | Revised Estimate | Now approved by the Commission |
| 1         | 2  | 3   | 4                | 5                              |
| <b>I</b>  | <b>Energy Requirement</b>                      |   |                  |                                |
| 1         | Energy Sales                                   | 264.00                                    | 245.44           | 245.44                         |
| 2         | Sales outside the state                        | 0.00                                      | 436.21           | 436.21                         |
| 3         | Total Sales (MU)                               | 0.00                                      | 681.65           | 681.65                         |
| 4         | T&D Loss (%)                                   | 36.00                                     | 40.00            | 40.00                          |
| 5         | T&D Loss (MU)                                  | 148.50                                    | 162.53           | 162.53                         |
| 6         | Energy Requirement (3+5)                       | 412.50                                    | 844.18           | 844.18                         |
| <b>II</b> | <b>Energy Availability</b>                     |   |                  |                                |
| 7         | Own Generation                                 | 10.05                                     | 6.00             | 6.00                           |
| 8         | Energy Purchase                                | 809.81                                    | 843.27           | 843.27                         |
| 9         | UI Purchases                                   | 0.00                                      | 0.00             | 0.00                           |
| 10        | Pool Loss %                                    | 2.30                                      | 2.30             | 2.30                           |
| 11        | Pool Loss (MU)                                 | 18.63                                     | 5.11             | 5.11                           |
| 12        | Energy available at State Periphery (7+8+9-11) | 801.23                                    | 844.18           | 844.18                         |
| 13        | Energy Requirement                             | 412.50                                    | 844.18           | 844.18                         |
| 14        | Surplus Power                                  | 388.73                                    | 0.00             | 0.00                           |

## 6.7 Fuel Cost

The fuel cost approved by the Commission in Tariff Order for FY 2014-15 and RE furnished by EPDS and now approved by the Commission are furnished in Table below.

**Table 6.5: Fuel Cost approved by the Commission for FY 2013-14**

(Rs.Cr)

| Sl. No. | Item      | Approved by the Commission in tariff order for FY 2014-15 | Revised Estimate | Now approved by the Commission |
|---------|-----------|---|------------------|--------------------------------|
|         |           | Fuel Cost   | Fuel Cost        | Fuel Cost                      |
| 1       | Fuel Cost | 0.35  | 0.19             | 0.19                           |

The Commission now approves fuel cost of Rs. 0.19 Cr for FY 2014-15, as projected by EPDS.

## 6.8 Power Purchase Cost

The Power Purchase Cost approved by the Commission for FY 2014-15 and RE furnished by the EPDS and now approved by the Commission are furnished in Table below:

**Table 6.6: Power Purchase Cost approved by the Commission for FY 2014-15**

| Sl. No | Item                | Approved by the Commission in Tariff Order for FY 2014-15 | Revised Estimate | Now approved by the Commission |
|--------|---------------------|---|------------------|--------------------------------|
|        |                     | Rs. Cr  | Rs. Cr           | Rs. Cr                         |
| 1      | Power Purchase Cost | 173.70  | 209.14           | 209.14                         |

**The Commission now approves the power purchase cost of Rs 209.14 Cr for FY 2014-15.**

## 6.9 Employee Cost

The Commission in its Order dated 15.04.2015 had approved employee cost at Rs 47.89 Cr for FY 2014-15. The EPDS has furnished provisional accounts at Rs 65.20 Crore for FY 2014-15.

**The Commission accordingly now approves Rs 65.20 Cr towards employee cost for FY 2014-15 as per the Provisional Accounts furnished by EPDS.**

## 6.10 Repair and Maintenance Expenses

The Commission in its Order-dated 30.3.2014 had approved R&M expenses at Rs. 34.98 Cr for FY 2014-15. The EPDS has furnished estimated expenses at Rs 31.66 Cr for FY 2014-15.

**The Commission accordingly now approves Rs 31.66 Cr towards R&M expenses for FY 2014-15 as per RE furnished by EPDS.**

## 6.11 Administrative and General Expenses

The Commission in its Order dated 30.3.2014, had approved Rs 3.10 Cr towards Administration and General Expenses for FY 2014-15. The EPDS has furnished provisional accounts at Rs. 2.53 Cr for FY 2014-15.

The Commission now approves Rs 2.53 Cr towards Administrative & General Expenses for FY 2014-15 as per provisional accounts.

### 6.12 Capital Investment and Capitalization during FY 2014-15

Capital investment and capitalization during FY 2014-15 approved by the Commission in its Order dated 15.04.2014 and provisional accounts furnished by EPDS and now approved by the Commission are furnished in Table below:

**Table 6.7: Capital Investment and Capitalization approved by the Commission for FY 2014-15**

(Rs in Crore)

| Sl. No.  | Item                               | Approved by the Commission in the Tariff Order for FY 2014-15 | RE furnished by EPDS for FY 2014-15 | Now approved by the Commission for FY 2014-15 |
|----------|------------------------------------|---|-------------------------------------|---|
| 1        | Opening Balance of CWIP            | -   | 65.73                               | 65.73   |
| 2        | Capital Investment during the year | 138.98  | 63.30                               | 63.30   |
| <b>3</b> | <b>Total</b>                       | -   | <b>129.04</b>                       | <b>129.04</b>                                 |
| 4        | Capitalization during the year     | 125.28  | 78.50                               | 78.50   |
| 5        | Closing Balance of CWIP            |   | 50.49                               | 50.49   |

The Commission now approves the capital investment of Rs 63.30 Crore and capitalization of Rs 78.55 Cr during the FY 2014-15 as per the RE furnished by EPDS.

### 6.13 Gross Fixed Assets

In the absence of valid information regarding gross fixed assets, the Commission in its Tariff Order dated 15.04.2014, had not approved the value of gross fixed assets. The EPDS in its review petition for FY 2014-15 has stated that the values of gross fixed assets have been taken from the asset registers, as detailed in Table below:

**Table 6.8: Gross Fixed Assets furnished by EPDS for FY 2014-15**

| Sl. No. | Item                      | Rs. Cr. |
|---------|---------------------------|---------|
| 1       | Opening Balance           | 756.67  |
| 2       | Additions during the year | 78.55   |
| 3       | Closing Balance           | 835.22  |

**Commission Analysis**

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

**6.14 Depreciation**

The EPDS has in its review petition has furnished depreciation of Rs 38.71 Crore for the year 2014-15.

**Commission's Analysis**

The EPDS has not furnished the calculation at which the amount of depreciation was arrived at. The Commission in its Tariff Order dated 15.04.2015 had approved depreciation of Rs 14.00 Crore for FY 2014-15 on the average GFA of Rs. 265.10 Cr during FY 2014-15 at the rate of 5.28%. The EPDS has stated Rs. 98.47 Crore during FY 2012-13 and Rs 103.98 Cr during FY 2013-14 are capitalised. As such the depreciation has been worked out accordingly as detailed in Table below:

**Table 6.9: Depreciation for 2014-15 Approved by the Commission**

(Rs. Cr)

| Sl. No. | Item                      | Rs. Cr. |
|---------|---------------------------|---------|
| 1       | Opening Balances GFA      | 98.47   |
| 2       | Additions during the year | 103.98  |
| 3       | Closing Balance           | 202.45  |
| 4       | Average GFA               | 150.46  |
| 5       | Rate of Depreciation      | 5.28%   |
| 6       | Depreciation              | 7.94    |

**The Commission accordingly approves depreciation at Rs 7.94 Crore for FY 2014-15.**

**6.15 Interest and Finance Charges**

The EPDS has furnished interest and finance charges at Rs 71.86 Cr during the year 2013-14.

**Commission's Analysis**

The Commission in its Tariff Order dated 30.3.2014 had not considered interest and Finance charges for FY 2014-15.

The EPDS in its additional information submitted on 24.01.2014 has stated that no loans were availed during FY 2014-15.

**As such the Commission has not considered interest and finance charges during FY 2014-15.**

### **6.16 Interest on Working Capital**

The EPDS has not claimed any interest on working capital for the FY 2014-15.

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

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

1. The Working Capital consists of:
  - (a) Operation & Maintenance expenses for one month
  - (b) Budget for maintenance of spares at the rate of 1% of the historical cost and escalated at the rate of 6% P.A from the date of commercial operations.
  - (c) Receivables equivalent to 2 months on fixed and variable charges of sale of energy.

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

Accordingly, the Commission approves interest on working capital for FY 2014-15, as shown below. The interest on working capital works out to Rs. 4.00 Crore, as detailed in Table below:

**Table 6.10: Interest on Working Capital approved by the Commission for FY 2014-15**

| Sl. No. | Item                        | Total Cost<br>Rs / Cr | Amount required for<br>working capital<br>(Rs. Cr) |
|---------|-----------------------------|-----------------------|--|
| 1       | O&M Expenses                |                       |  |
|         | (a) Employee Cost           | 62.50                 | 5.20   |
|         | (b) R&M Expenses            | 31.66                 | 2.64   |
|         | (c) Admin & Gen Expenses    | 2.53                  | 0.21   |
| 2       | Maintenance of spares       |                       |  |
| 3       | Receivables                 | 114.51                | 19.08  |
| 4       | Total                       |                       | 27.13  |
| 5       | SBI PLR as on 1.4.2014      |                       | 14.75%   |
| 6       | Interest on working capital |                       | 4.00   |

**The Commission now approves interest on working capital at Rs. 4.00 Cr for FY 2014-15.**

### 6.17 Return on Equity

The EPDS has claimed Rs. 33.43 Cr towards return on equity for FY 2014-15.

#### Commission's Analysis

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

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

### 6.18 Non-Tariff Income

The EPDS has furnished non-tariff income at Rs 0.90 Cr during the year 2014-15. It is felt that EPDS has not correctly assessed the Non-Tariff Income.

### Commissions Analysis

The Commission retains the already approved amount of Rs. 2.40 Crore towards Non-Tariff Income for FY 2014-15.

#### 6.19 Revenue from existing tariff for FY 2014-15

Revenue from the existing tariff approved by the Commission for FY 2014-15 in its Tariff Order dated 15.04.2014 and revised estimates furnished by the EPDS and now approved by the Commission are furnished in Table below:

**Table 6.11: Revenue from the existing Tariff for FY 2014-15 approved by the Commission**

| (Rs.Cr) |                   |               |                   |
|---------|-------------------|---------------|-------------------|
| Sl. No. | Category of Sales | Approved      | Revised Estimates |
| 1       | Domestic          | 17.89         | 19.00             |
| 2       | Commercial        | 21.57         | 19.12             |
| 3       | Public Lighting   | 0.42          | 0.15              |
| 4       | Temp. Supply      | 0.80          | 1.29              |
| 5       | HT Industry       | 59.72         | 62.90             |
| 6       | LT Industry       | 0.77          | 0.88              |
| 7       | Bulk Supply       | 10.53         | 11.17             |
| 8       | Outside Sales     | 112.73        | 98.15             |
|         | <b>Total</b>      | <b>224.43</b> | <b>212.66</b>     |

The Commission approves the Revenue from existing Tariff at Rs. 212.66 Cr including Revenue from outside sales at Rs. 98.15 Cr for FY 2014-15.

#### 6.20 Aggregate Revenue Requirement (ARR) for FY 2014-15

The ARR for FY 2014-15 approved by the Commission in its Tariff Order dated 30.3.2014, Revised Estimate furnished by the EPDS and now approved by the Commission are furnished in Table below:

**Table 6.12: Aggregate Revenue Requirement and Gap for FY 2014-15****(Rs. Crores)**

| Sl. No. | Item                          | Approved by the Commission | Revised Estimates by EPDS | Now approved by the Commission |
|---------|-------------------------------|----------------------------|---------------------------|--------------------------------|
| 1       | Cost of Fuel                  | 0.35                       | 0.19                      | 0.19                           |
| 2       | Cost of Power Purchase        | 173.70                     | 209.14                    | 209.14                         |
| 3       | Employee Costs                | 47.89                      | 65.20                     | 65.20                          |
| 4       | R&M Expenses                  | 34.98                      | 31.66                     | 31.66                          |
| 5       | Adm. & Gen. Expenses          | 3.10                       | 2.53                      | 2.53                           |
| 6       | Depreciation                  | 14.00                      | 36.71                     | 7.94                           |
| 7       | Interest & Fin Charges        | -                          | 71.86                     | -                              |
| 8       | Interest on W.C.              | 3.73                       | 4.04                      | 4.00                           |
| 9       | Return on Equity              | -                          | 33.43                     | -                              |
| 10      | Total ARR                     | 277.74                     | 454.76                    | 320.66                         |
| 11      | Less: Non Tariff Income       | 2.40                       | 0.90                      | 2.40                           |
| 12      | Net ARR                       | 275.34                     | 453.86                    | 318.26                         |
| 13      | Revenue from Tariff           | 112.00                     | 114.56                    | 114.51                         |
| 14      | Revenue from outside sales    | 112.73                     | 98.15                     | 98.15                          |
| 15      | Gap                           | 50.91                      | 241.15                    | 105.60                         |
| 16      | Energy sales within the state | 264.00                     | 245.44                    | 245.44                         |
| 17      | Energy sales outside state    | 388.73                     | 436.21                    | 436.21                         |
| 18      | Total Sales                   | 652.73                     | 690.65                    | 690.65                         |

**Review for FY 2014-15 indicates that the revenue gap has been increased to Rs. 105.60 Crore as against Rs. 50.92 Crore approved in the Tariff Order for FY 2014-15.**



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## 7. AGGREGATE REVENUE REQUIREMENT FOR FY 2015-16 , COMMISSION'S ANALYSIS AND DECISIONS

### 7.1 Consumer Categories

The EPDS was serving 95984 consumers as on 31.3.2014 in its area of operation. The consumers could be broadly categorised as under:

#### LT Category

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

#### HT Category

- Industrial
- Bulk Supply (LT & HT)

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

#### 7.1.1 Growth of Consumers

Details of the category-wise growth of consumers with connected loads over the actuals during 2013-14, the estimated figures for FY 2014-15 and the projections for FY 2015-16 are furnished in Table 7.1 below:

Table 7.1: Growth of Consumers and Connected Loads

| Consumer Category | FY 2013-14 (Actual) |              | FY 2014-15 (Estimated) |              | FY 2015-16 (Projected) |               |
|-------------------|---------------------|--------------|------------------------|--------------|------------------------|---------------|
|                   | Connected Load (MW) | Nos.         | Connected Load (MW)    | Nos.         | Connected Load (MW)    | Nos.          |
| Domestic          | 41.38               | 83854        | 45.15                  | 86375        | 45.83                  | 90568         |
| Commercial        | 17.59               | 10277        | 20.12                  | 10585        | 21.04                  | 11099         |
| Public Lighting   | -                   | -            | -                      | -            | -                      | -             |
| Temporary Supply  | -                   | -            | -                      | -            | -                      | -             |
| HT Industrial     | 48.22               | 358          | 48.66                  | 369          | 49.78                  | 387           |
| LT Industrial     | 0.34                | 450          | 0.36                   | 463          | 0.66                   | 486           |
| Bulk Supply       | 8.81                | 1045         | 9.92                   | 1076         | 10.32                  | 1129          |
| <b>Total</b>      | <b>116.34</b>       | <b>95984</b> | <b>124.21</b>          | <b>98868</b> | <b>127.63</b>          | <b>103669</b> |

## 7.2 Category-wise Energy Sales

EPDS has provided actual sales for FY 2010-11 to FY 2013-14, estimates for FY 2014-15 and the projected energy sales to various categories of consumer for FY 2015-16 as given below :

Table 7.2: Projected Energy Sales for FY 2015-16

| Category         | (MU)             |                  |                  |                  |                        |                        |
|------------------|------------------|------------------|------------------|------------------|------------------------|------------------------|
|                  | FY 2010-11 (Act) | FY 2011-12 (Act) | FY 2012-13 (Act) | FY 2013-14 (Act) | FY 2014-15 (estimated) | FY 2015-16 (Projected) |
| Domestic         | 57.97            | 82.77            | 78.98            | 83.98            | 87.49                  | 90.69                  |
| Commercial       | 29.23            | 29.72            | 38.26            | 35.43            | 36.45                  | 38.26                  |
| Public Lighting  | 2.60             | 2.30             | 0.43             | 0.35             | 0.36                   | 0.38                   |
| Temporary Supply | 0.15             | 0.30             | 0.09             | 1.61             | 1.65                   | 1.73                   |
| HT Industrial    | 58.39            | 71.63            | 91.76            | 97.11            | 100.02                 | 104.88                 |
| LT Industrial    | 1.31             | 8.63             | 1.15             | 1.15             | 1.18                   | 1.24                   |
| Bulk Supply      | 13.35            | 13.21            | 16.23            | 17.74            | 18.28                  | 19.16                  |
| <b>Total</b>     | <b>163.00</b>    | <b>208.56</b>    | <b>226.90</b>    | <b>237.37</b>    | <b>245.44</b>          | <b>256.34</b>          |

The EPDS has projected the category-wise energy sales for FY 2015-16 based on the actual past sales during FY 2010-11 to 2013-14 and growth rate and new developments on account of Government policies, socio-economic changes, industrial growth, etc., that would affect consumption across various categories of consumers.

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

Reasonable projection of category-wise energy sales is essential for determining the energy required to be purchased and likely revenue by sale of electricity. Sales forecast using the CAGR as the basis for projections is a tried and tested method and is used extensively across the states and accepted by the Regulators. EPDS has projected the category-wise energy sales for FY 2015-16, based on past trends over a period of four years.

The CAGR of the past energy sales from 2010-11 to 2013-14 is worked out and shown in Table below:

**Table 7.3: CAGR of energy sales**

| Sl. No. | Energy Sales (MU) | FY 2010-11 (Act) | FY 2011-12 (Act) | FY 2012-13 (Act) | FY 2013-14 (Act) | CAGR for 3 years from FY 10-11 To FY 13-14 (%) | CAGR for 2 years from FY 11-12 To FY 13-14 (%) | CAGR for FY 12-13 To FY 13-14 (%) |
|---------|-------------------|------------------|------------------|------------------|------------------|--|--|-----------------------------------|
| 1       | Domestic          | 57.97            | 82.77            | 78.98            | 83.98            | 13.15  | 0.73   | 6.33                              |
| 2       | Commercial        | 29.23            | 29.72            | 38.26            | 35.43            | 6.62   | 9.18   | (7.40)                            |
| 3       | Public lighting   | 2.60             | 2.30             | 0.43             | 0.35             | (48.75)  | (60.99)  | (18.60)                           |
| 4       | Temporary Supply  | 0.15             | 0.30             | 0.09             | 1.61             | 120.59   | 131.66   | 1688.89                           |
| 5       | HT Industrial     | 58.39            | 71.63            | 91.76            | 97.11            | 17.48  | 16.44  | 5.83                              |
| 6       | LT Industrial     | 1.31             | 8.63             | 1.15             | 1.15             | (4.25)   | (63.50)  | 0.00                              |
| 7       | Bulk Supply       | 13.35            | 13.21            | 16.23            | 17.74            | 9.94   | 15.88  | 9.30                              |
| 8       | <b>Total</b>      | <b>163.00</b>    | <b>208.56</b>    | <b>226.90</b>    | <b>237.37</b>    |  |  |                                   |

**Table 7.4: Specific Monthly Consumption during FY 2012-13 and FY 2013-14**

| Sl. No. | Category      | FY 2012-13 | FY 2013-14 |
|---------|---------------|------------|------------|
| 1       | Domestic      | 80.00      | 83.00      |
| 2       | Commercial    | 330.00     | 287.00     |
| 3       | Industrial LT | 246.00     | 213.00     |
| 4       | Industrial HT | 23032.00   | 22605.00   |
| 5       | Bulk Supply   | 1595.00    | 1415.00    |

The consumption of each category of consumers is discussed below, so as to arrive at a reasonable projection of energy sales for FY 2015-16.

### **Domestic**

The EPDS has projected energy sales to this category at 90.69 MU for FY 2015-16. The sales growth has been found to be erratic. Negative growth is observed during FY 2010-11 and FY 2012-13 over the previous year's sale and EPDS has not furnished reasons for such negative growth. It is seen that the three year CAGR (FY 11 – FY 14) is 13.15%, while 2 year CAGR (FY 12 - FY 14) is 0.73% and the YoY growth (FY 13 – FY 14) is 6.3%. The actual specific consumption during FY 2013-14 is 83 kWh. Considering the year- on-year growth of 6.33% over the actuals of FY 2013-14, the consumption for FY 2015-16 would be 94.95 MU

**The Commission approves energy sales at 94.95 MU for FY 2015-16 as against 90.69 MU projection of 90.69 MU.**

### **Commercial**

The EPDS has projected the energy sales at 38.26 MU for FY 2015-16. Negative growth is observed during FY 2013-14 over FY 2012-13 growth . EPDS has not furnished reasons for the same. The three-year CAGR (FY 11 – FY 14) is 6.62%, while 2 year CAGR (FY 12 – FY 14) is 9.18% and the YoY growth (FY 13 – FY 14) is (-) 7.4%.

The Commission considered reasonable to adopt 3 year CAGR of 6.62% P.A over actual sales during FY 2013-14 to project sales for FY 2015-16 which works out to 40.28 MU.

**The Commission approves energy sales at 40.28 MU for FY 2015 – 16, as against 38.26 MU projected by EPDS.**

### **Public Lighting**

The EPDS has projected sales at 0.38 MU for FY 2015-16. This is an unmetered category and negative growth is observed since FY 2011-12. Sudden fall in sales observed during 2012-13 at 0.43 MU over sales during FY 2011-12 which are at 2.30 MU. The EPDS has not furnished reasons for the same. Based on the actual consumption of 0.35 in FY 2013-14, estimated consumption of 0.36 in FY 2014-15, the projected consumption of 0.38 MU for FY 2015-16 is considered reasonable.

**The Commission approves energy sales at 0.38 MU for FY 2015-16 as projected by EPDS.**

#### **Temporary Supply**

The EPDS has projected energy sales at 1.73 MU for FY 2015-16. As seen from the past sales the consumption is increasing year after year. Based on the actual consumption of 1.61 MU in FY 2013-14, the projection of EPDS at 1.73 MU for FY 2015-16 is considered to reasonable.

**The Commission approves energy sales at 1.73 MU for FY 2015-16 as projected by EPDS.**

#### **HT Industrial**

The EPDS has projected energy sales at 104.88 MU for FY 2015-16. The three year growth (FY 11 – FY 14) is 18.48%, while 2 year growth (FY 12 – FY 14) is 16.44% and YoY growth (FY 13 – FY 14) is 5.83%. Rapid growth is observed upto FY 2012-13 which may not sustain. Year-on-year growth of 5.83% P.A is considered reasonable and consumption works out to 108.76 MU for 2015-16.

**The Commission approves energy sales at 108.76 MU for FY 2015-16 as against 104.88 MU projected by EPDS.**

#### **LT Industrial**

The EPDS has projected energy sales at 1.24MU for FY 2015 – 16. During FY 2011-12, sudden jump in sales is observed. The EPDS has not furnished reasons for such increase. There is no definite growth trend in energy sales to this category. The projection of 1.24 Mu by EPDS is considered to reasonable

**The Commission approves energy sales at 1.24 MU for FY 2015-16 as projected by EPDS.**

### **Bulk Supply**

The EPDS has projected energy sales at 19.16 MU for FY 2015-16. As verified from the past sales, negative growth is observed during FY 2010-11 and FY 2011-12 over the previous years. The EPDS has not furnished reasons for the same.

The growth from FY 2012-13 is found positive and reasonable. The three year CAGR is 9.94%, 2 year CAGR is 15.88% and year-on-year growth is 9.3%. The growth of 9.3% is found to be reasonable.

Considering the growth of 9.3% over actuals of FY 2013-14, the consumption is worked out at 21.19 MU and approved at 21.19 MU for 2015-16.

**The Commission approves energy sales at 21.19 MU for FY 2015-16, as against 19.16 MU projected by EPDS.**

### **7.3 Category-Wise Energy Sales**

The category-wise energy sales for FY 2015-16 projected by EPDS and those approved by the Commission are given in Table below:

**Table 7.5: Category-wise energy sales approved by the Commission for FY 2015-16**

| Sl. No. | Consumer Category | (MU)                           |   |
|---------|-------------------|--------------------------------|---|
|         |                   | Energy Sales Projected by EPDS | Energy sales approved by the Commission |
| 1       | Domestic          | 90.69                          | 94.95                                   |
| 2       | Commercial        | 38.26                          | 40.28                                   |
| 3       | Public Lighting   | 0.38                           | 0.38                                    |
| 4       | Temporary Supply  | 1.73                           | 1.73                                    |
| 5       | LT Industrial     | 1.24                           | 1.24                                    |
| 6       | HT Industrial     | 104.88                         | 108.76                                  |
| 7       | Bulk Supply       | 19.16                          | 21.19                                   |
|         | <b>Total</b>      | <b>256.34</b>                  | <b>268.53</b>                           |

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

EPDS has submitted that it had achieved reduction in T&D losses over the past years owing to improvement works executed every year and stated that range of losses will be 35 to 39%. EPDS projected T&D Losses at 39% for FY 2015-16. For working energy requirements, EPDS has considered a loss of 38.50%.

### Commission's Analysis

During FY 2013-14, the actual T&D Loss works out to 38.94%, while in FY 2014-15 the T&D Losses are estimated at 39.84%, as discussed in the review of the respective years. But in the Tariff Order for FY 2014-15, the trajectories for loss reduction were fixed and as per the trajectory the Commission has fixed the T&D losses at 34% for FY 2015-16.

**The Commission accordingly approves T&D Losses at 34% for FY 2015-16 as against 38.50% projected by EPDS.**

The trajectory for loss reduction for the period FY 2016-17 to FY 2018-19 is fixed as follows:

| Sl. No. | Year    | Target (%) |
|---------|---------|------------|
| 1       | 2016-17 | 32%        |
| 2       | 2017-18 | 30%        |
| 3       | 2018-19 | 28%        |

**The EPDS shall make all efforts for reduction of losses in the system as indicated above.**

### Energy Requirement

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

**Table 7.6: Energy Requirement of EPDS approved by the Commission for FY 2015-16**

| Sl. No. | Item                    | 2015-16<br>(MU) |
|---------|-------------------------|-----------------|
| 1       | Energy Sales approved   | 268.53          |
| 2       | T&D Losses approved (%) | 34.00           |
| 3       | T&D Losses              | 138.33          |
| 4       | Energy Requirement      | 406.86          |

## 7.5 Power Procurement for FY 2015-16

### 7.5.1 Own Generation

The EPDS owns 12 mini hydro electric power stations, with a total installed capacity of 35.7 MW, and 2 diesel generation stations, with a total installed capacity of 4.992 MW, totaling 40.692 MW, as detailed in Table below.

**Table 7.7: Installed capacity of own generating stations**

| Sl. No | Name of Projects                     | Installed Capacity (MW) | Remarks   | Net Generation April to December, 2014 (MU) |
|--------|--------------------------------------|-------------------------|---|---|
|        | <b>Hydro</b>                         |                         |   |   |
| 1      | Lower Lhagap Hydel Power (LLHP)      | 2 x 6.00                | Shut down due to 2011 earth quake   | 0.00  |
| 2      | Jali Power House (JPH)               | 6 x 0.35                |   | 0.81  |
| 3      | Rimbi-I                              | 3 x 0.20                |   | 0.025                                       |
| 4      | Rimbi-II                             | 2 x 0.50                |   | 0.008                                       |
| 5      | Rothak                               | 2 x 0.10                | Power house Abandoned   | 0.00  |
| 6      | Rongnichu                            | 5 x 0.50                | No generation due to failure of water conductor   | 0.00  |
| 7      | Chaten                               | 2 x 0.05                | Power house Abandoned   | 0.00  |
| 8      | Meyongchu                            | 2 x 2.00                | Less generation due to disturbances caused by damage of road  | 2.50  |
| 9      | Upper Rongnichu Hydel Project (URHP) | 4 x 2.00                | No Generation due to failure of water conductor system  | 0.00  |
| 10     | Kalez                                | 2 x 1.00                | Less generation due to damage of water conductor system   | 0.586                                       |
| 11     | Lachung                              | 2 x 0.10                | Power house abandoned   | 0.00  |
| 12     | Rabomchu                             | 2 x 1.50                | Station was earlier under shutdown due to earth quake in 2011. Now is operational since October, 2014 | 0.274                                       |
|        | <b>Diesel</b>                        |                         |   |   |
| 13     | Diesel Power House Gangtok           | 4 x 1.00                |   | 0.048                                       |
| 14     | DPH LLHP, Ranipool                   | 4 x 0.248               | Power house shut down due to 18 <sup>th</sup> September, 2011 earth quake.                            | 0.00  |
|        | <b>Total</b>                         | <b>40.692</b>           |   |   |

The EPDS has projected a generation of 10.00 MU from its own generating stations for the year 2015-16.

**The Commission approves own generation at 10.00 MU (Net) from its own generating stations for the year FY 2015-16 as projected by EPDS.**



## 7.6 Power purchase from Central Generating Stations

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

**Table 7.8: Power Allocation from Central Generating Stations**

| Sl. No.   | Source                | Capacity       | Allocation |               |
|-----------|-----------------------|----------------|------------|---------------|
|           |                       | MW             | %          | MW            |
|           | <b>Central Sector</b> |                |            |               |
| 1         | FSTPP, NTPC           | 1600.00        | 1.63%      | 26.08         |
| 2         | FSTPP-III, NTPC       | -              | -          | -             |
| 3         | KHSTPP-I, NTPC        | 840.00         | 1.55%      | 13.02         |
| 4         | KHSTPP-II, NTPC       | 1500.00        | 0.33%      | 4.95          |
| 5         | TSTPP, NTPC           | 1000.00        | 2.40%      | 24.00         |
| 6         | RANGIT-III, NHPC      | 60.00          | 13.33%     | 8.00          |
| 7         | TEESTA – V, NHPC      | 510.00         | 13.19%     | 67.27         |
|           | <b>Others</b>         |                |            |               |
| 8         | CHUKHA, PTC           | 270.00         | 2.22%      | 5.99          |
| 9         | WBSEDCL               | 50.00          | 20%        | 10.00         |
| <b>10</b> | <b>TOTAL</b>          | <b>5830.00</b> |            | <b>159.31</b> |

The EPDS has based the power purchase projections at the Merit Order Dispatch Principles while determining power purchase from various generating stations. However, in a power deficit scenario, these principles do not play a significant role as the utilities will try and purchase all the power that is available at their disposal. Accordingly, EPDS has considered purchase of the entire power available from all the possible sources during FY 2015-16 to meet the demand to the extent possible.

Besides the above, the EPDS is also entitled for free power of 12% from Teesta V, Rangit and Chuzachen hydropower stations.

The actual power procurement during FY 2012-13 and FY 2013-14, estimated for FY 2014-15 and objected for FY 2015-16 are furnished in Table below:

Table 7.9: Summary of E&amp;PDS Power Purchase Expenses for FY 2015-16

| (MU)     |                              |                      |                      |                       |                          |
|----------|------------------------------|----------------------|----------------------|-----------------------|--------------------------|
| Sl. No.  | Source                       | FY 2012-13 (Actuals) | FY 2013-14 (Actuals) | FY 2014-15 (Estimate) | FY 2015-16 (Projections) |
| 1        | 2                            | 3                    | 4                    | 5                     | 6                        |
| <b>1</b> | <b>NTPC</b>                  |                      |                      |                       |                          |
| A        | FSTPP                        | 122.32               | 102.95               | 102.95                | 102.95                   |
| B        | FSTPP-III                    | 12.77                | -                    | -                     | -                        |
| C        | KHSTPP-I                     | 75.22                | 84.31                | 84.31                 | 84.31                    |
| D        | KHSTPP-II                    | 30.41                | 26.04                | 26.04                 | 26.04                    |
| E        | TSTPP                        | 160.91               | 165.93               | 165.93                | 165.93                   |
| <b>2</b> | <b>NHPC</b>                  |                      |                      |                       |                          |
| A        | RANGIT-III                   | 4.23                 | 7.59                 | 7.59                  | 7.59                     |
| B        | TEESTA -V                    | 26.83                | 27.05                | 27.05                 | 27.05                    |
| <b>3</b> | <b>PTC</b>                   |                      |                      |                       |                          |
|          | CHUKHA                       | 34.71                | 40.25                | 40.25                 | 40.25                    |
| <b>4</b> | <b>Other sources</b>         |                      |                      |                       |                          |
|          | WBSEDCL                      | 47.11                | 56.88                | 56.88                 | 56.88                    |
|          | SPDC                         | 4.41                 | 12.67                | 12.67                 | 12.67                    |
|          | UI Purchase                  | 10.49                | 5.28                 | 5.28                  | 5.28                     |
| <b>5</b> | <b>Free Power</b>            | <b>304.11</b>        | <b>314.32</b>        | <b>314.32</b>         | <b>314.32</b>            |
| <b>6</b> | <b>Total Energy Purchase</b> | <b>833.07</b>        | <b>843.27</b>        | <b>843.27</b>         | <b>843.27</b>            |

### Commission's Analysis

As seen from the power procurement projection, the EPDS has projected the power drawal during FY 2015-16 at the same level of actual drawal during FY 2013-14 and estimate of FY 2014-15.

The Commission has considered the power procurement projected by EPDS during FY 2015-16, except the UI purchase of 5.28 MU as there is surplus power. If any contingency arises to procure power from UI, the same will be considered at the time of true up.

Power Procurement approved by the Commission is shown in the Table below:

Table 7.10: Power Procurement approved by the Commission for FY 2015-16

| Sl. No.  | Source                  | Projected by EPDS | MU                         |
|----------|-------------------------|-------------------|----------------------------|
|          |                         |                   | Approved by the Commission |
| <b>A</b> | NTPC                    | 379.23            | 379.23                     |
| 1        | FSTPP                   | 102.95            | 102.95                     |
| 2        | KHSTPP I                | 84.31             | 84.31                      |
| 3        | KHSTPP II               | 26.04             | 26.04                      |
| 4        | TSTPP                   | 165.93            | 165.93                     |
| <b>B</b> | NHPC                    | 34.64             | 34.64                      |
| 5        | Rangit III              | 7.59              | 7.59                       |
| 6        | Teesta V                | 27.05             | 27.05                      |
| <b>C</b> | Other Sources           | 109.80            | 109.80                     |
| 7        | PTC – Chukka            | 40.25             | 40.25                      |
| 8        | WBSEDCL                 | 56.88             | 56.88                      |
| 9        | SPDC                    | 12.67             | 12.67                      |
| <b>D</b> | Free Power              | 314.32            | 314.32                     |
|          | UI                      | 5.28              | -                          |
| 10       | Total Power Procurement | 843.27            | 837.99                     |

The Commission approves power procurement of 837.99 MU including free power of 314.32 MU for FY 2015-16.

## 7.7 Energy requirement and availability

The energy requirement and availability for FY 2013-14 (Actuals) and estimated for FY 2014-15 and projections for FY 2015-16 furnished by the EPDS are furnished in Table below:

Table 7.11: Energy Balance Projected by EPDS for FY 2015-16

| Sl. No.  | Particulars                            | FY 2013-14<br>(Actuals) | FY 2014-15<br>(Estimated) | (MU)                      |
|----------|--|-------------------------|---------------------------|---------------------------|
|          |  |                         |                           | FY 2015-16<br>(Projected) |
| <b>A</b> | <b>Energy Requirement</b>              |                         |                           |                           |
| 1        | Energy Sales within the State          | 237.37                  | 245.44                    | 256.34                    |
| 2        | Sales Outside State (UI)               | 73.29                   | 73.29                     | 73.29                     |
| 3        | Sales to Common Pool Consumers         | 0.00                    | 0.00                      | 0.00                      |
| 4        | Sales to Electricity Traders           | 218.70                  | 218.70                    | 216.20                    |
| 5        | Sales to Others Distribution Licensees | 144.22                  | 144.22                    | 141.72                    |
| <b>6</b> | <b>Total Sales</b>                     | <b>673.58</b>           | <b>681.65</b>             | <b>687.55</b>             |
| 7        | Distribution Losses                    |                         |                           |                           |
| (i)      | MU                                     | 164.19                  | 162.53                    | 160.50                    |
| (ii)     | %                                      | 41.00                   | 40.00                     | 39.00                     |

| Sl. No.  | Particulars                              | FY 2013-14 (Actuals) | FY 2014-15 (Estimated) | FY 2015-16 (Projected) |
|----------|--|----------------------|------------------------|------------------------|
| <b>8</b> | <b>Total Energy Requirement (6+7(i))</b> | <b>837.77</b>        | <b>844.18</b>          | <b>848.05</b>          |
| <b>B</b> | <b>Energy Availability</b>               |                      |                        |                        |
| 1        | Net Generation (own)                     | 4.70                 | 6.00                   | 10.00                  |
| 2        | Power Purchase From                      |                      |                        |                        |
| a)       | Central Stations                         | 413.88               | 413.87                 | 413.87                 |
| b)       | PTC                                      | 40.25                | 40.25                  | 40.25                  |
| c)       | WBSEDCL                                  | 56.88                | 56.88                  | 56.88                  |
| d)       | SPDC                                     | 12.67                | 12.67                  | 12.67                  |
| e)       | Free Power                               | 314.32               | 314.32                 | 314.32                 |
| f)       | Others – (UI)                            | 5.28                 | 5.28                   | 5.28                   |
| <b>3</b> | <b>Net Power Purchase (a+b+c+d+e+f)</b>  | <b>843.27</b>        | <b>843.27</b>          | <b>843.27</b>          |
| 4        | Less: Pool Loss                          | 10.22                | 5.11                   | 5.24                   |
| 5        | Energy Available at State Periphery      | 833.07               | 838.18                 | 838.05                 |
| <b>6</b> | <b>Total Energy Availability</b>         | <b>837.77</b>        | <b>844.18</b>          | <b>848.05</b>          |

### Commission's Analysis

The EPDS has calculated T&D losses on sales outside the State which is not correct for the reason that the sales outside the State will take place at State periphery and as such has no bearing on T&D losses within the state. Further, the average inter-state transmission losses in the Eastern Region during 50 weeks from 31.03.2014 to 16.03.2015 are 2.27%. Considering the inter-state transmission loss at 2.27%, the energy balance is worked out as detailed in Table below:

**Table 7.12: Energy Balance approved by the Commission for FY 2015-16**

| Sl. No.  | Particulars                         | 2015-16 (MU) |
|----------|-------------------------------------|--------------|
| <b>A</b> | <b>Energy Requirement</b>           |              |
| 1        | Energy Sales within the State MU    | 268.53       |
| 2        | T & D Losses %                      | 34.00%       |
| 3        | T & D Losses                        | 138.33       |
| 4        | Energy Requirement                  | 406.86       |
| <b>B</b> | <b>Energy Availability</b>          |              |
| 5        | Power Purchase including free power | 837.99       |
| 6        | Pool Losses %                       | 2.27%        |
| 7        | Pool Losses                         | 10.24        |
| 8        | Net Power available (5-7)           | 827.75       |
| 9        | Own Generation                      | 10.00        |
| 10       | Total Power Available (8+9)         | 837.75       |
| 11       | Surplus Power (10-4)                | 430.89       |

**The energy balance approved above provides for a surplus energy of 430.89 MU for FY 2015-16.**

## 7.8 Aggregate Revenue Requirement

The EPDS has projected Aggregate Revenue Requirement at Rs. 489.91 Crore for FY 2015-16, as detailed in Table below:

**Table 7.13: Aggregate Revenue Requirement for FY 2015-16 projected by EPDS**

| (Rs. In Crore) |                               |            |
|----------------|-------------------------------|------------|
| Sl. No.        | Item                          | FY 2015-16 |
| 1              | Fuel Cost                     | 0.37       |
| 2              | Power Purchase Cost           | 209.14     |
| 3              | Employee Cost                 | 77.06      |
| 4              | R&M Expenses                  | 34.96      |
| 5              | Adm. & Gen Expenses           | 2.58       |
| 6              | Depreciation                  | 45.63      |
| 7              | Interest & Finance charges    | 77.83      |
| 8              | Interest on WC                | 4.36       |
| 9              | Return on Equity              | 38.93      |
| 10             | Total Revenue Requirement     | 490.85     |
| 11             | Less: Non Tariff Income       | 0.94       |
| 12             | Aggregate Revenue Requirement | 489.91     |

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

## 7.9 Fuel Cost

The EPDS has projected fuel cost at Rs 0.37 Cr for FY 2015-16.

**The Commission approves fuel cost at Rs 0.37 Cr for FY 2015-16 as projected by EPDS.**

## 7.10 Power Purchase Cost

EPDS has furnished actual power purchase costs including Transmission charges, as shown below in Table below.

**Table 7.14: Actual Power Purchase Cost furnished by EPDS for FY 2013-14**

| (Rs. Cr) |              |                      |                          |                     |                  |        |  |                     |
|----------|--------------|----------------------|--------------------------|---------------------|------------------|--------|--|---------------------|
| Sl. No.  | Source       | Energy Received (MU) | Variable Cost (Ps./Unit) | Total Variable Cost | Total Fixed Cost | Others | Total Cost I/c supplementary bills (5+6+7) | Unit Cost (Rs./KWH) |
| 1        | 2            | 3                    | 4                        | 5                   | 6                | 7      | 8  | 9                   |
| 1        | NTPC         |                      |                          |                     |                  |        |  |                     |
|          | a) FSTPP     | 102.95               | 0.00                     | 29.09               | 17.32            | 7.14   | 53.55                                      | 5.20                |
|          | b) FSTPP-III | -                    | 0.00                     | -                   | -                | 0.21   | 0.21                                       | 5.19                |
|          | c) KHSTPP-I  | 84.31                | 0.00                     | 22.78               | 9.93             | 2.96   | 35.68                                      | 4.23                |
|          | d) KHSTPP-II | 26.04                | 0.00                     | 6.63                | 4.31             | 0.91   | 11.85                                      | 4.55                |
|          | e) TSTPP     | 165.93               | 0.00                     | 24.92               | 14.55            | 2.46   | 41.93                                      | 2.53                |

|          |                             |               |      |      |      |      |               |             |
|----------|-----------------------------|---------------|------|------|------|------|---------------|-------------|
| <b>2</b> | <b>NHPC</b>                 |               |      |      |      |      |               |             |
|          | a) RANGIT-III               | 7.59          | 0.00 | 0.66 | 0.72 | 0.14 | 1.52          | 2.00        |
|          | b) TEESTA-V                 | 27.05         | 0.00 | 3.57 | 3.46 | 3.26 | 10.29         | 3.80        |
| <b>3</b> | <b>Other sources</b>        |               |      |      |      |      |               |             |
|          | a) PTC                      | 40.25         | 0.00 | 6.43 | -    | 1.02 | 7.45          | 1.85        |
|          | b) WBSEDCL                  | 56.88         | 0.00 | 0.00 | -    | -    | 6.90          | 1.21        |
|          | c) SPDC                     | 12.67         | 0.00 | 3.80 | -    | -    | 4.31          | 3.40        |
| <b>4</b> | <b>Other Charges</b>        |               |      |      |      |      |               |             |
|          | a)Transmission Charge       | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 32.41         | 0.00        |
| <b>5</b> | <b>UI Purchase</b>          | 5.28          | 0.00 | 0.00 | 0.00 | 0.00 | 0.95          | <b>1.80</b> |
|          | <b>Free Power</b>           | 314.32        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00        |
|          | <b>Rebate/Other Charges</b> | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00        |
|          | <b>Total</b>                | <b>843.27</b> |      |      |      |      | <b>209.13</b> |             |

### Power Purchase Cost projected for FY 2015-16

The EPDS has projected a power purchase cost at Rs 209.13 Cr including interstate transmission charges of Rs. 32.41 Cr for FY 2015-16. Free power is projected at 314.32 MU and UI purchase; UI purchase is projected at 5.28 MU. The details are furnished in the following Table.

**Table 7.15: Power Purchase Cost projected by EPDS for FY 2015-16**

| (Rs. Cr) |                             |                      |                                    |                     |
|----------|-----------------------------|----------------------|------------------------------------|---------------------|
| Sl. No.  | Source                      | Energy Received (MU) | Total Cost I/c supplementary bills | Unit Cost (Rs./KWH) |
| 1        | 2                           | 3                    | 4                                  | 5                   |
| <b>1</b> | <b>NTPC</b>                 |                      |                                    |                     |
|          | a) FSTPP                    | 102.95               | 53.55                              | 5.20                |
|          | b) KHSTPP-I                 | 84.31                | 35.68                              | 4.23                |
|          | c) KHSTPP-II                | 26.04                | 11.85                              | 4.55                |
|          | d) TSTPP                    | 165.93               | 41.93                              | 2.53                |
| <b>2</b> | <b>NHPC</b>                 |                      |                                    |                     |
|          | a) RANGIT-III               | 7.59                 | 1.52                               | 2.00                |
|          | b) TEESTA-V                 | 27.05                | 10.29                              | 3.80                |
| <b>3</b> | <b>Other sources</b>        |                      |                                    |                     |
|          | a) PTC                      | 40.25                | 7.45                               | 1.85                |
|          | b) WBSEDCL                  | 56.28                | 6.90                               | 1.21                |
|          | c) SPDC                     | 12.67                | 4.31                               | 3.40                |
| <b>4</b> | <b>UI Purchase</b>          | 5.28                 | 0.95                               | <b>1.80</b>         |
| <b>5</b> | <b>Rebate/Other Charges</b> | 0.00                 | 0.00                               | 0.00                |
|          | <b>Total</b>                | <b>528.95</b>        | <b>209.13</b>                      |                     |

### Commission Analysis

As seen from the above, the EPDS has claimed the power purchase cost for FY 2015-16 at the rates actually paid during FY 2013-14. The Commission considers it reasonable to adopt the station-wise average rate of power purchase arrived at during FY 2013-14 to compute the power purchase cost for FY 2015-16. Accordingly, the power purchase cost for FY 2015-16 is worked out, as detailed in Table below:

The EPDS has projected 5.28 MU under UI purchase. The Commission has not considered UI purchase as there is surplus power. If there is need for such a purchase, the same would be considered at the time of True up.

**Table 7.16: Power Purchase Cost approved by the Commission for FY 2015-16**

| Sl. No   | Source                           | Energy Purchased (MU) | Average Cost Rs/kwh | Total Cost Rs/Cr |
|----------|----------------------------------|-----------------------|---------------------|------------------|
| <b>A</b> | <b>NTPC</b>                      |                       |                     |                  |
| 1        | FSTPP                            | 102.95                | 5.20                | 53.55            |
| 2        | KHSTPP I                         | 84.31                 | 4.23                | 35.68            |
| 3        | KHSTPP II                        | 26.04                 | 4.55                | 11.85            |
| 4        | TSTPP                            | 165.93                | 2.52                | 41.93            |
| <b>B</b> | <b>NHPC</b>                      |                       |                     |                  |
| 1        | Rangit III                       | 7.59                  | -                   | 1.52             |
| 2        | Teesta V                         | 27.05                 | -                   | 10.29            |
| <b>C</b> | <b>Other Sources</b>             |                       |                     |                  |
| 1        | PTC-Chukka                       | 40.25                 | 1.85                | 7.45             |
| 2        | WBSEDCL                          | 56.88                 | 1.21                | 6.90             |
| 3        | SPDC                             | 12.67                 | 3.40                | 4.31             |
| <b>D</b> | Rebate/other charges             | -                     | -                   | 2.29             |
| <b>E</b> | Free Power                       | 314.32                | -                   | -                |
| <b>F</b> | Transmission Charges             | -                     | -                   | 32.41            |
|          | <b>Grand Total (A+B+C+D+E+F)</b> | <b>837.99</b>         |                     | <b>208.18</b>    |

The Commission approves the power purchase cost at Rs. 208.18 Crore for purchase of 523.67 MU including transmission charges at Rs. 32.41 Crore. Free Power of 314.32 MU is considered for FY 2015-16.

## 7.11 Employee Cost

EPDs has furnished the total strength of employees in the Table below:

**Table 7.17: Employee Cadre Strength**

| Sl. No. | Particulars   | 2013-14 (Actuals) | 2014-15 (Estimated) | 2015-16 (Projected) |
|---------|---|-------------------|---------------------|---------------------|
| 1       | 2   | 3                 | 4                   | 5                   |
| 1       | Number of employees as on 1 <sup>st</sup> April                               | 3984              | 3989                | 3991                |
| 2       | Number of employees on deputation/foreign service as on 1 <sup>st</sup> April | -                 | -                   | -                   |
| 3       | Total Number of employees (1+2)   | 3984              | 3989                | 3991                |
| 4       | Number of employees retired/retiring during the year                          | 63                | 36                  | 45                  |
| 5       | Number of employees at the end of the year (3-4)                              | 3921              | 3953                | 3946                |

Employee productive parameters, as furnished by EPDS as shown below:

**Table 7.18: Employee Productive Parameters**

| Sl. No. | Particulars                                   | 2013-14 (Actuals) | 2014-15 (Estimated ) | 2015-16 (Projected ) |
|---------|---|-------------------|----------------------|----------------------|
| 1       | 2   | 3                 | 4                    | 5                    |
| 1       | Number of Consumers                           | 95984             | 98868                | 103669               |
| 2       | Connected Load in MW                          | 188.00            | 126.00               | 130.00               |
| 3       | Number of Employees                           | 3921              | 3953                 | 3946                 |
| 4       | Energy Sold (in MU)                           | 237.00            | 245.00               | 256.00               |
| 5       | Employees per MU of energy sold               | 418               | 403                  | 405                  |
| 6       | Employees for 1000 consumers                  | 41                | 40                   | 38                   |
| 7       | Share of Employees Cost in Total Expenses (%) | 18.10             | 14.30                | 15.60                |
| 8       | Employees Cost in paise/kWh of Energy sold    | 200.00            | 266.00               | 301.00               |

EPDS has furnished actual employee cost for FY 2013-14, estimated cost for FY 2014-15 and the projected cost for FY 2015-16 as shown below:

Actuals for FY 2013-14.....Rs. 47.51 Cr.

Estimated for FY 2014-15.....Rs. 65.20 Cr.

Projection for FY 2015-16.....Rs. 77.06 Cr.



EPDS has stated that employee cost include salaries, allowances, Bonus, etc. Employee Cost is stated to have been estimated by taking into account the actuals of FY 2013-14. Employee Cost for FY 2015-16 is projected by escalating the cost of FY 2014-15 considering all factors affecting the employee costs.

### Commission's Analysis

EPDS has furnished actuals for FY 2013-14 in the Format prescribed for filling basic pay medical reimbursement. All other columns have been kept blank. Detailed methodology on how the cost is arrived for FY 2014-15 and how the same is projected is not indicated convincingly. The Commission considered the actual expenditure for FY 2013-14 at Rs. 47.51 Cr and considering escalation factor at 6%, the employees cost for FY 2015-16 is arrived at Rs. 53.38 Cr.

**The Commission therefore approves the employee cost for FY 2015-16 at Rs. 53.38 Crore .**

## 7.12 Administrative and General Expenses

The EPDS has projected Administrative and General Expenses for 2015-16 at 2.58 Crore. The Administrative and General Expenses include Rent, Rates and Taxes, Travel & Conveyance expenses, Insurance, Telephone and Postage expenses, Electricity and Water charges, Technical and Consultancy fee, freight and notional related expenses etc.

The details of expenses projected by the EPDS are furnished in Table below:

**Table 7.19: Administrative and General Expenses Projected by EPDS for FY 2015-16**

| (Rs. Cr.) |                                |                   |                     |                     |
|-----------|--------------------------------|-------------------|---------------------|---------------------|
| Sl. No.   | Particulars                    | 2013-14 (Actuals) | 2014-15 (Estimated) | 2015-16 (Projected) |
| 1         | Rent, Rates & Taxes            | 0.01              | 0.01                | 0.01                |
| 2         | Insurance                      | 0.00              | 0.00                | 0.00                |
| 3         | Telephone, Postage & Telegrams | 0.05              | 0.06                | 0.06                |
| 4         | Consultancy Fees               | 0.00              | 0.00                | 0.00                |
| 5         | Technical Fees                 | 0.00              | 0.00                | 0.00                |
| 6         | Other Professional Charges     | 0.15              | 0.15                | 0.15                |
| 7         | Conveyance & Travel Expenses   | 0.28              | 0.21                | 0.25                |
| 8         | Electricity & Water Charges    | 0.09              | 0.10                | 0.11                |
| 9         | Others                         | 2.00              | 2.00                | 2.00                |
| 10        | Freight                        | 0.00              | 0.00                | 0.00                |

|    |                                 |             |             |             |
|----|---------------------------------|-------------|-------------|-------------|
| 11 | Other material related expenses | 0.00        | 0.00        | 0.00        |
| 12 | <b>Total Expenses</b>           | <b>2.58</b> | <b>2.53</b> | <b>2.58</b> |

### Commission's Analysis

Compared to actual expenditure during FY 2013-14, the EPDS has projected at Rs. 2.58 Cr for FY 2015-16.

**The Commission approves Rs. 2.58 Cr towards Administrative and General Expenses for FY 2015-16 as projected by EPDS.**

### 7.13 Repairs and Maintenance Expenses

The EPDS has projected Rs 34.96 Crore towards Repairs and Maintenance Expenses during FY 2015-16 which includes expenses towards operation and maintenance of electrical equipment, plant machinery vehicles, furniture and fixtures, office equipment and Buildings.

The details of expenses projected by EPDS are furnished in Table below:

**Table 7.20: Repairs and Maintenance Expenses projected by EPDS for FY 2015-16**

| (Rs. Cr.) |  |                   |                      |                      |
|-----------|--|-------------------|----------------------|----------------------|
| Sl. No.   | Item of Expenditure                          | 2013-14 (Actuals) | 2014-15 (Estimated ) | 2015-16 (Projected ) |
| 1         | Plant and Machinery                          | 5.69              | 3.28                 | 3.80                 |
| 2         | Building                                     | 1.17              | 0.84                 | 0.93                 |
| 3         | Hydraulic works & Civil works                | 0.00              | 0.00                 | 0.00                 |
| 4         | Line, Cable & Network                        | 32.82             | 25.98                | 28.60                |
| 5         | Vehicles                                     | 0.28              | 0.44                 | 0.48                 |
| 6         | Furniture & Fixtures                         | 0.00              | 0.01                 | 0.01                 |
| 7         | Office Equipments                            | 0.92              | 1.11                 | 1.14                 |
| 8         | Operating Expenses                           | 0.00              | 0.00                 | 0.00                 |
| 9         | <b>Total</b>                                 | <b>40.88</b>      | <b>31.66</b>         | <b>34.96</b>         |
| 10        | Less Capitalised                             | 0.00              | 0.00                 | 0.00                 |
| 11        | <b>Net Repair &amp; Maintenance Expenses</b> | <b>40.88</b>      | <b>31.66</b>         | <b>34.96</b>         |

### Commission's Analysis

The EPDS has projected the expenses at Rs.34.96 Cr for FY 2015-16. Commission approves R&M Expenses at Rs. 34.96 Cr as proposed by EPDS.

### 7.14 Capital Investment

The EPDS has proposed a Capital Investment of Rs. 138.98 Crore during FY 2015-16. Scheme-wise details of actual expenditure incurred during FY 2013-14, that estimated during FY 2014-15 and projected for FY 2015-16 are furnished in Table below:

**Table 7.21: Investment Plan Projected by EPDS for FY 2015-16**

| (Rs. Cr) |   |                 |                   |                     |                     |
|----------|---|-----------------|-------------------|---------------------|---------------------|
| Sl. No   | Name of Scheme/ Project                                       | Approved Outlay | 2013-14 (Actuals) | 2014-15 (Estimated) | 2015-16 (Projected) |
| 1        | 2   | 3               | 4                 | 5                   | 6                   |
| 1        | Schemes sanctioned under MDs                                  | 14.44           | 2.44              | 3.00                | 9.00                |
| 2        | Schemes sanctioned under Building/upgradation of Transformers | 0.00            | 0.00              | 0.00                | 0.00                |
| 3        | MNRE  | 0.00            | 0.00              | 3.47                | 0.21                |
| 4        | State's Share of MNRE   | 3.53            | 0.01              | 0.20                | 0.20                |
| 5        | NEC Schemes   | 15.88           | 14.05             | 19.05               | 24.43               |
| 6        | State Share of NEC Schemes                                    | 60.49           | 2.00              | 4.00                | 52.50               |
| 7        | NLCPR Schemes   | 214.49          | 41.67             | 24.92               | 141.84              |
| 8        | State's Share of NLCPR Schemes                                | 41.76           | 2.00              | 1.00                | 2.00                |
| 9        | Schemes under SPA   | 0.00            | 26.27             | 0.54                | 0.54                |
| 10       | State's share of SPA  | 0.60            | 0.07              | 0.10                | 0.43                |
| 11       | RGVY  | 5.90            | 1.00              | 1.00                | 3.90                |
| 12       | State's Share of RGGVY  | 0.00            | 0.00              | 0.00                | 0.00                |
| 13       | R-APDRP   | 14.21           | 1.00              | 4.00                | 8.21                |
| 14       | State's share of R-APDRP                                      | 0.00            | 0.00              | 0.00                | 0.00                |
| 15       | Schemes under TSP/SCSP  | 2.15            | 1.03              | 1.03                | 0.18                |
| 16       | Land compensation   | 0.00            | 0.75              | 2.00                | 2.00                |
| 17       | Schemes under CM's 42 days tour prog.                         | 0.00            | 0.00              | 0.00                | 0.00                |
| 18       | APDRP   | 18.45           | 14.40             | 0.00                | 4.05                |
|          | <b>Total</b>  |                 | 104.69            | <b>63.30</b>        | <b>250.74</b>       |

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

Table 7.22: Works in Progress

| (Rs. Cr) |                              |                   |                     |                     |
|----------|------------------------------|-------------------|---------------------|---------------------|
| Sl. No.  | Item                         | 2013-14 (Actuals) | 2014-15 (Estimated) | 2015-16 (Projected) |
| 1        | Opening Balance              | 63.30             | 65.73               | 50.49               |
| 2        | Add: New Investments         | 104.69            | 63.30               | 250.74              |
| <b>3</b> | <b>Total</b>                 | <b>167.99</b>     | <b>129.04</b>       | <b>301.24</b>       |
| 4        | Less: Investment Capitalised | 102.26            | 78.55               | 183.36              |
| <b>5</b> | <b>Closing Balance</b>       | <b>65.73</b>      | <b>50.49</b>        | <b>117.87</b>       |

### Commission's Analysis

As seen from the above, the EPDS has projected a capital investment of Rs 250.74 Crore and capitalisation of Rs 183.36 Crore during FY 2015-16.

**The Commission approves the capital investment of Rs 250.74 Crore and capitalisation of Rs 183.36 Crore for FY 2015-16 as projected by the EPDS.**

### 7.15 Gross Fixed Assets (GFAs)

The EPDS has stated that the opening GFA for FY 2015-16 has been taken from the assets register and works capitalised during FY 2015-16 have been added and the GFA computed, as detailed in Table below:

Table 7.23: Gross Fixed Assets Movement

| (Rs. Cr)       |                              |                                       |                              |
|----------------|------------------------------|---------------------------------------|------------------------------|
| Financial Year | Opening Balance (Rs. Crores) | Addition during the year (Rs. Crores) | Closing Balance (Rs. Crores) |
| FY 2013-14     | 654.41                       | 102.26                                | 756.67                       |
| FY 2014-15     | 756.67                       | 78.55                                 | 835.22                       |
| FY 2015-16     | 835.22                       | 183.36                                | 1018.58                      |

### Commissions Analysis

**In the absence of audited accounts the opening GFA as on 1.4.2013, furnished by the EPDS**

cannot be taken into consideration for the purpose of allowing depreciation or return on equity, etc.

## 7.16 Depreciation

The EPDS has projected depreciation of Rs. 45.63 Crore for FY 2015-16. The EPDS has further stated that the depreciation on the opening GFA, as on 1.4.2014, and 50% of additions during FY 2015-16 has been calculated at the rates prescribed in the SSERC Regulations, as detailed in Table below:

**Table 7.24: Depreciation for FY 2015-16 Projected by EPDS**

| Sl. No. | Item   | 2015-16<br>(Projected)<br>(Rs. in crores) |
|---------|--|---|
| 1       | Gross Block at the Beginning of the Year             | 835.21                                    |
| 2       | Additions during the Year                            | 183.36                                    |
| 3       | Cumulative Depreciation at the Beginning of the Year | 361.44                                    |
| 4       | Average Rate of Depreciation                         | NA  |
| 5       | Depreciation for the Year                            | 45.63                                     |
| 6       | Cumulative Depreciation at the End of the Year       | 407.07                                    |
| 7       | Net Block in the Beginning of the Year               | 473.77                                    |
| 8       | <b>Net Block at the End of the Year</b>              | <b>611.50</b>                             |

### Commission's Analysis

The EPDS has not furnished the rate at which depreciation is arrived. As discussed earlier, the depreciation on the opening GFA, as on 1.4.2012, cannot be considered. However, depreciation has been considered on the amount of actual capitalisation during FY 2013-14 and estimated during FY 2014-15 and 50% of the amount is proposed to be capitalised during FY 2015-16 at an average depreciation rate of 5.28%, as detailed below:

**Table 7.25 Depreciation for 2015-16 approved by the Commission**

| Sl. No. | Item                         | Amount<br>(Rs. Cr) |
|---------|------------------------------|--------------------|
| 1       | Opening GFA as on 1.4.2013   | 98.47              |
| 2       | Additions during FY 2013-14  | 102.26             |
| 3       | Closing GFA as on 31.3.2014  | 200.73             |
| 4       | Additions during FY 2014-15  | 78.15              |
| 5       | Closing GFA as on 31.03.2015 | 278.88             |
| 6       | Additions during FY 2015-16  | 183.36             |
| 7       | Closing GFA as on 31.3.2016  | 370.56             |

| Sl. No. | Item                        | Amount<br>(Rs. Cr) |
|---------|-----------------------------|--------------------|
| 8       | Average GFA for FY 2015-16  | 324.72             |
| 9       | Rate of Depreciation        | 5.28%              |
| 10      | Depreciation for FY 2015-16 | 17.15              |

The Commission approves depreciation at Rs 17.15 Crore for FY 2015-16, as against Rs 40.04 Crore projected by the EPDS.

### 7.17 Interest and Finance Charges

The EPDS has projected interest and Finance charges at Rs. 77.83 Crore for FY 2015-16. The EPDS has considered the rate of interest at 14.45% being the SBI PLR as on 1.4.2013 and calculated interest and finance charges by taking the opening loan as 70% of the GFA for FY 2014-15 and the proposed capitalisation during FY 2015-16, as detailed in Table below:

**Table 7.26: Interest and Finance Charges projected by EPDS for FY 2015-16**

| (Rs. Cr) |                                       |                     |                        |                        |
|----------|---------------------------------------|---------------------|------------------------|------------------------|
| Sl. No.  | Particulars                           | 2013-14<br>(Actual) | 2014-15<br>(Estimated) | 2015-16<br>(Projected) |
| 1        | 2                                     | 3                   | 4                      | 5                      |
| 1        | Opening Loan                          | 458.09              | 483.86                 | 490.46                 |
| 2        | Loan Additions (70% Capex for the FY) | 71.58               | 54.98                  | 128.35                 |
| 3        | Repayment                             | 45.81               | 48.39                  | 53.88                  |
| 4        | Closing Loan                          | 483.86              | 490.46                 | 564.93                 |
| 5        | Average Loan                          | 470.97              | 487.16                 | 527.69                 |
| 6        | Wt. Avg Interest on Loan              | 14.45%              | 14.45%                 | 14.45%                 |
| 7        | Interest on Loan                      | 69.47               | 71.86                  | 77.83                  |
| 8        | Total Interest & Finance Charges      | 69.47               | 71.86                  | 77.83                  |

The EPDS has requested the Commission to allow the above interest on loan for FY 2015-16.

#### Commission's Analysis

As verified from the Format 7, no loan was availed of by EPDS during FY 2013-14, nor contemplated during FY 2014-15, or in 2015-16. As such, it is construed that the loan details furnished supra are on normative basis.

**As such, the Commission has not considered interest and finance charges for FY 2015-16.**

### 7.18 Interest on Working Capital

The EPDS has projected interest on working capital at Rs. 4.36 Crore on normative basis for FY 2015-16 as per SSERC (Terms and Conditions for Determination of Tariff) Regulations,

2012, on one month's requirement of:

- Employee cost
- Adm & General Expenses
- R&M Cost and
- Two months' receivables.

The rate of interest on working capital has been considered as per SBI PLR as on 1<sup>st</sup> April of the respective year which is 14.45% as on 1.4.2013.

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

**Table 7.27: Interest on Working Capital Projected by EPDS for FY 2015-16**

| (Rs. Cr) |   |                        |                        |
|----------|---|------------------------|------------------------|
| Sl. No.  | Item  | 2014-15<br>(Estimated) | 2015-16<br>(Projected) |
| 1        | 2   | 3                      | 4                      |
| 1        | One month's Employee Costs                    | 5.43                   | 6.42                   |
| 2        | One month's Administrative & General Expenses | 0.4                    | 0.22                   |
| 3        | One month's R&M Cost                          | 2.64                   | 2.91                   |
| 4        | Maintenance Spares                            | 0.00                   | 0.00                   |
| 5        | Two months' Receivables                       | 19.09                  | 19.98                  |
| 6        | Total   | 27.37                  | 29.53                  |
| 7        | Rate of Interest                              | 14.45%                 | 14.45%                 |
| 8        | Interest on Working Capital                   | 4.04                   | 4.36                   |

### Commission's Analysis

As per Regulation 113 of SSERC (Terms and Conditions for Determination of Tariff) Regulations, 2012, interest on working capital shall be calculated on normative basis, notwithstanding the fact that the licensee has taken working capital loan from any outside agency.

Accordingly, the Interest on Working Capital has been worked out on the costs approved by the Commission, as detailed in Table below:

**Table 7.28: Interest on Working Capital Approved by the Commission for FY 2015-16**

| (Rs. Cr) |      |                     |        |
|----------|------|---------------------|--------|
| Sl. No.  | Item | Total Cost<br>Rs/Cr | Amount |

|   |   |        |        |
|---|---|--------|--------|
| 1 | O&M Expenses                              |        |        |
|   | (a) Employee Cost for one month           | 53.38  | 4.45   |
|   | (b) R&M Expenses for one month            | 34.96  | 2.91   |
|   | (c) Adm. & General Expenses for one month | 2.58   | 0.22   |
| 2 | Maintenance Spares                        | -      | -      |
| 3 | Receivables for two months                | 111.72 | 18.62  |
| 4 | Total                                     |        | 26.20  |
| 5 | SBI PLR as on 1.4.2013                    |        | 14.45% |
| 6 | Interest on Working Capital               |        | 3.79   |

**The Commission approves the Interest on Working Capital at Rs. 3.79 Crore of FY 2015-16, as against Rs 4.36 Crore projected by EPDS.**

### 7.19 Return on Equity

The EPDS has projected the Return on Equity at Rs 38.93 Crore for FY 2015-16 at 14% on the normative equity of 30% of GFA as detailed in Table below.

**Table 7.29: Return on Equity for FY 2015-16**

|         |  | (Rs. Cr)            |                        |                        |
|---------|--|---------------------|------------------------|------------------------|
| Sl. No. | Item                                   | 2013-14<br>(Actual) | 2014-15<br>(Estimated) | 2014-16<br>(Projected) |
| 1       | Opening Equity                         | 196.32              | 227.00                 | 250.56                 |
| 2       | Equity Addition (30% Capex for the FY) | 30.68               | 23.56                  | 35.01                  |
| 3       | Closing Equity                         | 227.00              | 250.56                 | 305.57                 |
| 4       | Average Equity                         | 211.66              | 238.78                 | 278.07                 |
| 5       | Rate of Return on Equity               | 14.00%              | 14.00%                 | 14.00%                 |
| 6       | <b>Return on Equity</b>                | <b>29.63</b>        | <b>33.43</b>           | <b>39.93</b>           |

### Commissions Analysis

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

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

### 7.20 Return on Capital Base



The EPDS has projected the Return on Capital Base at Rs 12.89 Crore for FY 2015-16. Any electricity utility can claim either Return on Equity, or Return on Capital Base. In either case, audited annual accounts are a must. EPDS has not produced Audited Accounts.

**As the EPDS has not produced audited accounts ,return on capital base is not considered.**

### 7.21 Provision for Bad Debts

The EPDS has not claimed any provision for bad debts during FY 2015-16.

### 7.22 Non-Tariff Income

The EPDS has projected a Non-Tariff Income at Rs. 0.94 Cr for FY 2015-16.

#### Commission's Analysis

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

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

About 95984 electricity connections are existing, as on 31.3.2014 and with minimum meter rent of Rs. 20/- p.m., the revenue from meter rent works out to over Rs 1.97 Crore. In addition, surcharge on late payment is to be considered. As the connections are increasing

year by year, the surcharge amount should naturally get increased. Miscellaneous income on other items specified in the Regulations is an addition.

As such, Non-Tariff Income at Rs 2.40 Crore, as was approved for FY 2014-15, is considered for FY 2015-16 also.

**The Commission considers the non-tariff income at Rs 2.40 Crore for FY 2015-16, as against Rs. 0.94 Crore projected by EPDS.**

### 7.23 Revenue from Existing Tariff

The EPDS has projected revenue from sale of energy with existing tariff at Rs. 119.87 Cr for sale of 256.34 MU within the State and with an average rate of Rs.4.68/Kwh and Rs. 98.15 Cr from sale of energy outside State for sale of 431.21 MU with an average rate of Rs. 2.28 /Kwh.

#### Commissions Analysis

With the approved sales of 268.53 MU within the state and 431.21 MU outside the state, the revenue projected at the existing Tariff is detailed in Table below:

**Table 7.30: Revenue from the Existing Tariff as Approved by the Commission for FY 2015-16 (Rs. Cr)**

| Sl. No.   | Category                        | Energy Sales (MU) | Average Rate (Rs/kwh) | Amount (Rs/Cr) |
|-----------|---------------------------------|-------------------|-----------------------|----------------|
| 1         | Domestic                        | 94.95             | 2.18                  | 20.70          |
| 2         | Commercial                      | 40.28             | 4.89                  | 19.70          |
| 3         | LTIS (Rural)                    | 0.84              | 2.67                  | 0.24           |
| 4         | LTIS (Urban)                    | 0.80              | 3.87                  | 0.31           |
| 5         | Public Lighting                 | 0.38              | 4.21                  | 0.16           |
| 6         | Temporary Supply                | 1.73              | 8.00                  | 1.38           |
| 7         | HT Supply                       | 108.76            | 5.60                  | 60.87          |
| 8         | Bulk Supply                     | 21.19             | 5.54                  | 11.74          |
| <b>9</b>  | <b>Total Sales within state</b> | <b>268.53</b>     | <b>4.28</b>           | <b>115.10</b>  |
| <b>10</b> | <b>Sales outside state</b>      | <b>431.21</b>     | <b>2.90</b>           | <b>125.05</b>  |
| <b>11</b> | <b>Total Sales (9+10)</b>       | <b>699.74</b>     | <b>3.43</b>           | <b>240.15</b>  |

**The Commission approves the revenue from the existing tariff at Rs 115.10 Cr on sale of 268.53MU within the State at an average rate of at Rs 4.28/kwh and Rs. 125.05 Cr on sale of 431.21 MU outside the State at an average rate of Rs 2.90/kwh.**

## 7.24 Aggregate Revenue Requirement (ARR) and Gap

Based on the approvals of the above projections, the ARR of EPDS for FY 2015-16 works out as detailed in Table below:

**Table 7.31: Aggregate Revenue Requirement approved by the Commission for FY 2015-16**

| (Rs. Cr)  |                                     |                        |                      |  |
|-----------|-------------------------------------|------------------------|----------------------|--|
| Sl. No.   | Item of Expenditure                 | 2014-15<br>(Estimated) | Projected<br>2015-16 | Approved by the<br>Commission<br>2015-16 |
| 1         | 2                                   | 3                      | 4                    | 5  |
| 1         | Cost of Fuel                        | 0.19                   | 0.37                 | 0.37                                     |
| 2         | Cost of Power Purchase              | 209.14                 | 209.14               | 208.18                                   |
| 3         | Employee Costs                      | 65.20                  | 77.06                | 53.38                                    |
| 4         | R&M Expenses                        | 31.66                  | 34.96                | 34.96                                    |
| 5         | Administrative and General Expenses | 2.53                   | 2.58                 | 2.58                                     |
| 6         | Depreciation                        | 38.71                  | 45.63                | 17.15                                    |
| 7         | Interest Charges                    | 71.86                  | 77.83                | -  |
| 8         | Interest on Working Capital         | 4.04                   | 4.36                 | 3.79                                     |
| 9         | Return on NFA/Equity                | 33.43                  | 38.93                | -  |
| 10        | Income Tax                          | 0.00                   | 0.00                 | -  |
| <b>11</b> | <b>Total Revenue Requirement</b>    | <b>456.75</b>          | <b>490.85</b>        | <b>320.41</b>                            |
| 12        | Less: Non Tariff Income             | 0.90                   | 0.94                 | 2.40                                     |
| <b>13</b> | <b>Net Revenue Requirement</b>      | <b>455.86</b>          | <b>489.91</b>        | <b>318.01</b>                            |
| 14        | Revenue from Tariff                 | <b>114.52</b>          | <b>119.87</b>        | <b>115.05</b>                            |
| 15        | Revenue from Sale Outside the State | 98.15                  | 98.15                | 125.05                                   |
| <b>16</b> | <b>Gap</b>                          | <b>243.19</b>          | <b>271.90</b>        | <b>77.91</b>                             |
| 17        | Energy Sales within the State       | -                      | 256.34               | 268.53                                   |
| 18        | Energy Sales outside the State      | -                      | 431.21               | 431.21                                   |
| 19        | Average Cost of Supply Rs/kwh       | -                      | 7.13                 | 4.54                                     |

The Revenue gap of Rs. 77.91 core has been arrived at on the basis of the projected data for FY 2015-16. The Revenue Gap is about 24.49% of the ARR. The Commission is of the view that the EPDS shall make efforts to bridge the revenue gap by improving the operational performance, particularly by reduction of distribution losses which, in turn, would reduce the resource gap. A concerted effort needs to be made to recover the outstanding arrears, as well as to identify the high end users in the State, i.e., industrial units, hotels, etc. This would

increase the energy demand in the State and the potential revenue from energy sales. The Commission observes that a sizeable quantum of power is purchased by the EPDS for meeting the energy demand of the State (within the State consumption). The EPDS needs to make efforts to improve its own generation, so that a sizeable part of the State's demand is met from its own generation. The Commission does not propose any increase in tariffs for consumers other than those belonging to commercial and HT industrial categories.

## **8.DIRECTIVES AND ADVISORIES**

### **Introduction**

During the course of Review of Performance of Energy and Power Department, the deemed licensee in the State of Sikkim, it was observed that but for marginal improvements noticed in some areas of operation, the compliance, as enjoined in the directives issued by the Commission, has not been up to the mark. The Commission reiterates the directives and directs that the issues be addressed with utmost diligence and complied with.

In pursuance to the directives issued by the Hon'ble Commission in its Tariff Order No. TR - 1/2014-15 dated 15.04.2014 regarding the ARR & Tariff for the Year 2014-15, the compliance is submitted as under:-

### **Directive – 1:**

“During the course of the performance review relating to the Energy and Power Dept., the deemed Licensee in the State, for the financial year 2012-2013, it was observed that, with exception of marginal improvements recorded in some areas of operation, the compliance requirements, as enjoined in the directives issued by the Commission, have not be adequately satisfied by the licensee. The Commission reiterates the directives in this regard for the concerned Licensee to address these pertinent issues with utmost diligence and ensure compliance of the same.”

### **Compliance:**

With the observation of the Hon'ble commission regarding directives issued in the order in case No. TR-1/2014-15, in future all efforts shall be put to improve the performance to the

satisfaction of the Commission.

**Commission's Comments**

Efforts put forth by EPDS and results achieved have not been reported. The Commission is unable to notice any improvement. The Commission, therefore, reiterates the directive

**Directive 2:**

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

**Compliance:**

The directive required the department to take steps legal action for recovery of arrears.

That the issue was taken up in earnest, but taking legal recourse may aggravate the issue. Instead, the defaulting consumers were approached for clearing the payments. In a few cases individual consumers were taken up with the help of the District Administration but the process has been slow. However, there may be very good response from Government as the government has been appraised of the situation (departmental electricity bill arrears) umpteen times and now may take action to recover the arrears on its own.

The outstanding arrears as on 31.03.2014 were submitted to the Commission as well.

**Commission's Comments**

The Commission is not convinced about the efforts being made regarding realisation of revenue. The Department, therefore, needs to put in more efforts to improve the revenue realisation.

**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:**

Regarding instituting effective & conscious measures to mitigate revenue shortfall from high-end consumers namely Industrial Units, Star category Hotels; it is submitted that these premises are now being billed through high caliber digital energy meters ensuring proper metering; however installation of Remote Sensing Meters in all bulk load could not be taken up.

**Commission’s Comments**

Efforts made and results achieved have not been reported on the 49 bulk consumers some of whom have been provided with remote meters. A status report may be submitted by the 30<sup>th</sup> June 2015.

**Directive 4:**

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

**Compliance:**

The audit report on the specific feeders of the pilot project in Gangtok in enhancing the

Transmission Network, Distribution System and billing of energy consumption, will be made as early as possible as required by the Commission and steps taken accordingly to address the issue of loss in high loss area.

**Commission's Comments**

A status report may be submitted by the 30th June 2015.

**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:**

Further to the constitution of Hydro Project Monitoring Committee, the Chief Engineer (East) is appointed as a Nodal Officer of these matters who is entrusted the responsibility to be continuously in touch with the Power Developers in the State for regular updates.

**Commission's Comments**

Reports may be obtained periodically from the nodal officers and submitted to the Commission on a quarterly basis.

**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:**

A well-documented Asset & Depreciation Register along with the Tariff Petition for the year 2014-15 has been submitted, which may kindly be given due consideration by the Hon'ble

commission.

**Commission's Comments:**

The Commission appreciates the efforts made by the EPDS and updated Asset Details (Abstract) for Generation, Transmission and Distribution may be submitted by 30<sup>th</sup> June 2015.

**Directive 7:**

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

**Compliance:**

It is submitted that the Energy & Power Department operates under Govt. Accounting norms. Expenditure is incurred against the grants as indicated in the Demands for Grants & Receipt as per the estimates of the Receipts duly passed by the State Legislative. All Accounts formats, registers etc. used are as per Government Accounting norms. Since it does not operate accounts under Double Entry System as followed in Commercial Accounting by Boards/Corporations, the Balance Sheet, Profit & Loss Accounts etc. are not prepared.

Further, the Accounts are audited by the CAG & no internal auditors like Chartered Accountants are engaged for normal Expenditure & Receipt Accounts operated out of the Budget allocated to the Department.

To achieve the desired report for such Annual accounts, a parallel set of Accounts in commercial format is suggested to be maintained engaging an internal auditor for monthly Concurrent Audit, which may require approval of the CAG & the State Govt. or similar pattern may have to be followed by the Department done in other states.

**Commission's Comments:**

The Directive to submit Audited Annual Accounts has not been complied with. EPDS has also not indicated the time-frame by which the Accounts will be submitted.

**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:**

E&PDS has already started the process of compilation of data at various levels. Computerized Management Information System (MIS) is also being introduced to build up Credible and accurate data base to meet the requirements for filing ARR & Tariff Petition as per regulatory requirements and directions in future.

**Commission’s Comments:**

Details of the Category-wise connected load Revenue billed, Revenue Collected and balance collected have not been indicated in the filing for FY 2015-16. This may be done and submitted to the Commission by the 30<sup>th</sup> June 2015.

**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 submitted report on % of defective meters as follow:

|        |        |
|--------|--------|
| Bulk   | 31.00% |
| supply | %00%   |
| HTS    | 7.23%  |
| LTIS   | 13.11% |
| Comme  | 11.08% |
| rcial  |        |
| Domest | 20.42% |
| ic     |        |

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:**

The E&PDS has initiated a drive to replace the defective meters & installation of new meters to unmetered consumers. The consumers are also appealed at regular interval to purchase energy meter at their own cost and choice to install at their service connection as per the manufacturer's specification given by the department.

The status of metering till date is still far from appreciation as indicated below:

|  |          |
|--|----------|
| Total Number of consumers as on 31.March 2014      | = 95824  |
| Metered Consumers                                  | = 74125  |
| Consumers with Defective/Non-functional Meter      | = 21699  |
| % of Metered Consumers                             | = 77.37% |
| % of Consumers with Defective/Non-functional Meter | = 22.65% |

The department has stopped giving service connection without proper energy meter installed in the applicant premise and further stated that the existing service connections (households) without working and correct energy meter may also be liable to be disconnected if such defective meter are not replaced within a given time frame and a

gazette notification to this effect, as approved by the cabinet, is also being published shortly that certainly will enhance the targeted 100% metering process.

**Commission's Comments:**

EPDS has not reported the number of defective meters replaced in 2013-14. The Commission directs that defective meters in HT and Bulk Consumers be replaced in 6 months time. Commercial and LT Industrial should also be replaced by December, 2015 and 75% of Domestic Consumers by December, 2015. Hence, suitable plans need to be drawn up to implement this Directive.

**Directive 10: Consumer Contribution for Capital Investment**

“The fact of consumer contribution for capital investment is not brought out in the ARR and Tariff Petition.

The EPDS is directed to furnish the details of contributions being collected from consumers for capital works. The amounts collected from the consumers towards capital investment shall be brought out in the accounts. The depreciation and Return on Equity / Capital Base should not be claimed on the amount contributed by the consumers towards capital investment.”

**Compliance:**

It is submitted E&PD has not collected any contribution from consumers towards capital investment.

**Commission's Comments:**

The statement of EPDS has been noted

**Directive 11: Investment Plan and approval of Capital Expenditure**

“Annual Investment Plan shall be submitted to the Commission and approval of Commission should be obtained for all major capital works costing Rs. 5.00 Crore and above before execution of the works.”

**Compliance:**

E&PDS will submit details of Capital works costing Rs. 5.00 Crore and above for approve of

the Hon'ble commission for execution of such work.

**Commission's Comments:**

EPDS shall not take up any new works costing Rs. 5.00 Cr and more, without obtaining prior approval from the Commission

**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 IE 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:**

The system of Security Deposit is applicable to Bulk Supply and High Tension Supply consumers. EPDS has introduced a system of maintaining circle wise details of such security deposits. Details will be submitted with future filings.

**Commission's Comments:**

The proposal of EPDS is not accepted. The number of Bulk and HT consumers is limited. Compiling data of SD paid by such consumers will not take a month's time. Details shall be reported by June, 2015.

**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:**

Energy & Power Department is carrying out all the instruction and initiatives as suggested by the Commission viz., public awareness and sensitisation programme on various issues to the public for their benefit in the grams sabhas, panchayats ward level meeting and departmental co-ordination meetings as and when there are huge public participations etc. E&PDS is regularly imparting training and conduction workshops to its employees on the topic of safety measures, acts, rules and regulations that govern the power sector.

**Commission's Comments:**

Public awareness and sensitisation programme is to be done through the print and Electronic Media. EPDS is directed to furnish details of such publications. Copies of notices, publications issued should also be furnished to the Commission.

**Directives 14:**

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

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

**Compliance:**

The observation and the guidelines of the Hon'ble Commission regarding this directive issued in the order in case No. TR-1/2014-15 shall be put in top gear to overhaul the power sector in days to come. With the cadre review there are three Principle Chief Engineer in the Department and they shall take initiative to head the three different entities viz., generation, transmission and distribution independently to perform in the corporate fashion and achieve the milestone as the Department moves forward.

**Commission's Comments:**

For corporatisation of EPDS, the methodology has to be finalised in consultation with the State Government. The actions include: type of new entities to be decided, and finalisation of the balance sheets/ profit and loss accounts of the new entities. All these actions need to be taken with the approval of Government. Action taken/proposed to be taken timeline for corporatisation of EPDS may be reported by 30.04.2015.

**Fresh Directives (2015-16)**

**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 30.06.2015.

**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:

| Year         | Departmental |           | Others   |           | Total     |
|--------------|--------------|-----------|----------|-----------|-----------|
|              | Fatal        | Non-Fatal | Fatal    | Non-Fatal |           |
| 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.

**Directives 17: Free Power to Rural Domestic Consumers**

The EPDS shall ensure that no new connection is given to any category of consumer without meter installation. Metering should be a pre-condition for availing of the benefits of 100 Units of Free Power to rural domestic consumers announced by the State Government. The EPDS shall ensure that all such consumers whose power consumption exceeds 100 units are billed as per the notified Tariff for the excess quantity of power consumed.

**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.

**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.

**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.

**Directive 21: Banking of Surplus Power.**

As the State has only Hydro Electric Power projects, the power generation would be at its peak during the summer due to the melting of snows and the annual monsoons, whereas in winter the generation would be much less. The EPDS may therefore like to look at negotiating with entities like the NTPC for banking the surplus power during summer, which can be drawn later by the State to meet its own requirement during the winters.

**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.



## 9. TARIFF PRINCIPLES AND DESIGN

### 9.1 Background

- (a) The Commission in determining the revenue requirement of EPDS for FY 2014-15 and retail tariff has been guided by the provisions of electricity Act 2003. The National Tariff Policy (NTP), CERC Regulations in this regard and SSERC (Terms and conditions for determination of Tariff) Regulations 2012. Section 61 of the Act lays down the broad principles, which shall guide determination of retail tariff. As per these principles the tariff should “Progressively reflect cost of supply” and also reduce the Cross subsidies “within a period specified by the Commission”. The Act lays special emphasis on safeguarding consumer interests and also requires that the costs should be recovered in a reasonable manner. The Act mandates that tariff determination should be guided by the factors, which encourage competition, efficiency, economical use of resources, good performance and optimum investment.

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

- (b) The NTP mandates that Multi Year Tariff (MYT) framework be adopted for determination of tariff from 1<sup>st</sup> April 2006. However the Commission is not in a position to introduce MYT Regime in the State mainly because of lack of requisite and reliable data from EPDS. The present MIS and regulatory reporting system of the EPDS is very inadequate for any such exercise at this stage. There has been no study to

assess voltage wise losses in the absence of metering of all feeders distribution transformers and consumes. Technical and Commercial loses are yet to be segregated and quantified voltage wise. The Commission has issued directives to EPDS in the tariff order for FY 2012-13 and FY 2014-15 as well as in the present tariff order for FY 2015-16 to chalk out a long term action plan for reduction of T&D losses for both technical and non-technical with relevant load flow studies and energy audit and submit to the Commission by December 2014. Under these conditions it would not be practicable to implement MYT framework this year. The Commission after taking into account all the factors has decided to introduce MYT in due course, when the data is available.

- (c) The mandate of the NTP is that tariff should be within plus / minus 20% of the average cost of supply by 2010-11. It is not possible for the Commission to implement this at present because of consumers' paying capacity in Sikkim is low. There has been a high level of the fluctuating revenue gap. The gap in the year 2012-13 was 18% and that of 2013-14 is 16%. However, in this tariff order an element of performance target has been indicated by setting target for T&D loss reduction and increasing in sales volume during the period from 2012-13 to 2014-15. The improved performance, by reduction of loss level, and increase in sale will result in substantial reduction in average cost of supply. The existing and proposed tariff of EPDS is single part tariff. The Commission has considered for a nominal increase in tariff in view of the capacity of the consumers to pay higher rates.
- (d) Clause 8.3 of National Tariff Policy lays down the following principles for tariff design:
- (i) In accordance with the National Electricity Policy, consumers below poverty line who consume below a specified level, say 30 units per Month, may receive a special support through Cross subsidy. Tariffs for such designated group of consumers will be at least 50% of the average cost of supply. This provision will be re-examined after five years.
  - (ii) For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the SERC would notify the roadmap, within six Months with a target that latest by the end of the year 2010-11 tariffs are within  $\pm 20\%$  of the average

cost of supply. The road map would have intermediate milestones, based on the approach of a gradual reduction in Cross subsidy.

For example, if the average cost of service is Rs.3 per unit, at the end of year 2012-13, the tariff for the Cross subsidized categories excluding those referred to in para-1 above should not be lower than Rs. 2.40 per unit and that for any of the Cross subsidizing categories should not go beyond Rs.3.60 per unit.

(e) Regulation 16 of JERC for M&M (Terms and Conditions for Determination of Tariff) Regulation specifies.

(i) The Cross subsidy for a consumer category means the difference between the average per unit rate based on tariff schedule of the Commission for that Category and the combine average cost of supply per unit expressed in percentage terms as a portion of the combined average cost of supply.

(ii) In the first place, the Commission shall determine the tariff, so that it progressively reflects the combined average cost of supply of electricity and also reduce Cross-subsidies within a reasonable period. In the second phase, the Commission shall consider moving towards category wise cost of supply as a basis for determination of tariff.

(f) The Commission has considered special treatment to BPL consumers. It has also aimed at raising the per capita consumption of the State from 100 kWh in 2010-11 to 144 kWh in 2012-13 to 300 kWh by the end of 2015. The Commission endeavors that the tariff progressively reflects cost of supply in a reasonable period and the Government subsidy is also reduced gradually. The tariff has been rationalized with regards to inflation, paying capacity and to avoid tariff shock.

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

### **(a) Existing & Proposed Tariff**

EPDS in its tariff petition for FY 2015-16 has proposed for revision of the existing retail tariffs to various categories of consumers to earn additional revenue to meet the expenses to a reasonable extent.

The EPDS has proposed tariff revision as indicated in table – 9.1 placed below.

**Table 9.1: Existing Tariffs v/s proposed Tariffs for FY 2015-16**

| Sl. No.  | Category of Consumers     | Existing Rate<br>Paisa/KWH | Proposed Rate<br>Paisa/KWH |
|----------|---------------------------|----------------------------|----------------------------|
| 1        | 2                         | 3                          | 4                          |
| <b>1</b> | <b>Dome s tic (Rural)</b> |                            |                            |
| a)       | Up to 50 units            | 110                        | 130                        |
| b)       | 51 to 100 units           | 225                        | 250                        |
| c)       | 101-200 units             | 345                        | 380                        |
| d)       | 201 to 400 units          | 415                        | 445                        |
| e)       | 401 & above               | 440                        | 470                        |
|          | <b>Dome s tic (Urban)</b> |                            |                            |
| a)       | Up to 50 units            | 110                        | 175                        |
| b)       | 51 to 100 units           | 225                        | 285                        |
| c)       | 101-200 units             | 345                        | 400                        |
| d)       | 201 to 400 units          | 415                        | 475                        |
| e)       | 401 & above               | 440                        | 500                        |
| <b>2</b> | <b>Commercial (Rural)</b> |                            |                            |
| a)       | Up to 50 units            | 315                        | 350                        |
| b)       | 51 to 200 units           | 490                        | 520                        |
| c)       | 201 to 400 units          | 515                        | 545                        |
| d)       | 401 & above               | 540                        | 570                        |
|          | <b>Commercial (Urban)</b> |                            |                            |
| a)       | Up to 50 units            | 315                        | 400                        |
| b)       | 51 to 200 units           | 490                        | 550                        |
| c)       | 201 to 400 units          | 515                        | 575                        |
| d)       | 401 & above               | 540                        | 600                        |
| <b>3</b> | <b>Public lighting</b>    |                            |                            |
|          | Rural Areas               | 250                        | 250                        |
|          | Urban Areas               | 460                        | 460                        |
| <b>4</b> | <b>Indus trial</b>        |                            |                            |
| <b>A</b> | <b>HT</b>                 |                            |                            |
| a)       | HT (AC) above 3.3 KV      |                            |                            |
| b)       | Upto 100 KVA              | 300                        | 360                        |
| c)       | 100 - 250 KVA             | 348                        | 415                        |
| d)       | 250- 500 KVA              | 396                        | 475                        |
| e)       | 500 KVA & above           | 410                        | 495                        |

| Sl. No.  | Category of Consumers | Existing Rate Paisa/KWH | Proposed Rate Paisa/KWH |
|----------|-----------------------|-------------------------|-------------------------|
| <b>B</b> | <b>LT (Rural)</b>     |                         |                         |
| a)       | Up to 500 units       | 235                     | 300                     |
| b)       | 501 - 1000 units      | 420                     | 460                     |
| c)       | 1001 & above          | 545                     | 600                     |
| <b>C</b> | <b>LT (Urban)</b>     |                         |                         |
| a)       | Up to 500 units       | 480                     | 560                     |
| b)       | 501 - 1000 units      | 550                     | 600                     |
| c)       | 1001 & above          | 620                     | 670                     |
| <b>5</b> | <b>Bulk supply</b>    |                         |                         |
| a)       | LT                    | 540                     | 595                     |
| b)       | HT                    | 560                     | 615                     |

### (b) Tariff Categories

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

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

### (c) Tariffs approved by the Commission

Having considered the Petition no: TR-1/2014 of EPDS for approval of Aggregate Revenue Requirement (ARR) and determination of retail tariff for sale of energy and having approved aggregate revenue requirement under Para 7.24 the Commission retains the existing tariffs except in response of commercial and HT industrial.

Table 9.2: Tariffs approved by the Commission for FY 2015-16

| Sl. No.  | Category of Consumers   | Demand Charges<br>(HT Supply only)<br>Rs/KVA/Month | Approved Energy<br>Charges Paisa/KWH |
|----------|-------------------------|--|--------------------------------------|
| 1        | 2                       | 3  | 4                                    |
| <b>1</b> | <b>Domestic (DLT)</b>   |  |                                      |
| a)       | Up to 50 units          |  | 110                                  |
| b)       | 51 to 100 units         |  | 225                                  |
| c)       | 101 to 200 units        |  | 345                                  |
| d)       | 201 to 400 units        |  | 415                                  |
| e)       | 401 & above             |  | 440                                  |
| <b>2</b> | <b>Commercial (CLT)</b> |  |                                      |
| a)       | Up to 50 units          |  | 330                                  |
| b)       | 51 to 200 units         |  | 515                                  |
| c)       | 201 to 400 units        |  | 540                                  |
| d)       | 401 & above             |  | 567                                  |
| <b>3</b> | <b>Public Lighting</b>  |  |                                      |
|          | Rural Areas             |  | 250                                  |
|          | Urban Areas             |  | 460                                  |
| <b>4</b> | <b>Industrial</b>       |  |                                      |
| A        | HT                      |  |                                      |
| a)       | HT(AC) above 3.3 KV     |  |                                      |
| b)       | Upto 100 KVA            | 175  | 300                                  |
| c)       | 100 – 250 KVA           | 225  | 348                                  |
| d)       | 250 – 500 KVA           | 250  | 396                                  |
| e)       | 500 KVA & above         | 475  | 410                                  |
| <b>B</b> | <b>LT (Rural)</b>       |  |                                      |
| a)       | Up to 500 units         |  | 235                                  |
| b)       | 501 – 1000 units        |  | 420                                  |
| c)       | 1001 & above            |  | 545                                  |
| <b>C</b> | <b>LT (Urban)</b>       |  |                                      |
| a)       | Up to 500 units         |  | 480                                  |
| b)       | 501 – 1000 units        |  | 550                                  |
| c)       | 1001 & above            |  | 620                                  |

| Sl. No. | Category of Consumers | Demand Charges<br>(HT Supply only)<br>Rs/KVA/Month | Approved Energy<br>Charges Paisa/KWH |
|---------|-----------------------|--|--------------------------------------|
| 5       | <b>Bulk Supply</b>    |  |                                      |
| a)      | LT                    |  | 540                                  |
| b)      | HT                    |  | 560                                  |

Details are given in tariff schedule in the Appendix.

**(d) Miscellaneous charges and important conditions of supply**

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

This order shall come into force from 1.4.2015 and shall remain effective till revised/ amended by the Commission. The Order shall be given wide publicity by the Petitioner for information of the general public.

**Sd/-**  
**Chairperson**

**Place: Gangtok**

**Date: 31.03.2015.**

## 10. WHEELING CHARGES

### 10.1 Wheeling Charges

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

**Table 10.1: Allocation Matrix**

| SI. No. | Particulars                         | Wire Business (%) | Retail Supply Business (%) |
|---------|-------------------------------------|-------------------|----------------------------|
| 1       | Cost of Power Purchase              | 0.00              | 100.00                     |
| 2       | Employee Expenses                   | 60.00             | 40.00                      |
| 3       | Administration and General Expenses | 50.00             | 50.00                      |
| 4       | Repair and Maintenance Expenses     | 90.00             | 10.00                      |
| 5       | Depreciation                        | 90.00             | 10.00                      |
| 6       | Interest and Finance Charges        | 90.00             | 10.00                      |
| 7       | Interest on Working Capital         | 10.00             | 90.00                      |
| 8       | Provision for Bad Debt              | 0.00              | 100.00                     |
| 9       | Intra State Transmission Charges    | 0.00              | 100.00                     |
| 10      | Return on Equity                    | 90.00             | 10.00                      |
| 11      | Non Tariff Income                   | 10.00             | 90.00                      |

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

**Table 10.2: Segregation of wires and Retail Supply Costs for FY 2015-16**

(Rs. Cr)

| SI. No. | Particulars                  | Total Cost | Wire Cost | Supply Cost |
|---------|------------------------------|------------|-----------|-------------|
| 1       | Employee Cost                | 53.38      | 32.03     | 21.35       |
| 2       | R&M Cost                     | 34.96      | 31.46     | 3.50        |
| 3       | Adm. & Gen. Expenses         | 2.58       | 1.29      | 1.29        |
| 4       | Depreciation                 | 17.15      | 15.43     | 1.72        |
| 5       | Interest and Finance Charges | -          | -         | -           |
| 6       | Interest on Working Capital  | 3.79       | 0.38      | 3.41        |



|   |                         |               |              |              |
|---|-------------------------|---------------|--------------|--------------|
| 7 | Return on Equity Income | -             | -            | -            |
| 8 | Less: Non-Tariff Income | 2.40          | 0.24         | 2.16         |
| 9 | <b>Total</b>            | <b>114.26</b> | <b>80.83</b> | <b>33.43</b> |

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

The Commission has arrived wheeling charges based on the above wire cost and energy sale for FY 2015-16 and shown Table below:

**Table 10.3: Wheeling Tariff approved by the Commission**

| Sl. No. | Particulars   | FY 2015-16 |
|---------|---|------------|
| 1       | ARR for wheeling function approved by the Commission (Rs. Cr) | 80.83      |
| 2       | Total Energy Sale approved (MU)                               | 268.53     |
| 3       | Wheeling Tariff (Rs./Kwh)                                     | 0.30       |

The Commission approves wheeling Tariff at Rs. 0.30/Kwh for FY 2015-16.

### Transmission Charges

EPDS did not submit the data or worked out transmission charges. However based on energy sales and T&D Loss approved by the Commission for FY 2015-16 the energy delivered by the Transmission System to the Distribution System is worked out as below:

|                                      |                           |
|--------------------------------------|---------------------------|
| Energy Sales                         | 268.58 MU                 |
| T&D Loss                             | 34.00%                    |
| Energy Delivered                     | $268.58/0.66=406.66$ Mu   |
| Demand on the Transmission System is | $406.66/8760*0.70=664$ MW |

EPDS has not provided ARR for Transmission as it is integrated utility. To arrive at ARR for transmission 25% of approved fixed cost for EPDS is considered as cost for Transmission.

(Rs. Cr)

| Particulars                  | Approved Cost for FY 2015-16 | 25% of approved cost |
|------------------------------|------------------------------|----------------------|
| Employee Cost                | 53.38                        | 13.34                |
| R&M Cost                     | 34.96                        | 8.74                 |
| A&G Charges                  | 2.58                         | 0.64                 |
| Depreciation                 | 17.15                        | 4.29                 |
| Interest and finance charges | -                            | -                    |
| Interest on working Capital  | 3.79                         | 0.95                 |
| Return on Equity             | -                            | -                    |
| Less: Non Tariff Income      | 2.40                         | 0.60                 |
| <b>Total</b>                 | <b>114.26</b>                | <b>28.56</b>         |

|   |                                      |
|---|--------------------------------------|
| Transmission Charges for long term open access consumers (Rs./MW/Month) | $28.56/664*12=35843$                 |
| Transmission Charges for short term open access consumers (Rs./Mw/Day)  | $25\% \text{ of } 28.56/664*365=295$ |

The Commission decides that the transmission pen access charges will be Rs. 35843 per MW per month or part thereof for long term open access consumers and Rs. 295 per MW per day or part thereof for short time consumers.

## 11. FUEL AND POWER PURCHASE COST ADJUSTMENT

### 11.1 Background

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

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

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

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

Where,

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

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

- $R_{c1}$  = Weighted average base rate of coal supplied ex-power station coal yard as approved by the Commission for the adjustment period in Rs./MT
- $R_{c2}$  = Weighted average base rate of coal supplied ex-power station coal yard for the adjustment period in Rs./MT
- $Q_o$  = Actual Quantity of oil (in KL) consumed during the adjustment period or normative oil consumption as per Tariff order whichever is less.
- $R_{o1}$  = Weighted average base rate of oil ex-power station (Rs./KL) approved by the Commission for the adjustment period.
- $R_{o2}$  = Weighted average actual rate of oil ex-power station supplied (Rs. / KL) during the adjustment period.
- $Q_{pp}$  = Total power purchased from different sources (kWh) =  $Q_{pp2} + Q_{pp3}$
- $Q_{pp1}$  =  $Q_{pp3} \left[ 1 - \frac{TL}{100} \right]$  in kWh
- TL = Transmission loss (CTU) (in percentage terms).
- $Q_{pp2}$  = Power Purchase from sources with delivery point within the state transmission or distribution system (in kWh)
- $Q_{pp3}$  = Power Purchase from sources on which CTU transmission loss is applicable (in kWh)
- $R_{pp1}$  = Average rate of Power Purchase as approved by the Commission (Rs./kWh)
- $R_{pp2}$  = Average rate of Power Purchase as approved by the Commission (Rs./kWh)
- $Q_{pg}$  = Own power generation (kWh)

- $Q_{pg1}$  = Own Power generation (kWh) at generator terminal – approved auxiliary consumption
- L = Percentage T&D loss as approved by the Commission or actual, whichever is lower.
- SHR = Station Heat Rate as approved by the Commission (Kcal / kWh)
- TSL = Percentage Coal Transit and Stacking Loss as approved by the Commission
- GCV = Weighted average gross calorific value of coal as fired basis during the adjustment period (Kcal / Kg)
- $V_z$  = Amount of variable charges on account of change of cost of unknown factors like water charges, taxes or any other unpredictable and unknown factors not envisaged at the time of Tariff fixation subject to prior approval of the Commission (Rs.)
- A = Adjustment, if any, to be made in the current period to account for any excess / shortfall in recovery of fuel of Power Purchase cost in the past adjustment period, subject to the approval of the Commission (Rs.)

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

If there are more than one power stations owned by the Licensee  $Q_c$ ,  $R_{c1}$ ,  $R_{c2}$ ,  $Q_o$ ,  $R_{o1}$ ,  $R_{o2}$ ,  $Q_{pg}$  and  $Q_{pgi}$  will be computed separately for each power station and sum of the increase/decrease of cost of all power stations shall be taken into consideration. Can levy FPPCA charges with the prior approval of the Commission. Levy of FPPCA charges shall be subject to the following terms and conditions.

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

- a. The basic nature of FPPCA is 'adjustment' i.e. passing on the increase or decrease in the fuel costs and power purchase cost, as the case may be, compared to the approved fuel costs and power purchase costs in this Tariff Order.

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

## Annexure " I "

## REVENUE FROM EXISTING TARIFF FOR F.Y 2015-16

| Sl. No.        | Category                  | Connected Load (MW)            | Sales (MU)   | Demand Charge (Rs./KVA) | Energy Charges (Rs. kWh) | Demand Charges (Rs. Cr) | Energy Charges (Rs. cr) | Total (Rs. Cr) |
|----------------|---------------------------|--------------------------------|--------------|-------------------------|--------------------------|-------------------------|-------------------------|----------------|
| <b>I</b>       | <b>Domestic</b>           |                                |              |                         |                          |                         |                         |                |
|                | Upto 50                   |                                | 43.00        |                         | 1.10                     |                         | 4.73                    | 4.73           |
|                | 51-100                    |                                | 26.00        |                         | 2.25                     |                         | 5.85                    | 5.85           |
|                | 101-200                   |                                | 11.00        |                         | 3.45                     |                         | 3.80                    | 3.80           |
|                | 201-400                   |                                | 10.00        |                         | 4.15                     |                         | 4.15                    | 4.15           |
|                | > 400                     |                                | 4.95         |                         | 4.40                     |                         | 2.18                    | 2.18           |
|                | <b>Total Domestic</b>     | <b>20.84 (R)<br/>24.99 (U)</b> | <b>94.95</b> |                         |                          |                         | <b>20.71</b>            | <b>20.71</b>   |
| <b>II</b>      | <b>Commercial</b>         |                                |              |                         |                          |                         |                         |                |
|                | upto 50                   |                                | 10.00        |                         | 3.30                     |                         | 3.30                    | 3.30           |
|                | 51-200                    |                                | 10.00        |                         | 5.15                     |                         | 5.15                    | 5.15           |
|                | 201-400                   |                                | 9.00         |                         | 5.40                     |                         | 4.86                    | 4.86           |
|                | >400                      |                                | 11.28        |                         | 5.67                     |                         | 6.40                    | 6.40           |
|                | <b>Total Commercial</b>   | <b>0.98 (R)<br/>20.06 (U)</b>  | <b>40.28</b> |                         |                          |                         | <b>19.71</b>            | <b>19.71</b>   |
| <b>III (a)</b> | <b>LTIS (Rural)</b>       |                                |              |                         |                          |                         |                         |                |
|                | upto 500                  |                                | 0.50         |                         | 2.35                     |                         | 0.12                    | 0.12           |
|                | 501-1000                  |                                | 0.10         |                         | 4.20                     |                         | 0.04                    | 0.04           |
|                | >1000                     |                                | -            |                         | 5.45                     |                         |                         |                |
|                | <b>Total LTIS (Rural)</b> | <b>0.66</b>                    | <b>0.60</b>  |                         |                          |                         | <b>0.16</b>             | <b>0.16</b>    |
| <b>III (b)</b> | <b>LTIS (Urban)</b>       |                                |              |                         |                          |                         |                         |                |
|                | upto 500                  |                                | 0.44         |                         | 4.80                     |                         | 0.21                    | 0.21           |
|                | 501-100                   |                                | 0.20         |                         | 5.50                     |                         | 0.11                    | 0.11           |
|                | > 1000                    |                                | -            |                         | 6.20                     |                         |                         |                |
|                | <b>Total LTIS (Urban)</b> |                                | <b>0.64</b>  |                         |                          |                         | <b>0.32</b>             | <b>0.32</b>    |
|                | <b>Total LTIS</b>         |                                | <b>1.24</b>  |                         |                          |                         | <b>0.48</b>             | <b>0.48</b>    |
| <b>IV</b>      | <b>Public Lighting</b>    |                                |              |                         |                          |                         |                         |                |

|           |                                     |              |               |     |      |              |               |               |
|-----------|-------------------------------------|--------------|---------------|-----|------|--------------|---------------|---------------|
|           | Rural                               |              | 0.10          |     | 2.50 |              | 0.03          | 0.03          |
|           | Urban                               |              | 0.28          |     | 4.60 |              | 0.13          | 0.13          |
|           | <b>Total Public Lighting</b>        | <b>0.38</b>  | <b>0.38</b>   |     |      |              | <b>0.16</b>   | <b>0.16</b>   |
| <b>V</b>  | <b>HT Supply</b>                    |              |               |     |      |              |               |               |
|           | upto 100 KVA                        | 21,000       | 26.26         | 175 | 3.00 | 4.41         | 7.88          | 12.29         |
|           | 101-250 KVA                         | 25000        | 29.50         | 225 | 3.48 | 6.75         | 10.27         | 17.02         |
|           | 251 - 500 KVA                       | 9000         | 19.50         | 250 | 3.96 | 2.70         | 7.72          | 10.42         |
|           | >500 KVA                            | 13000        | 33.50         | 475 | 4.10 | 7.41         | 13.74         | 21.15         |
|           | <b>Total HT</b>                     | <b>49.78</b> | <b>108.76</b> |     |      | <b>21.27</b> | <b>39.60</b>  | <b>60.87</b>  |
|           |                                     |              |               |     |      |              |               |               |
| <b>VI</b> | <b>Bulk Supply</b>                  | <b>10.32</b> |               |     |      |              |               |               |
|           | LT                                  |              | 7.00          |     | 5.40 |              | 3.78          | 3.78          |
|           | HT                                  |              | 14.19         |     | 5.60 |              | 7.95          | 7.95          |
|           | <b>Total Bulk Supply</b>            |              | <b>21.19</b>  |     |      |              | <b>11.74</b>  | <b>11.74</b>  |
|           | Temp. Supply                        |              | 1.73          |     | 8.00 |              | 1.38          | 1.38          |
|           | <b>Total Sales within the state</b> |              | <b>268.53</b> |     |      |              | <b>93.78</b>  | <b>115.05</b> |
|           | Outside the state                   |              | 431.21        |     | 2.90 |              | 125.05        | 125.05        |
|           | <b>Total</b>                        |              | <b>699.74</b> |     |      |              | <b>218.83</b> | <b>240.10</b> |



**Public Notice Issued by the EPDS in Sikkim Herald (English Edition)**

**Publication Date : 27<sup>th</sup> February 2015.**

**SIKKIM HERALD** Gangtok, (Friday) February 27, 2015

**Energy and Power Department  
Government of Sikkim  
Gangtok**

Date: 25/02/2015

No. LUPRC/REG&PDR/HCPB-VIG-131038

**PUBLIC NOTICE IN RESPECT OF  
AGGREGATE SIKKIM STATE ELECTRICITY REGULATORY COMMISSION, FOR THE FINANCIAL YEAR 2015-16.**

Notice is hereby published to all consumers & stake holders, that Energy & Power Department, Government of Sikkim a domestic license engaged in the distribution & retail sale of electricity has filed the tariff petition before the Sikkim State Electricity Regulatory Commission, (SERC) for Sikkim State, the Aggregate Reserve Requirement (ARR) & tariff application for distribution & retail sale of electricity for the FY 2015-16 under section 152 of Electricity Act, 2003 & Notification No. 02/SERC/UTR/2012, dated 14.08.2012. The Commission has registered & admitted the petition filed by the Department of Power vide CASE No TR-12014.

The Summary of ARRs for the FY 2015-16 is given in table below:

| Sl. No. | Items of Expenditure            | 2014-15<br>(Est. revised)<br>₹ in Crores | 2015-16<br>(Projected)<br>₹ in Crores |
|---------|---------------------------------|--|---------------------------------------|
| 1       | Cost of fuel                    | 306.14                                   | 295.74                                |
| 2       | Cost of Power Purchase          | 65.62                                    | 71.00                                 |
| 3       | Repairs & Maint.                | 57.46                                    | 54.53                                 |
| 4       | RRR Expenses                    | 2.51                                     | 2.56                                  |
| 5       | Admin & Gen. Expenses           | 32.14                                    | 45.35                                 |
| 6       | Depreciation                    | 71.88                                    | 77.89                                 |
| 7       | Interest Charge                 | 4.04                                     | 4.36                                  |
| 8       | Electricity supplying cost      | 33.52                                    | 33.92                                 |
| 9       | Salaries & PF/Provident         | 0.02                                     | 0.02                                  |
| 10      | Income Tax                      | 496.78                                   | 489.15                                |
| 11      | Total Revenue Requirement       | 0.01                                     | 0.01                                  |
| 12      | LTFS (Net) Provision            | 458.28                                   | 485.91                                |
| 13      | Net Revenue Requirement (11-12) | 99.15                                    | 112.97                                |
| 14      | Revenue from tariff             | 99.15                                    | 112.97                                |
| 15      | Revenue from outside Sale sale  | 243.18                                   | 27.80                                 |
| 16      | Cost of LTFS (12-15)            | 0.00                                     | 0.00                                  |
| 17      | Revenue FY 2012-13              | 0.00                                     | 0.00                                  |
| 18      | Balance FY 2012-14              | 0.00                                     | 221.81                                |
| 19      | Total Revenue (14-18)           | 243.18                                   | 0.00                                  |
| 20      | Revenue Balance carried over    | 0.00                                     | 15.70                                 |
| 21      | Net Revenue Requirement         | 0.00                                     | 0.00                                  |
| 22      | Contingency Asset               | 0.00                                     | 0.00                                  |
| 23      | Energy Sales (MU)               | 245.44                                   | 256.34                                |

1. AT & C losses: The AT & C losses for the year 2015-16 has been projected at 4%.

2. It is proposed to cover the revenue shortfall through additional revenue from proposed tariff revision annually. Copies of the filing & application refer to at para-1 above are available in the following Offices:

(a) Asst. Chief Engineer (HCPB)-Smt. Nidhi Chatterjee (Revenue), Energy & Power Department, Kazi Road Gangtok.

(b) Superintending Engineer (R&C LTFS), Energy & Power Department, Kazi Road Gangtok.

3. If interested parties may discuss the said ARR and tariff proposed and take note thereof during office hours of the above offices on or after 01.03.2015.

4. Copies of above document can also be obtained from the above offices on payment of ₹ 100/- per copy of petition through BSNL account of 3801 Power (HCPB) Gangtok.

5. Summary of tariff rate changes for retail supply of electricity to consumers proposed by the Energy & Power Department, Government of Sikkim for the year 2015-16 are included in the schedule.

6. Optional Suggestions: If any of the AMR, RRR and tariff proposals submitted by the Energy & Power Department, Government of Sikkim, together with supporting materials may be filed with Secretary, Sikkim State Electricity Regulatory Commission, Gangtok-Sikkim 737102 in five copies in person or through registered post so as to reach the Commission on or before 10.03.2015.

7. Copies and Suggestions as above should be supported by an affidavit duly executed by the person on behalf of the petitioner and should be supported by an affidavit duly executed by the applicant if filed on behalf of any Organization or any class of consumers. It should be as per the format given in the schedule. If the supporting documents are not as per the format, it may be specifically mentioned. The supporting documents should be submitted to the SERC on or before 10.03.2015.

8. The SERC, after receiving the written objections received in response to the notification may call for such objections, as it deems appropriate for a hearing on the specified dates, which will be notified by the Commission in due course.

| Sl. No. | Category of consumers     | Existing Rate | Proposed Rate        |      |
|---------|---------------------------|---------------|----------------------|------|
|         |                           | Demand Change | Change % to Existing |      |
| 1       | Domestic Supply (Rural)   | 101           | 50                   | -50% |
| a)      | up to 50 units            | 226           | 226                  | 0%   |
| b)      | 51 to 100 units           | 2318          | 2318                 | 0%   |
| c)      | 101-200 units             | 419           | 449                  | 10%  |
| d)      | 201 to 400 units          | 440           | 470                  | 7%   |
| e)      | 401 & above               | 447           | 477                  | 7%   |
| 2       | Commercial Supply (Rural) |               |                      |      |
| a)      | up to 50 units            | 315           | 303                  | -4%  |
| b)      | 51 to 100 units           | 490           | 520                  | 6%   |
| c)      | 101 to 200 units          | 515           | 545                  | 6%   |
| d)      | 201 to 400 units          | 540           | 570                  | 6%   |
| e)      | 401 & above               | 547           | 577                  | 6%   |

| Sl. No. | Category of consumers                                  | Existing Rate  | Proposed Rate        |     |
|---------|--|----------------|----------------------|-----|
|         |  | Demand Change  | Change % to Existing |     |
| 1       | Commercial Supply (Urban)                              |                |                      |     |
| a)      | up to 50 units   | 315            | 303                  | -4% |
| b)      | 51 to 100 units  | 490            | 520                  | 6%  |
| c)      | 101 to 200 units                                       | 515            | 545                  | 6%  |
| d)      | 201 to 400 units                                       | 540            | 570                  | 6%  |
| e)      | 401 & above  | 547            | 577                  | 6%  |
| 2       | Domestic Charge against standard load 25 KVA and above | 10000/Annually | 11000/Annually       | 10% |
| 3       | Public Lighting (Rural Areas)                          | 250            | 250                  | 0%  |
| 4       | Public Lighting (Urban Areas)                          | 402            | 402                  | 0%  |
| 5       | LTFS (Rural)   |                |                      |     |
| a)      | Up to 500 units  | 225            | 307                  | 37% |
| b)      | 501 to 1000 units                                      | 250            | 332                  | 33% |
| c)      | 1001 & above   | 545            | 626                  | 15% |
| 6       | LTFS (Urban)   |                |                      |     |
| a)      | Up to 500 units  | 425            | 507                  | 20% |
| b)      | 501 to 1000 units                                      | 450            | 532                  | 18% |
| c)      | 1001 & above   | 600            | 676                  | 13% |
| 7       | LTFS (Rural)   |                |                      |     |
| a)      | Up to 500 units  | 225            | 307                  | 37% |
| b)      | 501 to 1000 units                                      | 250            | 332                  | 33% |
| c)      | 1001 & above   | 545            | 626                  | 15% |
| 8       | LTFS (Urban)   |                |                      |     |
| a)      | Up to 500 units  | 425            | 507                  | 20% |
| b)      | 501 to 1000 units                                      | 450            | 532                  | 18% |
| c)      | 1001 & above   | 600            | 676                  | 13% |
| 9       | LTFS (Rural)   |                |                      |     |
| a)      | Up to 500 units  | 225            | 307                  | 37% |
| b)      | 501 to 1000 units                                      | 250            | 332                  | 33% |
| c)      | 1001 & above   | 545            | 626                  | 15% |
| 10      | LTFS (Urban)   |                |                      |     |
| a)      | Up to 500 units  | 425            | 507                  | 20% |
| b)      | 501 to 1000 units                                      | 450            | 532                  | 18% |
| c)      | 1001 & above   | 600            | 676                  | 13% |
| 11      | LTFS (Rural)   |                |                      |     |
| a)      | Up to 500 units  | 225            | 307                  | 37% |
| b)      | 501 to 1000 units                                      | 250            | 332                  | 33% |
| c)      | 1001 & above   | 545            | 626                  | 15% |
| 12      | LTFS (Urban)   |                |                      |     |
| a)      | Up to 500 units  | 425            | 507                  | 20% |
| b)      | 501 to 1000 units                                      | 450            | 532                  | 18% |
| c)      | 1001 & above   | 600            | 676                  | 13% |

PCE cum Secretary  
Energy & Power Department,  
Government of Sikkim  
Gangtok.

R.O. NO. 428/PDR/PUB/Class/14-15/RR, dt. 26/2/2015

**Government of Sikkim  
Social Justice, Empowerment and Welfare Department  
(Welfare Division)**

8th Mile, Tadong, Lumhey  
Gangtok - 737101

Fax No. 03592 - 232120  
Tel No. 03592 - 232120

Date: 23/02/2015

No. 28/SJE&W/D/WD

**NOTIFICATION**

In pursuance of all the previous orders in this regard, the State Government is pleased to constitute the Scheduled Caste Welfare Users as follows:

**Non-Official Members:**

- Shri. Lok Naya Chel, Gangtok, Dist. Sikkim - Member
- Shri. Gopal Yadav, President, SJKS - Member
- Shri. Mani Kumar Rabong, South Sikkim - Member
- Shri. Tara Das, Khatok, West Sikkim - Member
- Shri. Tulana Rai, Lhasang, West Sikkim - Member
- Shri. Kingling Bagdos, North Sikkim - Member
- Shri. Parra Bai - Sookakamo, Solighari - Member

**Official Members:**

- Joint Director, Deputy Secretary - Horticulture & Cash Crops Dev. Deptt. - Member
- Joint Director, Deputy Secretary - Member
- Joint Deputy Secretary - Horticulture - Member
- Joint Deputy Secretary - Horticulture - Member
- Joint Deputy Secretary - Horticulture - Member

Shri. Sarna Chutani, shall be the Chairperson of the Board as already notified vide Notification No. 611/Date/2014 dated 26.01.2014.

By Order and in the Name of the Government:

Sd/-  
(D. K. Jayakumar) IAS  
Principal Secretary,  
Social Justice Emp. & Welfare Deptt.  
File No. 303/1131/WD/2015



## APPENDIX

## TARIFF SCHEDULE – FY 2015-16

**I. DOMESTIC SUPP (DS) Type of**

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 a.c. 430/230 volts, 50 cycles/sec (hz)

**(b) Rates:**

| Units Consumption               | Paisa per kWh (Unit) |
|---------------------------------|----------------------|
| Up to 50                        | 110                  |
| 51 to 100                       | 225                  |
| 101 to 200                      | 345                  |
| 201 to 400                      | 415                  |
| Consumption exceeding 400 units | 440                  |

**(c) Monthly Minimum Charge:**

| Details             | Rate      |
|---------------------|-----------|
| Single Phase Supply | Rs. 40.00 |
| Three Phase Supply  | Rs 200.00 |

**(d) Monthly Rebate (if paid within due date) :** 5% on Energy Charges

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

If electricity supplied in domestic-premises is used for commercial purpose, the entire supply shall be charged under commercial supply.

**Free supply of electricity for consumption up to 100 units applicable to all the domestic consumers in rural areas under Gram Panchayat Unit (GPU) as notified by the Rural Management and Development Department as per clause 1 of Government Gazette Notification No.33/P/GEN/97/PART-V dated 25.11.2014 shall be determined on the basis of assessment recorded through energy meter only and assessment accounted on average basis shall not be entertained for subsidy.**

## **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 a.c. 430/230volts, 50 cycles/Sec (hz)

### **(c) Rate:**

| <b>Consumption range</b>        | <b>Paisa per Kwh (Unit)</b> |
|---------------------------------|-----------------------------|
| Upto 50                         | 330                         |
| 51 to 200                       | 515                         |
| 201 to 400                      | 540                         |
| Consumption exceeding 400 units | 567                         |



|   |  |   |
|---|--|---|
| <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. | <b>Rural Areas</b>                               | <b>Urban Areas</b>                                |
|   | Rs. 60/KVA/Month plus energy charges shown above | Rs. 100/KVA/Month plus energy charges shown above |

If electricity supplied in domestic-premises is used for commercial purpose, the entire supply shall be charged under commercial supply.

**(c) Monthly Minimum Charge:**

| Details             | Rate       |
|---------------------|------------|
| Single Phase Supply | Rs. 200.00 |
| Three Phase Supply  | Rs. 500.00 |

**(d) Monthly within due date) :**  
Charges

**Rebate (if paid)**  
5% on Energy

**(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 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 a.c. 430/230volts, 3 phase/single phase, 50 cycles/Sec (hz)

(b) **Rate:**

| Units Consumption  | Paisa per kWh  |  |
|--|--|--|
|  | Rural  | Urban  |
| Up to 500  | 235  | 480  |
| 501 to 1000  | 420  | 550  |
| 1001 & Above   | 545  | 620  |
|  |  |  |
| <b>Demand Charges</b> – for those establishments whose sanction load is more than 25 KVA & does not have independent transformer but run their unit through shared transformers. | <b>Rural Areas</b>                                   | <b>Urban Areas</b><br><br>Rs. /kVA/Month plus energy charge as shown above |
|  | Rs. 60 /Kva/Month plus energy charges as shown above | Rs. 100/Kva/Month Plus Energy charges as shown above.                      |

(c) **Monthly Minimum Charge:**

|                    |                   |
|--------------------|-------------------|
| <b>Rural Areas</b> | Rs. 60 /KVA/Month |
| <b>Urban Areas</b> | Rs.100 /KVA/Month |

**(d) Monthly Rebate (if paid within due date) :** 5% on Energy Charges

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

#### **IV. HIGH TENSION 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 a.c, 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. 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. In case energy meters are installed on the LT side the assessed energy consumption shall be grossed up by 4% to account for the transformation loss and billed accordingly.

**(b) Rate:**

| <b>Units Consumption</b>                                | <b>Tariff</b>                            |
|---|--|
| Up to 100 kVA: Demand Charges<br>plus<br>Energy Charges | Rs. 175 /kVA/Month<br><br>300 Paisa/Unit |

|  |  |
|--|--|
| 101 to 250 kVA: Demand charges<br>Plus<br>Energy Charges           | Rs. 225/Kva/Month<br><br>348Paisa/Unit   |
| 251 kVA to 500 kVA<br><br>Demand Charges<br>Plus<br>Energy Charges | Rs. 250 /kVA/Month<br><br>396 Paisa/Unit |
| Above 500 kVA Demand Charges<br><br>Plus<br>Energy Charges         | Rs. 475 /kVA/Month<br><br>410Paisa/Unit  |

**(c) Monthly Minimum Charges: Demand Charges**

**(d) Monthly Rebate (if paid within due date): 2% on Energy Charges**

**(e) Annual Surcharge (charge on the gross arrear outstanding every March end): 15**

**V. BULK SUPPLU (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 a.c. 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 Consumptions | Paisa/Unit |
|------------------|------------|
| LT               | 540        |
| HT               | 560        |



**(c) Monthly Minimum Charge:**

| Details            | Tariff                        |
|--------------------|-------------------------------|
| LT (430/230 Volts) | Rs. 150 /kVA of Sanction Load |
| HT (11kV or 66 kV) | Rs. 140/kVA of Sanction Load  |

**(d) Monthly Rebate (if paid within due date):** 2% on Energy Charges

**(e) Annual Surcharge (charge on the gross arrear outstanding every March end):** 15%

**Power Factor Adjustment charges:**

(a) **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 for every 1% drop or part thereof in the average power factor during the month below 95%.

(b) **Power factor rebate:** If the power factor of the consumer's installation in any month is above 95% the consumer will be entitled to a rebate at the rate of 0.5% in excess of 95 % power factor on the total amount of energy charge for that month for every 1% rise or part thereof in the average power factor during the month above 95%

**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 a.c. 230/430 volts, 50 cycles/Sec (hz)

**(b) Rate** Domestic supply rate is applicable

**(i) Up to 100 units** To be billed to Secretary, Rajya Sainik Board

**(ii) 101 and above** To be billed to the Consumer

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

**VII. SUPPLY TO BLIND**

**Type of consumer**

Service connection provided to a house of a family whose head of the family is blind and the same is certified by the National Association for Blinds.

**(a) Nature of service:**

Low Tension a.c. 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) |
|---|----------------------|
| <p><b>Places of worship:</b><br/>                     (i) Having 3 lights points:<br/>                     A) up to 100 units<br/>                     B) Above 101 units</p> |                      |

|  |                                     |
|--|-------------------------------------|
| <p>(ii) Having 4 to 6 lights points.<br/> A) Up to 150 units<br/> B) Above 151 units</p> <p>(iii) Having 7 to 12 points<br/> A) Up to 30 units<br/> B) Above 301 units</p> <p>(iv) Having 13 and more light points<br/> A) Up to 500 units<br/> B) Above 501 units</p> <p><b>A) To be billed to Secretary, Ecclesiastical Department and to be submitted to the head of Department in the District.</b></p> <p><b>B) To be billed to Head of the Place of worship.</b></p> | <p>Domestic rate is applicable.</p> |
|--|-------------------------------------|

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

#### IX. PUBLIC LIGHTING ENERGY CONSUMPTION CHARGES

It has been decided that the electrical energy consumption charges of public lightning street light etc in urban area shall be paid by the Urban Development & Housing Department. Similarly the consumption of electrical energy for street fight etc in rural areas shall be paid by the concerned Panchayat / Rural Management & Development department. The necessary meter/metering equipments shall be provided by the Energy & Power Department and for which the standard (Tariff Schedule) charges is also applicable in accordance with rules and regulations of the Department

#### Rate:

| Category    | Rate          |
|-------------|---------------|
| Rural Areas | 250 Paisa/KWH |
| Urban Areas | 460 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 a.c. 430/230 volts, 50 Hz /H.T. 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 Rs. 10/- (Rupees ten) 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) Rs 50 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             | Rs. 20.00 |
| (b)   | Three phase              | Rs. 60.00 |
| (ii)  | Maximum demand indicator | Rs.175.00 |
| (iii) | Time switch              | Rs.120.00 |

**METERS**

**X III. TESTING OF**

|     |                            |         |
|-----|----------------------------|---------|
| i)  | Energy Meters 1 Ph         | Rs. 150 |
| ii) | Other Metering Instruments | Rs. 250 |

**XIV. DISCONNECTION & RECONNECTION**

|      |                           |           |
|------|---------------------------|-----------|
| (i)  | DS and CS category        | Rs.150.00 |
| (ii) | LTIS, HTS & Bulk category | Rs.250.00 |

Unless otherwise

demand by the Department replacement of meters or shifting the position of meter boards etc, can be entertained exclusively on the specific written request of the consumer against a payment of Rs. 150.00 each time which does not include the cost of requirement and labor and the same will be extra.

**XV. REPLACEMENT OF FUSES**

Service for replacement of fuses in the main cut-outs available against the following Payments:-

|      |              |              |          |
|------|--------------|--------------|----------|
| (i)  | Low tension  | Single phase | Rs.15.00 |
|      |              | Three phase  | Rs.20.00 |
| (ii) | High tension |              | Rs.40.00 |

**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 @ Rs.30.00 per call of such services.

**XVII. SECURITY DEPOSIT**

Security deposit shall be deposited, by the consumer, in the following rates for the meters provided by the Department.

|   |                  |         |           |
|---|------------------|---------|-----------|
| 1 | Electronic Meter | 3 phase | Rs.500.00 |
|---|------------------|---------|-----------|

|   |                        |         |           |
|---|------------------------|---------|-----------|
|   |                        | 1 phase | Rs.200.00 |
| 2 | Electromagnetic Meters | 3 phase | Rs.150.00 |
|   |                        | 1 phase | Rs. 75.00 |

The Security deposit will be forfeited and the line will be disconnected if the consumer tampers the meter. The line will be reconnected only after the fresh security deposit is deposited and other applicable charges are paid.

**XVIII. OTHER CONDITIONS FOR SUPPLY OF ELECTRICAL ENERGY (a) Meter found out of order**

In the event of meter being found out of order (which includes meter ceasing to record, running fast or slow, creeping or running reverse direction) and where the actual errors on reading cannot be ascertained the meter will be declared faulty and the correct quantum of energy consumption shall be determined by taking the average consumption for the previous three months.

If the average consumption for the three months cannot be taken due to the meter ceasing to record the consumption or any other reason, then the correct consumption will be determined based on the average consumption for succeeding 'three months (after installation of meter) where any differences or dispute arise as to the correctness of meter reading or bill amount etc then the matter shall be decided by the concerned Chief Engineer of the department upon the written intimation either from the concerned Executive Engineer or from concerned consumer. However, the bill should be paid on or before the due date. The amount so paid will be considered as advance to the credit of the consumer's account until such time as the billed amount in dispute is fully settled. After determining the correct consumption due billing will be made and necessary adjustment shall be done in the next bill issued. This method shall be applicable to all categories of consumers.

**(b) Defaulting consumer**

The Department shall not give any type of service connection to a defaulting consumer.

**(c) Fixing the position of meter/metering equipment**

During the inspection of Assistant Engineer of the Department the point of entry of supply of mains and position of meter, cut-out/metering equipments etc will be decided and should not be changed later on without written permission from Department,

The Department will in no case fix the meter, main cut-out metering equipments nor allow the same to remain in any position where the employees are prohibited from entering or where there is difficulty of access for employees.

**(d) Notification/application before connection**

The consumer must give not less than 2 months notice before the supply or additional supply is required. In the case of HTIS/LTIS/BS consumers, longer notice which may extend to six months or more may be required to enable the Department to make necessary arrangement for such supply, which will subject to its availability in the system and seven clear days notice shall be given by the Assistant Engineer of the area to the applicant for the Purpose of inspecting the premises and investigating the feasibility of power supply. If service can be affected by extending service line alone, the consumer will be given a written permission from the office of the Assistant Engineer about providing the service connection to his premises.

**(e) Sketch of the premises**

- (i) A neat sketch of the premises should also submit the proposed internal electrification of the building showing the light points, light plug points, power plug points, fan/exhaust fan points, main isolator position, distribution Control system location and other fittings etc.
- (ii) In the case of industrial/workshop etc the consumer should submit a neat sketch showing the location of all E&M equipments and its motor capacity if any etc in addition to the above.

**(f) Load sanction**

Depending on the availability of the quantum of electrical energy in the system, the load shall be sanctioned for all categories of consumers by the authorized officer of



the Department.

**XIX. LAND - free of cost for service connection and other association facilities:**

The consumer shall provide the necessary land to the Department belonging to his/her on free of cost basis and afford all reasonable facilities for bringing in the direct cables or over headlines from the Department's T&D system for servicing the consumers but also cables or overhead lines connecting 'the department's other consumers and shall permit the department to provide all requisite switch gear thereto on the above premises and furnish supply to such other consumers through cables/ overhead lines and terminals situated on the consumer's premises.

**XX. ACCESS TO PREMISES AND APPARATUS**

- (a) If any consumer obstructs or prevents departments authorized officers/employees in any manner, from inspecting his/her premises at any time to which the supply is afforded or where the electrical installations or equipments belonging to the department or the consumers situated in such premises and if there is scope of suspecting any malpractice, the authorized officer; employees of the department may disconnect the power supply forthwith without notice and keep such power supply disconnected till the consumer affords due facilities for inspection. If such inspection reveals nothing to undertake any malpractice or pilferage, the department then restore the power supply to his/he premises.
- (b) If such inspection reveals any commission of malpractice as specified in the "Malpractice clauses mentioned below, this may be dealt as per the relevant clauses which are indicated in the sub-head of malpractice.
- (c) The department shall not be responsible for any loss or damage or inconvenience caused to the consumer on account of such disconnection of supply.

**XXI. INTERFERENCE WITH SUPPLY MAINS AND APPARATUS**

- (a) A consumer shall not interfere with the supply main or apparatus including the metering arrangement, which may have been installed in his/her premises.
- (b) The consumer shall not keep connected to the department supply system if any

apparatus to which the department has taken reasonable objection or which the department may consider likely to interfere or affect injudiciously the department's equipments installed in his/her premises or the Department's supply to other consumer.

- (c) The consumer shall not keep the unbalanced loading of three phase supply taken by him/her from the Department.
- (d) The consumer shall not make such use of supply given to him/her by the department as to act prejudicially to the department's supply system in any manner whatsoever,

## **XXII. MALPRACTICE**

- (i) Contravention of any provision of the terms conditions of supply the Indian electricity Act 2003, the Indian Electricity Rules 1956 or any other law/rule governing the supply and use of electricity regulating order shall be treated as malpractice and the consumer indulging in any such malpractice shall be liable at law/rule/order. Subject to generality as above.
- (ii) Cases mentioned hereunder, shall be generally treated as malpractice:-
  - (a) Exceeding the sanctioned/contract load authorized by the department without the permission of the department.
  - (b) Addition, alteration and extension of electrical installation in the consumer's premises without permission of the department or extension to any premises other than the one for which supply sanctioned/contracted for.
  - (c) Unauthorized supply of electricity to any service which is including the service line disconnected by the Department against electricity revenue arrear or any other offended clauses and the same service line reconnected without permission of the department.
  - (d) Non-compliance of orders in force imposing restriction of use of energy for rational and equitable distribution thereof.
  - (e) Use of electricity for any purpose other than that for which supply is contracted /sanctioned for.
  - (f) Resale of energy without the permission of the department, (g) Theft of energy.
  - (g) Obstruction to lawful entry of authorized officer/employee of the department into

consumer's premises.

- (h) Interfering and tampering with the meter and metering system.

#### **XXIII. PAYMENT OF COMPENSATION FOR MALPRACTICES**

Where a consumer is found to be indulging in malpractice with regard to use of electricity and use of device to commit theft of energy etc. the Assessing Authority of the department will decide about the payment of compensation amount to be imposed against such consumer as per the relevant rules and regulations.

#### **XXIV. INSTITUTION OF PROSECUTION**

Any officer employee authorized to inspect and deal with cases of malpractice and theft of energy may launch prosecution as an aggrieved person as mentioned in section 135 & 150 of the Indian Electricity Act 2003.

#### **XXV. READING OF METER AND PREPARATION OF BILL**

- (a) The meter reading will be taken once in a month. The reading of meter will be recorded by meter reader in a card provided near the meter and open to inspection by consumer. Bill for energy consumption charges will be prepared based on the reading noted in the card.
- (b) Any complaint with regard to the accuracy of the bill the same shall be intimated immediately by the consumer to the Assistant Engineer, who has issued the bill quoting the bill number/ account number date etc.
- (c) If the consumer does not receive the electricity bill he shall inform the Assistant Engineer concerned about the non-receipt of his bill and on such representation, a copy will be supplied to him.

#### **XXVI. 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 no and should quote the consumer no. while corresponding with the department for prompt attention by the department.

**XXX. FUSE CALL**

In case the department's main fuse or fuses fail, the consumer or his representative may give the intimation in the adjacent control room either in person or through phone. Employees bearing the identity cards of the department are allowed to replace those fuses. Consumers are not allowed to replace those fuses and they will render themselves liable to pay heavy penalty if the department's seals are been found broken.

In attending the fuse – off calls. Top most priority will be given to cases of fire due to short circuit, accident, arcing in consumer's main *etc.*

**XXXI. THEFT OF POWER**

Theft of power is a criminal offence under electricity act. Whoever commit the theft of power shall be punishable in accordance with I.E. Act 2003.

**XXXII. SUPPLY WITHOUT METER**

Where a supply to the consumer is given without meter the consumption of Electrical Energy in kWh will be computed in the manner indicated below.

**1. Government office building:**

**Sanctioned load (kW) x 6 hrs x 30 days x 60 /100**

**2. Other Consumers:**

**Sanctioned load (kW) x 8 hrs x 30 days x 60 /100**