



**KARNATAKA ELECTRICITY REGULATORY COMMISSION**

# **TARIFF ORDER 2015**

OF

## **BESCOM**

*(Under MYT Framework)*

ON

**ANNUAL PERFORMANCE REVIEW FOR FY14  
&  
REVISED ARR & RETAIL SUPPLY TARIFF FOR FY16**

**2<sup>nd</sup> March 2015**

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<b>ABBREVIATIONS</b>	
AAD	Advance Against Depreciation
AEH	All Electric Home
ABT	Availability Based Tariff
A&G	Administrative & General Expenses
AG	Accountant General
APDRP	Accelerated Power Development and Reforms Programme
APR	Annual Performance Review
APV	Above Poverty Line
ARR	Annual Revenue Requirement
ATE	Appellate Tribunal for Electricity
ATL	Anti Theft Law
BBMP	Bruhut Bangalore Mahanagara Palike
BEE	Bureau of Energy Efficiency
BJ	Bhagya Jyothi
BMAZ	Bangalore Metropolitan Area Zone
BESCOM	Bangalore Electricity Supply Company
BNC	Billing & Collection
BPL	Below Poverty Line
BRAZ	Bangalore Rural Area Zone
BWSSB	Bangalore Water Supply & Sewerage Board
CAG	Comptroller & Auditor General
CAGR	Compound Annual Growth Rate
CDT	Commission Determined Tariff
CERC	Central Electricity Regulatory Commission
CE	Chief Engineer
CEA	Central Electricity Authority
CESC	Chamundeshwari Electricity Supply Corporation
CGR	Consumer Growth Rate
CGS	Central Generating Stations
CKM	Circuit Kilometre
CMD	Chairman & Managing Director
CPI	Consumer Price Index
CPRI	Central Power Research Institute
CoS	Cost of Service
DA	Dearness Allowance
DC	Direct Connection



DC LINES	Double Circuit Lines
DCB	Demand Collection & Balance
DG PLANT	Diesel Generating Plant
DMS	Distribution Management System
DPR	Detailed Project Report
DRUM	Distribution Reforms, Upgrade & Management
DSM	Demand Side Management
DTC	Distribution Transformer Centre
EC	Energy Charges
EHT	Extra High Tension
EHV	Extra High Voltage
EOU	Export Oriented Units
ERC	Expected Revenue From Charges
ES&D CODE	Electricity Supply & Distribution Code
ESCO	Electricity Service Companies
ESCOMs	Electricity Supply Companies
FC	Fixed Charges
FDSC	Foreign Debt Service Charges
FEC	Fuel Escalation Charges
FAC	Fuel Adjustment Cost
FY	Financial Year
FEV	Foreign Exchange Variation
GESCOM	Gulbarga Electricity Supply Company
GFA	Gross Fixed Assets
GIS	Geographical Information System
Gol	Government of India
GoK	Government of Karnataka
HESCOM	Hubli Electricity Supply Company
HP	Horse Power
HT	High Tension
HV	High Voltage
Hz	Hertz
IDC	Interest During Construction
IP SETS	Irrigation Pump Sets
IPPs	Independent Power Projects/ Producers
KEB	Karnataka Electricity Board
KER Act	Karnataka Electricity Reform Act
KERC	Karnataka Electricity Regulatory Commission

KJ	Kutira Jyothi
KM/Km	Kilometre
KPCL	Karnataka Power Corporation Limited
KPTCL	Karnataka Power Transmission Corporation Limited
KV	Kilo Volts
KVA	Kilo Volt Ampere
KW	Kilo Watt
KWH	Kilo Watt Hour
LDC	Load Despatch Centre
LT	Low Tension
MAT	Minimum Alternate Tax
MD	Managing Director
MESCOM	Mangalore Electricity Supply Company
MFA	Miscellaneous First Appeal
MGHE Station	Mahatma Gandhi Hydro Electric Station
MIS	Management Information System
MNR	Meter Not Recording
MoP	Ministry of Power
MU	Million Units
MUSS	Master Unit Sub Station
MVA	Mega Volt Ampere
MVAR	Mega Volt Ampere Reactive
MW	Mega Watt
MYT	Multi Year Tariff
NFA	Net Fixed Assets
NTPC	National Thermal Power Corporation
O&M	Operation & Maintenance
PCKL	Power Corporation of Karnataka Ltd.,
PFC	Power Finance Corporation Limited
PGCIL	Power Grid Corporation Of India Limited
PKCL	Power Corporation of Karnataka Ltd.,
PLF	Plant Load Factor
POCA	Power Purchase & Other Cost Adjustment
PPA	Power Purchase Agreement
PPCA	Power Purchase Cost Adjustment
PRDC	Power Research & Development Consultants
PTC	Power Trading Corporation
RE	Rural Electrification

RGVY	Rajiv Gandhi Grameena Vidyuth Yojana
R&M	Repair and Maintenance
RLMS	Rural Load Management System
ROE	Return on Equity
ROR	Rate of Return
RTPS	Raichur Thermal Power Station
SC & ST	Schedule Caste & Schedule Tribe
SC LINE	Single Circuit Line
SEB	State Electricity Board
SERCs	State Electricity Regulatory Commissions
SLDC	State Load Despatch Centre
SPV	Special Purpose Vehicle
T&D	Transmission & Distribution
TCs	Transformer Centres
TERI	The Energy & Resource Institute
TPC	Tanirbavi Power Company
TRL	Total Revenue Management
UG CABLES	Underground Cables
VC	Variable Charges
VVNL	Visvesvaraya Vidyuth Nigama Limited
WPI	Wholesale Price Index
YOY	Year on Year

**KARNATAKA ELECTRICITY REGULATORY COMMISSION,  
BANGALORE - 560 001**

**Dated this 2<sup>nd</sup> day of March, 2015**

**Order on BESCOM's Annual Performance Review for FY14 and Revised ARR & Retail Supply Tariff  
for FY16**

**In the matter of:**

**Application of BESCOM in respect of the Annual Performance Review for FY14 and Revised ARR &  
Retail Supply Tariff for FY16 under Multi Year Tariff framework.**

<b>Present:</b>	<b>Shri M.R.Sreenivasa Murthry</b>	<b>Chairman</b>
	<b>Shri H.D.Arun Kumar</b>	<b>Member</b>
	<b>Shri D.B.Manival Raju</b>	<b>Member</b>

**O R D E R**

The Bangalore Electricity Supply Company Ltd., (hereinafter referred to as BESCOM) is a Distribution Licensee under the provisions of the Electricity Act, 2003, and has on 08.12.2014 filed the following applications for consideration and orders:

- a) Approval of the Annual Performance Review for the financial year FY14 and Revision of ARR for FY16.
- b) Approval of the revised distribution and Retail Supply Tariff for the financial year 2015-16 (FY16).

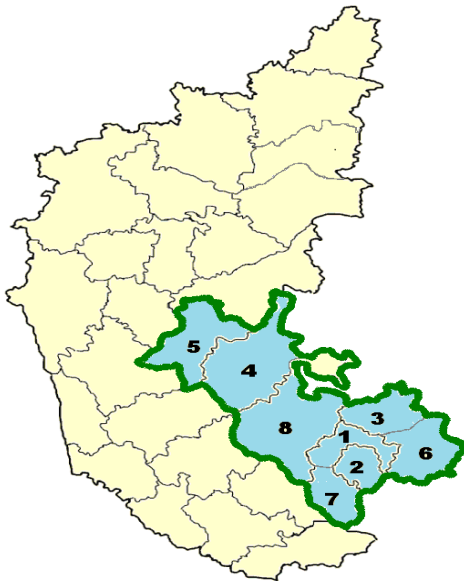
In exercise of the powers conferred under Sections 62, 64 and other provisions of the Electricity Act, 2003, read with KERC (Terms and conditions for Determination of Tariff for Distribution and Retail Sale of Electricity) Regulations 2006, and other enabling Regulations, the Commission has carefully considered the applications and the views and objections submitted by the consumers and other stakeholders. The Commission's decisions are given in this order, Chapter wise.

# CHAPTER – 1

## INTRODUCTION

### 1.0 Brief History of BESCOM:

Bangalore Electricity Supply Company Ltd., (BESCOM) is a Distribution Licensee under Section 14 of the Electricity Act, 2003 (hereinafter referred to as the Act). BESCOM is responsible for purchase of power, distribution and retail supply of electricity to its consumers and also providing infrastructure for open access, Wheeling and Banking in its area of operation which includes eight Districts of the State as indicated below:



1. Bengaluru Rural
2. Bengaluru Urban
3. Chikkaballapura
4. Chitradurga
5. Davanagere
6. Kolar
7. Ramanagara
8. Tumkur

BESCOM is a registered company under the Companies Act, 1956, incorporated on 30<sup>th</sup> April, 2002. BESCOM commenced its operations on 1<sup>st</sup> June, 2002.

At present BESCOM's area of operations are structured as follows:

O&M Zones	O&M Circles	O&M Divisions
Bangalore Metropolitan Area	Bangalore North Circle	Malleswaram Peenya

		Hebbal
		Shivajinagar
	Bangalore East Circle	Vidhanasoudha
		Indiranagar
		Koramangala
	Bangalore South Circle	HSR Layout
		Jayanagar
		Raja Rajeshwarinagar
	Bangalore West Circle	Rajajinagar
		Kengeri
	Bangalore Rural Circle	Nelamangala
		Yelahanka
		Ramanagara
	Ramanagara Circle	Kanakapura
Bangalore Rural Area		Chandapura
		Chikkaballapur
	Kolar Circle	Chinthamani
		Kolar
		KGF
		Tumkur
Chitradurga	Tumkur Circle	Tiptur
		Madhugiri

Davangere Circle

Davangere  
 Harihara  
 Hiriyur  
 Chitradurga

The O & M divisions of BESCO are further divided into one hundred and eighteen sub-divisions with each of the sub-divisions having two to three O & M section offices.

The section offices are the base level offices looking into operation and maintenance of the distribution system in order to provide reliable and quality power supply to BESCO's consumers.

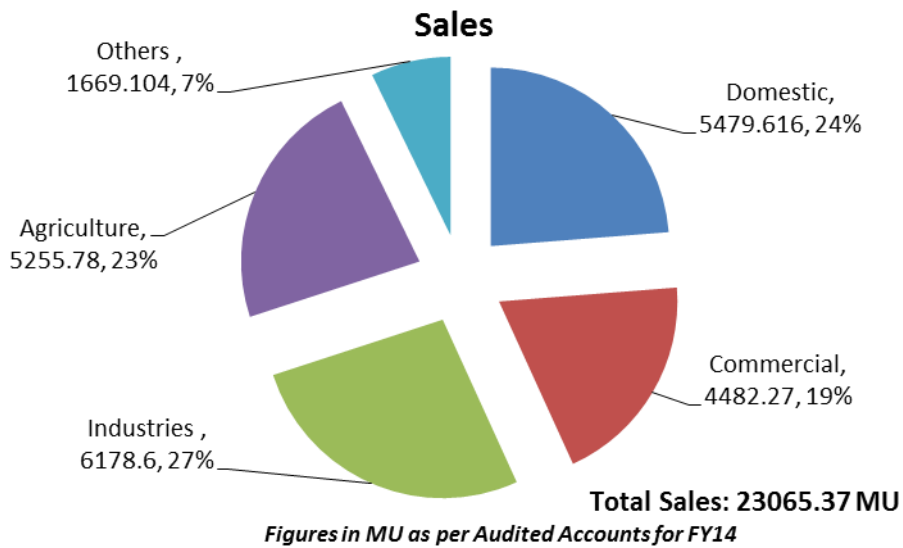
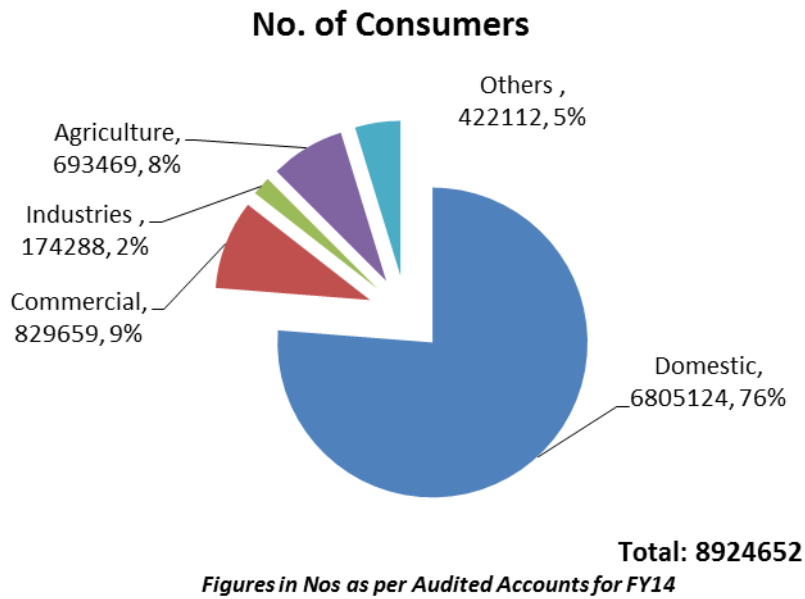
### 1.1 BESCO at a glance:

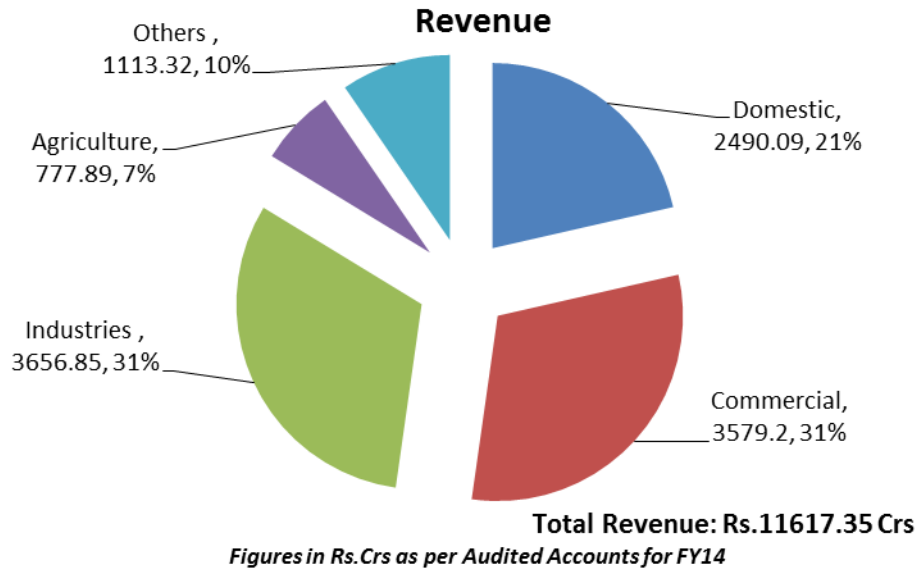
The profile of BESCO is as indicated below:

Sl. No.	Particulars (As on 31-03-2014)		Statistics
1.	Area	Sq. km.	41092
2.	Districts	Nos.	8
3.	Taluks	Nos.	44
4.	Population	lakhs	207.42
5.	Consumers	lakhs	89.25
6.	Energy Sales	MUs	23065
7.	Zone	Nos.	3
8.	DTCs	Nos.	193948
9.	Assets	Rs. in Crores	12615
10.	HT lines	Ckt. Kms	83142
11.	LT lines	Ckt. Kms	158500
12.	<b>Total employees strength:</b>		
A	Sanctioned	Nos.	17592
B	Working	Nos.	12047
13.	Revenue Demand	Rs. in Crores	11617
14.	Revenue Collection	Rs. in Crores	10156



**1.2 Number of Consumers, Sales in MU to the categories of consumers and Revenue details in FY14 are as follows:**





BESCOM has filed its application for approval of Annual Performance Review for FY14, revised Annual Revenue Requirement (ARR) and Retail Supply Tariff for FY16.

BESCOM’s applications, the objections / views of stakeholders thereon and the Commission’s decisions on the approval of Annual Performance Review for FY14, Revision of ARR and the Retail Supply Tariff for FY16 are discussed in detail in the subsequent Chapters of this Order.

## CHAPTER – 2

### SUMMARY OF FILING & TARIFF DETERMINATION PROCESS

#### 2.0 Background for Current Filing:

The Commission in its Tariff Order dated 6<sup>th</sup> May, 2013 had approved the ERC for FY14 to FY16 and the Retail Supply Tariff of BESCO for FY14 under MYT principles for the control period of FY14 to FY16. BESCO in its present application filed on 8<sup>th</sup> December, 2014 has sought approval for the Annual Performance Review (APR) for FY14 based on the audited accounts, Revised ARR for the 3<sup>rd</sup> year of the third control period i.e. FY16 and Revised Retail Supply Tariff for FY16.

#### 2.1 Preliminary Observations of the Commission

After a preliminary scrutiny of applications, the Commission had communicated its observations to BESCO on 12<sup>th</sup> December, 2014. The preliminary observations were mainly on the following points:

- Details to be furnished in formats
- Sales Forecast
- Power Purchase
- O&M Expenses
- Distribution losses
- Capex

BESCO has furnished its replies on 19<sup>th</sup> December, 2014. The replies furnished by BESCO are considered in the respective Chapters of this Order.

## 2.2 Public Hearing Process

2.2.1 As per the Karnataka Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Distribution and Retail Sale of Electricity) Regulations, 2006, read with the KERC Tariff Regulations 2000, and KERC (General and Conduct of Proceedings) Regulations, 2000, the Commission vide its letter dated 30<sup>th</sup> December, 2014 treated the application of BESCOM as petition and directed BESCOM to publish the summary of the Revised ARR and Tariff proposals in the newspapers calling for objections, if any, from interested persons.

Accordingly, BESCOM has published the same in the following newspapers:

Name of the News Paper	Language	Date of Publication
Deccan Herald	English	1/1/2015 & 2/1/2015
Times of India		
Kannada Prabha	Kannada	
Udayavani		

BESCOM's application on APR of FY14, revision of ARR and Tariff for FY16 were also hosted on the web sites of BESCOM and the Commission for the ready reference and information of the general public.

2.2.2 In response to the application of BESCOM, the Commission has received eight statements / letters of objections. BESCOM has furnished its replies to all these objections. The Commission has held a Public Hearing in the Commission's Office on 06.02.2015 at the Court Hall of the Commission in Bangalore. The details of the written / oral submissions made by various stake holders and the response from BESCOM thereon have been discussed in Chapter - 3 of this Order.

### **2.3 Consultation with the Advisory Committee of the Commission**

The Commission has also discussed the proposals of KPTCL and all ESCOMs in the State Advisory Committee meeting held on 25<sup>th</sup> February, 2014. During the meeting the following important issues were also discussed:

- Projection of Power availability for FY16
- Performance of KPTCL / ESCOMs during FY14
- Major items of expenditure of KPTCL / ESCOMs

Members of the Committee have offered valuable suggestions on the proposals. The Commission has taken note of these suggestions while passing the order.

## CHAPTER – 3

### PUBLIC CONSULTATION

#### SUGGESTIONS / OBJECTIONS & REPLIES

- 3.1 The Commission undertook the process of public consultation in order to obtain suggestions/views/objections from interested stake-holders on the Tariff Applications filed by BESCOM. In the written submissions as well as during the public hearing some Stake-holders and public have raised several objections to the Tariff Applications filed by BESCOM. The names of the persons who have filed written objections and made oral submissions are given below:

Sl.No	Application No.	Name & Address of Objectors
1	BA-01	Sri. A. Lokesha, Financial Advisor & Chief Accounts Officer, BWSSB, Bengaluru
2	BA-02	Sri. N.C. Gopinathan, Hon. General Secretary, KASSIA, Bengaluru
3	BA-03	Sri. N.A. Venkatesh, Executive Committee Member, Laghu Udyog Bharathi- Karnataka Bengaluru
4	BA-04	Sri. S Sampathraman, President, FKCCI, Bengaluru
5	BA-05	Sri. Puttasawamy, Sheshdripuram, Bengaluru-20
6	BA-06	Sri. K.C. Gangadharaiiah, Kasaraghatta, Nelamangala Taluk
7	BA-07	Sri. D.M. Kushal Kumar, Nelamangala Taluk
8	BB-01	Sri.Cherian, General Secretary, Koramangala 4 <sup>th</sup> Block Resident's Welfare Association, Bengaluru.
9	AE-01	Farmers from Kolar/Chikkaballapur
10	AE-2	Sri M Subbanna, Bengaluru
11	AE-3	Sri Mekala Eshwara Reddy, President, Yuvasena Social Action Club, Ballari
12	AE-4	Sri B S Raghavendra Rao, Mysuru
13	AE-5	Doddanavar Global Energy Pvt. Ltd., Bengaluru
14	AE-6	Sri C Girisha & others, Anekal
15	AE-7	Sri P B Mahesha, Anekal

In the public hearing held on 06.02.2015 the following persons made oral submission before the Commission. A List of the persons who made oral submissions during the Public Hearing on 06.02.2015 is as under:

<b>SL.No.</b>	<b>Names &amp; Addresses of Objectors</b>
1	Sri Mallappa Gowda & Sri Rajagopal, KASSIA, Bengaluru
2	Sri N. Venkatesh & Sri Lakshmisha, Laghu Udyog Bharati, Karnataka, Bengaluru
3	Sri P.B. Mahesha, Anekal
4	Sri R. Ravi Kumar, Anekal
5	Sri C. Girisha, Anekal
6	Sri T.V. Mohandas Pai, Vice President, B.PAC, Bengaluru
7	Sri Ananda R, Ex-M.C. Member Karnataka State Electrical Contractors Association, Bengaluru
8	Sri Shankar Nesargi, DGEPL, Bengaluru
9	Sri K.C. Gangadharaiah, Bharatiya Kissan Sangha
10	Sri M.R. Ranganatha, Advocate for Bharatiya Kissan Sangha
11	Sri B.S. Sridhara Babu, Advocate for Bharatiya Kissan Sangha, Bengaluru.
12	Sri G.N. Krishnappa, Electrical Contractor
13	Sri Panchakshari Swamy, Nalkanahatty
14	Sri A. Raja Rao, Consumer Care Society, Bengaluru
15	Sri M.L. Ashok, Consumer Care Society, Bengaluru
16	Sri V.S. Arbatti, Advocate for BWSSB, Bengaluru
17	Sri Ravi Krishna Reddy, Aam Aadmi Party
18	Sri Chandrashekar, Sneha Spandana, Bengaluru
19	Sri C.S. Gangadhara
20	Sri Govinda Reddy, Chief Engineer, BSNL, Bengaluru

The above persons have raised several issues concerning (i) Tariff (ii) Quality of power supply and Service (iii) Compliance of Commission's directives (iv) Wheeling & Banking and (v) Certain specific requests. The following are the main objections and comments

received on various issues relating to BESCO's tariff application and the response of BESCO:-

### **3.2 Tariff Related issues:**

- 1) The application is not maintainable as it is not filed 120 days before the commencement of the next financial year as required under the MYT Regulations.

#### **BESCO's RESPONSE:**

Due to non-availability of accurate power purchase details, BESCO was compelled to seek extension of time limit from the Commission. The Commission vide its letter dated 03.12.2014 directed BESCO to file APR for FY14 and revised ARR/Tariff application for FY16 on or before 12th December, 2014. BESCO has filed its petition for tariff revision for FY16 on 08.12.2014.

- 2) BESCO has not produced the auditor's report along with Profit and Loss accounts. BESCO has not addressed the irregularities noticed by the Comptroller and Auditor General of India.

#### **BESCO's RESPONSE:**

At the time of filing, draft Accounts of FY14 were filed before the Commission. Later, full report of the Annual Accounts of FY14 was made available to the Commission. The observations made by the Comptroller and Auditor General of India on the Accounts of BESCO have been addressed by the Board and submitted to the Commission.

- 3) The depreciation of assets is not in line with the judgment of Hon'ble ATE in Appeal Nos. 34, 36 of 2014 and 84 of 2006. BESCO has not furnished reasons for the depreciation claimed at Rs.1850.10 Crores.

#### **BESCO's RESPONSE:**



BESCOM's Accounts are being drawn as per the Companies Act.

- 4) As per the judgment of the Hon'ble ATE in SIEL Ltd Vs PSERC, BESCOM should have juxtaposed tariff revision of each class of consumer's cost of supply, subsidies and cross subsidies.

**BESCOM's RESPONSE:**

BESCOM has, in its filing vide page No. 29, tabulated the cross subsidy level approved by the Commission and the actual amount received.

- 5) BESCOM has not filed the petition as per the chapter 2, Clause 2.8, of the MYT Regulations and failed to furnish the perspective plan, depreciation, advance against depreciation as required under Regulations. Further, BESCOM has failed to furnish the data of past two years preceding the base year as per Clause 3.10 of the Regulations.

**BESCOM's RESPONSE:**

BESCOM has filed the petition in accordance with the MYT Regulations and furnished the details as required. BESCOM will provide other details on request.

- 6) BESCOM has purchased short term power of 296.85 MU at Rs.163.27 Crores and medium term power of 9578.97 MU at Rs.499.01 Crores resulting in higher power purchase cost, although the overall quantum of power purchased is less than the approved levels. BESCOM should have entered into long term contracts through transparent bidding process rather than going in for short term purchase of power. The short term power purchase by BESCOM above the cap fixed by the Commission needs to be rejected.

**BESCOM's RESPONSE:**

Short term power purchase is brought down to 3893.37 MU in FY14 as against 7637.53 MUs in FY13. Short term procurements are through online bidding process.

- 7) BESCOM has shown a gap of Rs.2062.66 Crores for FY16 which includes Regulatory assets of Rs.342.16 Crores of FY13. The Regulatory assets of Rs.342.16 Crores of FY13 should not be carried forward to the third control period. A deficit of Rs.839.88 Crores claimed for FY14 should not be considered during the revision of tariff for FY16.

**BESCOM's RESPONSE:**

There is a gap of Rs.840 Crores for FY14 as against the approved costs. It is the Commission's Order to carry the regulatory asset of FY13 to future years in two equal installments. The 1<sup>st</sup> installment along with the carrying cost is now proposed to be recovered through Tariff revision in FY16. For FY16, it is projected that the Power purchase cost will increase by 8 paise per unit when compared to FY14. Employee cost will increase by 2 paise, Administrative and General Expenditure and Depreciation is projected to increase by 1 paise each and interest and finance charges to increase by 4 paise. This translates to increase in the expenditure by 16 paise per unit. Commission approved an average tariff of Rs.5.36 per unit for the year FY15 but actual revenue as at the end of November, 2014 shows average realization at Rs.5.19 per unit. Thus there is a deficit of 17 paise. This translates to a gap of 34 paise per unit for FY16.

- 8) The deficit for FY16 is stated to be Rs.880.60 Crores, but, BESCOM has not mentioned the amount of arrears to be recovered from local bodies and has failed to collect arrears from the consumers and reduce its losses. If the GoK pays the arrears, there would be no gap for FY16. The Commission is increasing the tariff every year to ensure that, no ESCOM will make losses, in spite of which, BESCOM has estimated a loss of Rs.880.60 Crores for FY16 and sought 80 paise increase in tariff which is objectionable. The collection efficiency of BESCOM has to be increased from 94% to 100%.

**BESCOM's RESPONSE:**

In BESCOM filing, the demand increase is indicated at 5.85%, collection rate for FY14 has increased to 7.21%. This indicates, collection efficiency has increased by 1.36%. The collection of revenue is not the parameter for determination of the tariff. The distribution loss is at 13.89% which is within the band width of loss approved by the Commission.

- 9) The Voltage wise tariff and cost of supply to each category needs to be adopted instead of average cost of supply considered at present.

**BESCOM's RESPONSE:**

The details as desired by the Commission for the purpose of determination of voltage class wise cost, data and calculations are placed before the Commission for validation and for needful action.

- 10) In the current filing there are several mismatches in formats A2 and A3 and the same needs thorough scrutiny.

**BESCOM's RESPONSE:**

The error is regretted. Bank balance in A-2 and A-3 now depict Rs.380.12 Crores.

- 11) The IP set consumption based on the segregated feeders for April, 2014 to September 2014 shows significant variations Viz, 87.2 units per month in some divisions and 5301.60 units per month in other divisions.

**BESCOM's RESPONSE:**

No comments.

12) The transmission charges indicated in format D1 is Rs.10835.85 Crores, but in the proposal for APR of FY14 it is shown as 10848.20 Crores. Also, the power purchase including the transmission charges shown in D1 and Annexure-2 are different.

**BESCOM's RESPONSE:**

The total cost of generation and power purchase including transmission is Rs.12311.88 Crores.

13) No study is initiated to make a comparative analysis of the electricity tariff in other neighbouring States and the tariff in Karnataka is high compared to other States.

**BESCOM's RESPONSE:**

The Tariff comparison with other States cannot be made as type of generators and fuel mix is different for different States.

- 14) BESCOM has not objected to the tariff proposal of KPTCL due to an understanding between BESCOM and KPTCL thereby violating the Condition No. 29.2 of the terms of license.

**BESCOM's RESPONSE:**

BESCOM has raised objections for KPTCL's tariff proposal.

- 15) The O&M cost claimed is found to be 115% more than the approved figures and no explanation is furnished. BESCOM has failed to control its O&M expenses, Rs.319.28 Crores out of Rs.1126.58 Crores is shown as other expenses. The O&M expenses worked out on normative basis should not be considered as it does not conform to industry standards. The cost needs to be justified based on the industry benchmark and as a percentage of the capital installations. BESCOM needs to have 10 years business plan with all projected costs (Capex and Opex).

**BESCOM's RESPONSE:**

O&M expenses approved by the Commission in the tariff order dated 06.05.2013 was based on the data available at the time of the Order. Now the projections are made by using the same formula with the updated data. The O&M expenses is determined by the Commission as per the approved formula duly taking into consideration the Consumer Price Index (CPI), Whole Sale price index (WPI) consumer growth rate (CGI) and BESCOM's efficiency factor of 1%.

16) As per the Tariff Policy, the tariff to be fixed should be within +/- 20 % of the "Cost to Serve". Since the cost to serve of BESCOM has not been approved by the Commission, it is not possible to verify whether the proposed tariff is within limits.

**BESCOM's RESPONSE:**

The Hon'ble Appellate Tribunal for Electricity has directed the State Commission to indicate category wise cross subsidy with reference to voltage wise cost of supply in Appeal No.42/2014. This is only a tool to fix the tariff to the different category of consumers. However, the tariff determined by the Commission to the industrial consumers, is almost +/- of 20% of Average Cost of Supply.

17) BESCOM has not furnished the details as to whether the peak load has reduced after the implementation of the ToD tariff. If the peak load has not reduced, then the Commission may consider making it optional.

**BESCOM's RESPONSE:**

Fixing of ToD meters is to encourage/discourage the consumers to use energy at off peak/peak hours. i.e., to encourage the consumers to shift the load from peak hours to non-peak hours. Hence, it may not be cancelled.

18) BESCOM's Consumer Security Deposit is capitalized pursuant to the State Government's order. BESCOM should not claim RoE for the same and it should not be allowed in ARR. The consumer deposits should be paid interest on quarterly basis and the bills should indicate the amount of deposit. As per the order of the Commission, the consumer deposits are to be given interest at the PLR of SBI, but, BESCOM is giving only 8.25 % interest.

**BESCOM's RESPONSE:**

As per KERC Security Deposit Regulations - 2005, interest on security deposit is payable as per bank rate. As per the definition of bank rate as narrated in the said Regulation "Bank Rate" means the Bank Rate as notified by Reserve Bank of India".

19) Since the gap between the supply and demand is increasing day by day, the Government has to consider alternative sources of generation with small gestation period to fill the gap instead of purchasing high cost power on short term basis. The low cost power from Hydel and thermal sources are to be utilized at optimum level and PLF of KPC thermal plants needs to be improved.

**BESCOM's RESPONSE:**

At present, BESCOM is functioning as a distribution Company in the State. KPCL is vested with the generation of power in Thermal and Hydro power projects. As of now BESCOM do not have any plans to set up its own generating stations.

20) BESCOM has failed to explain the deviations in capital expenditure incurred over the approved capex and the capital expenditure has not been subjected to Prudence check by the Commission.

**BESCOM's RESPONSE:**

The details of deviation of the expenditure incurred during the FY2014 are as follows:

The budget approved in MYT under Ganga Kalyana and service connection head was Rs.25 Crores. Since, the Gangakalyana works and water supply schemes are Government programmes, these works have to be taken up on priority to achieve the target fixed by GoK. The target fixed by GoK under Ganga Kalyana scheme for FY14 was around 6000 numbers. Along with regular service connection works, 4648 numbers of water supply installations have been serviced during FY14. Hence Rs.123 Crores have been incurred during FY14.

As and when new 66/11 KV stations are established by KPTCL, BESCO has to take up evacuation work of new 11 KV/OH/UG line works and link lines on priority, to take the load on the Sub-station and to bifurcate the overloaded feeders in order to maintain uninterrupted power supply to the consumers.

Providing additional DTCs/ Enhancement of DTCs are taken up on top priority, to reduce the load of the over loaded transformers, to avoid failure of the transformers and to provide uninterrupted power supply to the prospective consumers.

The projection of Rs.370 Crores was made for FY14 under the head NJY phase I & II. However in FY14, 110 feeders have been commissioned and Rs.138 Crores has been incurred. Further, remaining 208 feeder works will be taken in FY15 under spill over works.

The Commission is conducting prudence check of capital works every year.

21) BESCO had to pay interest for delayed payment made to generators as the receivables from other ESCOMs have not been realized in time. Such interest for delayed payment made to generators should not be passed on to the consumers.

**BESCO's RESPONSE:**

BESCO has not furnished its response.

22) The subsidy for BJ/KJ installations should be claimed as per the actual meter reading instead of estimating the consumption.

**BESCO's RESPONSE:**



BESCOM is claiming the subsidy based on the actual metered consumption of BJ/KJ installations.

23) KPCL & KPTCL are not being managed efficiently and they have failed to reduce transmission losses and unearth theft of electricity. The salary of the employees is very high as compared to that of Govt. employees and they enjoy additional benefits like bonus, surrender/ encashment of earned leave, medical reimbursement etc. Proper Auditing, monitoring, evaluation, supervision and compliance are required to improve the system in these organizations. Even though the Commission had not approved the money spent on employees Bonus, welfare fund and advertisement, the BESCOM is trying to pass this burden on the consumers which is not proper.

**BESCOM's RESPONSE:**

BESCOM has brought down the distribution loss level to 13.81% in the year FY14. This loss level is within the band width of trajectory of loss levels fixed by the Commission.

Pay and allowances of the employees are governed by the policy of the Government.

24) The tariff has been increased 6 times in five years and it has increased the burden on the farmers, small traders and small scale industries.

**BESCOM's RESPONSE:**

Tariff revision for FY16 is very much necessary, as there is a carried gap to an extent of Rs.611 Crores for FY13. Rs.342 Crores is apportioned by the Commission for FY16 as per the Order dated 12.05.2014. Actual accounts of FY14 are now finalized. Per unit power purchase cost is Rs.3.50 per unit as against the approved purchase cost of Rs.3.21 per unit. This increase in power purchase cost translates to Rs.542 Crores. This is uncontrollable expenditure. For farmers, the Government of Karnataka is bearing the tariff for Irrigation

pump sets, and tariff fixed to the below poverty line is being fixed by the Commission at 50% of average cost of supply.

25) The Commission has been approving 73% to 77% of the projected power purchase cost in the past years. If, similar policy is adopted for projected power purchase cost for FY16, there would be no need to revise the tariff.

**BESCOM's RESPONSE:**

The suggestion of the petitioner is not tenable as 25% reduction in power purchase may result in reducing the hours of power supply to consumers. BESCOM's power purchase cost for FY16 has increased only by 2% over the actual power purchase cost of FY14.

26) The solar water heater rebate should be increased to Rs.100/- to encourage installation and use of solar water heaters and the proposal of BESCOM to withdraw solar water heater rebate, needs to be rejected.

**BESCOM's RESPONSE:**

The rebate should be discontinued to the consumers having solar water heaters.

27) Abundant wind and solar energy is to be utilized for compensating shortage of power.

**BESCOM's RESPONSE:**

Not much of installed capacity of solar power is available for compensating the shortage of power. BESCOM is encouraging solar roof top PV plants where the consumer is getting paid for the energy pumped to the grid as per the tariff determined by the Commission.

28) Use of CFL or LED bulbs instead of incandescent bulbs to illuminate Mysore Palace will save power.

**BESCOM's RESPONSE:**

Replacing incandescent bulbs by CFL or LED bulbs has to be taken up by respective authorizes. BESCOM can only request its consumers to switch to LED and CFL bulbs. This in turn reduces consumption of consumers

29) Heavy amount is being spent on improving the Office and on luxury items like furniture, computer, mobile phones, etc. The walkie-talkie procured recently by spending crores of rupees is rendered wasteful as none of the instruments is working.

**BESCOM's RESPONSE:**

Purchases are made only after getting administrative approvals.

30) For new layouts, it is provided in Clause 3.2.3 of Conditions of Supply that the developers have to carry on the works on self-execution basis. In reality, the Officers are recognizing new layouts as unauthorized layouts and providing electricity supply, causing loss to the Company.

**BESCOM's RESPONSE:**

BESCOM is providing power supply connection as it is very essential for dwelling houses.

31) Tenders for procurement of material are being finalized at a price of 20% more than bid price by illegal methods.

**BESCOM's RESPONSE:**

Procurement is made as per rules.

### **3.3 Quality of power supply and Service**

32) BESCOM has not indicated steps taken to improve its efficiency in distribution business which could have been transferred as efficiency gains to the consumers.

**BESCOM's RESPONSE:**

BESCOM has taken several steps to improve its efficiency in distribution business like, segregation of feeders, installing RMUs for uninterrupted power supply, HVDS, Distribution automation System (DAS), monitoring of feeder level interruptions, 24x7 call center for attending to consumer complaints and implementing standards of performance etc.,. The gains from lesser interruptions, quick service and reliability of power supply would benefit the consumers directly.

33) Pilferage and unauthorized use of electricity should be curbed. Old equipment should be replaced by new ones to reduce losses.

**BESCOM's RESPONSE:**

In FY14, about 33,125 No. of installations were inspected and about 6,312 installations were back billed for the misuse of tariff.

34) Reasons for loss are unscientific extension of lines and installation of transformers. In Chandapura Division, Rs.500 lakhs has been spent on installing transformers for less than 66 HP installations and extending lines. Transformers with 25 KVA capacity are being installed. Installation of transformers of 63 KVA or 100 KVA capacity will reduce the cost.

**BESCOM's RESPONSE:**

The extension of lines and installation of transformers are carried out as per the standards specified in Conditions of Power Supply and Grid Code. Installation of 25 kVA transformers and extending HT line is taken up to reduce the HT / LT ratio as well as to improve the HVDS penetration to the distribution Network to reduce losses.

35) BESCOM has not initiated any action to introduce pre-paid meters as per Section 47 (5) of the Electricity Act, 2003.

**BESCOM's RESPONSE:**

Presently, BESCOM is installing and commissioning 3525 Prepaid meters (Card Technology) on pilot basis to temporary installations in Indiranagar Division.

36) People are suffering due to distribution transformers not being maintained, low voltage and load shedding. The farmers are forced to bear the cost of repair of the transformers as BESCOM is not repairing or replacing the failed transformers within 72 hours.

**BESCOM's RESPONSE:**

BESCOM is taking all necessary steps to improve its maintenance of distribution system with good voltage and quality power supply, and Standards of Performance (SoP) is implemented and action is being taken as per SoP. Any specific issues may be brought to the notice of the concerned O&M subdivision, Division and Circles and at company level.

37) When a complaint is lodged by the consumer, a complaint number has to be issued immediately/automatically. A proper monitoring needs to be taken up to redress the complaints in time.

**BESCOM's RESPONSE:**

The consumer complaints can be given on telephone No.1912 and by SMS through 9243150000 and the complaint will be registered and a complaint number will be given to the consumer.

38) Measures should be taken for optimum utilization of power from all generators, reduction of T&D losses & prevention of theft and misuse and installation of meters to all consumers.

**BESCOM's RESPONSE:**

The allocation of power from different generators to ESCOMs is done by GoK. BESCOM's distribution loss for FY14 is 13.89% and it is within the band of distribution loss approved by the Commission. BESCOM has a vigilance wing headed by a Superintendent of Police, having vigilance and police personnel specially set up to look into electricity theft.

39) BJ connections are being given to rich people instead of poor, which should be avoided.

**BESCOM's RESPONSE:**

The BJ consumers are selected by the Government and as per the list provided by the Government, BJ connections are arranged.

40) Transformers should be removed from foot-paths.

**Response:** As Consumers do not provide space in their premises, BESCOM has installed transformers on foot-paths.

### **3.4 Compliance of Commission's directives**

41) BESCOM has not shown any seriousness in complying with the directives of the Commission viz., HVDS, DSM in agriculture, DTC metering, reduction of distribution losses, reducing HT: LT ratio, energy audit, improving reliability, implementation of SBU, reducing accidents, metering of IP sets and BJ/KJ, 100% metering of installations and installing time switches for street lights.

**BESCOM's RESPONSE:**

Under HVDS, the 66 feeders of Tumkur division are taken up for implementation of the scheme and BESCOM is working out a plan on reducing the cost of estimates by utilizing the released assets. As regards DSM in agriculture, M/s EESL has submitted the DPR for Pavagada taluk and the methodology is under discussion. Further, 114967 DTCs are metered out of 205925 and the metering for the remaining DTCs is in process. Energy audit of 25 towns is being carried out. Ring fencing of the subdivisions is in progress. 42 out of 2109 of hazardous locations/installations are rectified as on November, 2014.

All villages and hamlets having population of 100 and more are electrified. However, to make optimum usage of RGGVY under 12th Plan, BESCOM is carrying

out survey to identify the beneficiaries. Providing Time Switches to the street lights is the responsibility of the BBMP and other local authorities and BESCO can assist the Local body to carry out the same.

42) The unscheduled load shedding without the approval of KERC has adversely affected the industries and it is requested to take suitable action against in the matter.

**BESCO's RESPONSE:**

Scheduled load shedding is informed to the consumer. Unscheduled load shedding which may be due to system constraints and inadequacy in generation availability is also displayed in the website of BESCO.

43) The progress of NJY is very poor and BESCO has not quantified the improvements achieved in rural areas after implementation of NJY.

**BESCO's RESPONSE:**

In Niranthara Jyothi Yojana in Phase - I, 271 feeders have been commissioned. The Phase-II of NJY project is in progress.

Third party report on Niranthara Jyothi Yojana is attached as part of filing.

44) The enumeration of the IP sets and regularization of unauthorized IP sets has not been taken up seriously by BESCO and consumer indexing and GPS mapping has not been completed.

**BESCO's RESPONSE:**

The number of IP installations as on September, 2014 is 708150 and the enumeration of IP sets is conducted regularly. Consumer indexing in BMAZ will be completed after incremental assets are updated in the system and in BRAZ and CTAZ area, 98% of consumer indexing is completed.

45) The Earlier RLMS in BESCOM area is to be subjected to technical audit.

**BESCOM's RESPONSE:**

BESCOM will be submitting compliance to the CAG report on RLMS to the Government.

46) Metering all the categories of consumers is to be made mandatory and subsidy is to be disallowed without submission of measured data. Direct subsidy to farmers is to be implemented.

**BESCOM's RESPONSE:**

Metering all categories is being taken up before providing connections. In the case of metering Irrigation pump sets, BESCOM could not fix meters due to protest from the farmers.

47) It is suggested to scrap the NJY as it is not beneficial. Instead, un-restricted three phase power supply is to be extended to all feeders.

**BESCOM's RESPONSE:**

Niranthara Jyothi project is to segregate the Irrigation pumps from the existing rural feeders with an aim to provide 24 hours supply to non-IP consumers.

### **3.5 Wheeling & Banking**

48) Open access facility should be extended to consumers with less than 1 MW demand.



**BESCOM's RESPONSE:**

As per the provisions of Open Access regulations, at present only consumers with 1 MW and above contract demand are eligible for open access.

- 49) Cross subsidy charges levied on wind projects in the State should be discontinued as wind power cannot be traded in open market and should be supplied within the State. The ESCOMs are claiming the demand charges in the bills as well as factoring in the ARR calculations. Wind power should not be considered as open access power and cross subsidy is to removed for wind power and demand charges to be deleted.

**BESCOM's RESPONSE:**

Removal of cross subsidy surcharge will affect the utility in two ways – loss of financial revenue when the consumers temporarily migrate out of the grid and a sudden rise in demand when consumers return to the grid. Owing to the increase in fixed charges in transmission and distribution business, BESCOM had requested the Commission to reintroduce cross subsidy surcharge during FY12. The cross subsidy surcharge has been calculated as per the formula given in National Tariff Policy. Hence, Open Access Consumers who use the transmission and distribution network should bear the cost of network plus losses besides paying cross subsidy surcharge.

**3.6 Specific requests:**

- 50) BWSSB has a social obligation to provide water to all categories of citizens of BBMP area which includes 27% of BPL and EWS consumers. The Power tariff at present accounts for 64% of the revenue of BWSSB and it is the single largest item of its expenditure. The proposed hike will result in further increase of its expenditure. Water tariff charged by BWSSB being the highest in the country, it may not be possible to increase the water tariff any further. Hence, it is requested to continue with the present tariff structure.

**BESCOM's RESPONSE:**

BESCOM's major expenditure is towards power purchase cost which amounts to nearly 85%, the balance is the operational and other costs. The actual average cost of power purchase was Rs.3.88 per unit for FY14 as against the approved rate of Rs.3.62/unit. BESCOM has projected the Power Purchase cost for FY16 at an Average power purchase cost of Rs.3.97/unit i.e., 2% increase. Also, the gap in revenue for FY16 is estimated at Rs. 880 Crores. To fill the gap as well as to procure power from all sources of generation to cater to the requirement of the consumers, the tariff needs to be revised upwards for water supply schemes also.

Tariff revision for FY16 is very much necessary, as there is a carried over gap to an extent of Rs.611 Crores for FY13, of which Rs.342 Crores is apportioned by the Commission to the year FY16 as per the Order dated 12.05.2014. Truing up proposed in APR of FY14 is Rs.839 Crores and a gap of Rs.881 Crores is estimated for FY16. The increase in tariff is required as the power purchase cost is increasing year on year.

51) KASSIA has requested that the tariff of software companies should be under commercial category, as they have higher paying capacity.

**BESCOM's RESPONSE:**

The power re-classification of the tariff category is vested with the Commission.

52) Sri Puttaswamy and others have suggested that, a consumer/farmer representative is to be made member of BESCOM's Board to address the issues relating to the consumer and farmers.

**BESCOM's RESPONSE:**

The distribution companies are wholly owned by GoK and the government is appointing the Board members.

53) KASSIA has requested for independent feeders for the industries to reduce the interruptions.

**BESCOM's RESPONSE:**

There are independent feeders for the industries in Industrial areas and BESCOM is trying to provide independent feeders wherever possible for industrial clusters.

54) KASSIA has submitted that, the energy intensive industries like foundries, forging shops, steel mill, blow-moulding and heat treatment shops in Karnataka are not able to compete with the neighboring States due to higher cost of power and hence need reduction in tariff.

**BESCOM's RESPONSE:**

The Cost of power is increasing year on year and Power purchase cost accounts for 85% to 90% of the annual revenue requirement of BESCOM. This being the case, the tariff reduction would be difficult.

55) Laghu Udyog Bharathi has requested that the proposal of BESCOM to charge commercial tariff for the residential premises with offices in a portion of the same premises needs to be rejected.

**BESCOM's RESPONSE:**

An inspection drive was initiated in Bangalore's Cubbonpet and Nagarthpet area, wherein nearly 800 cases of misinterpretation of tariff category were found.

Extending domestic tariff to the portion of a house is misunderstood by the public as well as the concerned Authorities. Providing subsidized tariff (below average cost of supply) to these high yielding commercial activities are burdening the other consumers. Hence, it is appropriate to categorize these professional activities as commercial and the consumer

who desires to carry out such business in their residence may need to have separate meter under commercial tariff.

56) Koramangala 4<sup>th</sup> Block Residents Association has requested that the tariff for Domestic category should not be increased.

**BESCOM's RESPONSE:**

The increase in tariff is required as the power purchase cost is also increasing year on year.

**During the Public Hearing, the following additional issues were raised:**

- 1) The proposal of BESCOM to implement ToD during morning 6.00 Hrs to 10.00Hrs should not be considered.
- 2) Introduce incentives to LT installation being converted into HT installations, as the maintenance of Distribution transformer and its loss is borne by consumers.
- 3) Distribution Automation System (DAS) project is inordinately delayed and the interest on account of the delay should not be passed on to the consumers.
- 4) As directed by the Commission, BESCOM is not conducting consumer interaction meetings at regular intervals and is not inviting consumers/consumer Associations for such meetings.
- 5) Introduce pre-paid meters for all the industries.
- 6) Cross subsidy should be reduced as per the provisions of Electricity Act, 2003 and Tariff Policy. Bills issued to consumers should indicate the amount of cross subsidy paid by such consumers.
- 7) The subsidy should be given only to genuine farmers.
- 8) BESCOM should establish a power trading team and use hydro energy for meeting the peak loads.
- 9) Tariff slabs should be reduced to 2 to 3 only.
- 10) There are glaring errors in the parameters like, capex, loans and advances, sundry receivables and working capitals.

- 11) The Petition is not filed in accordance with the provisions of Companies Act and the decision of Hon'ble ATE in Appeal No.108/2010 in so far as preparation of Accounts is concerned.
- 12) The 3 phase power supply to IP sets should be provided during day time instead of night to avoid electrical accidents.
- 13) The defunct bore wells should not be considered for estimating the IP set consumption.
- 14) Voltage fluctuation is the reason for failure of distribution transformers and BESCO is not replacing such failed transformers within the time stipulated in SoP.
- 15) The O&M expenses and employee cost is very high despite shortage of group C&D staff.
- 16) The load forecasting should be revised every year and submitted to the Commission. BESCO should carry out energy forecasting to meet 24x7 Hrs power supply.
- 17) Reliability index in urban areas is as high as 99.33% whereas in some rural areas it is shown as 62.1%. Though the reliability index is calculated at 11kV feeder level, the LT line reliability is not computed.
- 18) BSNL has requested to treat it as industry and change its tariff category from LT3 to LT5.
- 19) The first slab in Domestic category tariff should be increased to 100 Units from the existing 30 Units.
- 20) There is discrimination in tariff for IT/BT companies [LT2 (b)] and cyber cafés [LT3].
- 21) Financial powers delegated to lower officers of BESCO for procurement of emergency items are misused for purchase of mobile phones, furniture etc.,. The vehicles owned by the officers/employees of BESCO are hired for the use of service center in benami names.
- 22) The fixed charges for availing temporary power supply should be removed. The term of temporary power supply should be increased to two years. The temporary connections should be billed monthly.
- 23) BESCO has not indicated the fine collected from the IT service provider M/s Infosys for poor performance.
- 24) The consumer deposit details should be displayed in the monthly bill.
- 25) Applying LT5 tariff to floriculture is not proper.
- 26) Paying guest accommodation should be charged under commercial category instead of domestic tariff.

- 27) Bills are not being issued to Nurseries even though BESCO is required to issue bills once in three months.
- 28) There is a large variation in the distribution losses among O&M divisions. This needs to be checked by independent auditors.
- 29) The Commission should introduce performance based incentive system for all O&M divisions. The periodical assessment of performance and recording and recognizing the outstanding performance is necessary.
- 30) The bare wires, exposed distribution transformer and outdated switchgears on the foot paths should be removed.
- 31) Since, the PPA between UPCL and BESCO is not approved by the State Commission. The cost incurred for power purchase from un-approved sources should not be passed on to the consumers.
- 32) Several members of the public and organizations like FKCCI have expressed the view that assessment of consumption by ESCOMs as supply made to IP sets is exaggerated, and a part of the commercial losses including deficient billing of power supplied to consumers and un-authorized use / theft of power is possibly included in the quantum of energy assessed as IP set consumption. They have urged that measures should be put in place urgently for ensuring a more accurate assessment of IP sets energy consumption as well as detection of commercial and technical losses in the area of each ESCOM.

### **3.7 COMMISSION'S VIEWS:**

The stake-holders have raised several issues concerning the filing of application, compilation of accounts by ESCOMs, classification of tariff, improving the distribution efficiency including reduction of losses etc., The Commission is of the view that most of these issues are dealt with in the Chapter dealing with Directives and compliance elsewhere in this Order. Views of the Commission on the issues raised pertaining to Tariff related matters are summarized below:

**Regarding the non-maintainability of the Petition as the application is not filed within 120 days before the commencement of the next financial year:**

BESCOM has filed its petition for tariff revision for FY16 on 8<sup>th</sup> December, 2014 within the time limit extended by the Commission. The Commission relies on the observation made by the Hon'ble Appellate Tribunal for Electricity (ATE), in the Case reported in 2010 ELR (APTEL) 0175 that "if the Licensee is unable to file ARR petition due to some reasons, it will not be proper to say that the application has to be rejected. What could be done in such situation is that the carrying cost can be denied and not the revenue recoverable for the period of delay". In the present case, the revenue requirement sought is from 1<sup>st</sup> April, 2016 and therefore, the time taken by BESCOM for filing the application will not adversely affect the consumers' interest and hence the petition is maintainable.

**Regarding BESCOM not producing the auditor's report along with Profit and Loss accounts and Balance Sheet etc.,**

The Commission had observed this aspect in its preliminary observations and has received the Profit & Loss Accounts and the Balance Sheet of BESCOM duly audited by the Comptroller & Auditor General of India. For the purpose of approving the ARR, the Commission has relied on the audited accounts submitted by BESCOM.

**Depreciation claims not being made as per the Orders of the ATE:**

The Depreciation claims are being regulated as per the MYT Regulations keeping in view the various Orders of the Hon'ble ATE.

**Regarding indicating tariff of each class of consumer's cost of supply, subsidies and cross subsidies as per the Orders of the Hon'ble ATE:**

The Commission has kept in view the Orders of the Hon'ble ATE in Appeal No. 46 of 2014 and has indicated the consumers' cost of supply and the cross subsidy for FY16 in the relevant chapter of this Order.

**BESCOM has not filed the petition as per the chapter 2, clause 2.8, of the MYT Regulations:**

BESCOM has filed the application for revision of ARR for FY16 which is the third year of the Control period. The points raised by the objector are relevant in so far as filing of an application at the beginning of the Control Period is concerned.

**Regarding Purchase of short term power by BESCOM resulting in higher power purchase cost:**

As the availability of power through the long-term sources is inadequate to meet the State's energy and peak demand, the ESCOMs are purchasing the short-term power for meeting the peak and energy shortages. These purchases are being made through competitive bidding duly complying with the provisions of the Electricity Act.

**Regarding carry forward of Regulatory Asset to the third Control Period:**

In the Commission's Order dated 12<sup>th</sup> May, 2014, it was decided to treat a part of the deficit as Regulatory Asset, to be recovered over the next two years i.e. FY16 and FY17. Hence out of Rs.611 Crores, a part of the regulatory asset set by the Commission in its tariff order dated 12<sup>th</sup> May, 2014 has to be included in the ARR of FY16. As per Orders of the Hon'ble ATE in OP No.1/2011 dated 11.11.2011, the Regulatory Asset can be carried forward for a maximum of three years. Also, after undertaking the Annual Performance Review (APR) based on audited accounts, the net deficit or surplus has to be carried forward to the next ARR.

**Regarding improving the collection efficiency of BESCOM to reduce the Gap in Revenue:**

The accumulation of arrears from water supply and street light installations will not affect the working results of the Company. However, timely recovery of these arrears will result in better cash flows, enabling the Company to discharge its current liabilities. Nevertheless, the Commission notes with concern, the huge accumulation of arrears from water supply and street light installations in BESCOM and direct BESCOM to pursue the matter with the Government to recover the same at the earliest.



**Adoption of Voltage wise tariff and cost of supply to each category:**

The Commission has been adopting the average cost of supply to determine the retail tariff. Adoption of Cost to Serve concept requires capturing the data in respect of demand of each category of consumers in a scientific manner. The distribution network of Karnataka is such that, it is difficult to segregate the common cost between voltage levels. It has been the Commission's endeavor to reduce the cross subsidy gradually and to introduce the Cost to Serve concept at an appropriate time. However, as directed by the Hon'ble ATE, the Commission has indicated the variations in the levels of cross subsidies in respect of various categories of consumers and would ensure gradual reduction of cross subsidies as contemplated in the Electricity Act and the Tariff Policy of the Government of India.

**Several Mismatches in A-2 and A-3 Formats:**

The figures furnished by the Licensees are scrutinized thoroughly before the issue of Orders by the Commission.

**Variations in IP set consumption based on the segregated feeders:**

The Commission is considering the actual consumption recorded in the feeders predominantly feeding to the IP set Consumption pending the completion of feeder segregation work. The Commission is not accepting abnormal variations in the specific consumption and wherever the specific consumption has shown a decreasing trend, the same has been adopted, instead of adopting a higher specific consumption proposed by BESCO. The Commission has also directed the ESCOMs to compute the IP set consumption based on the actual meter reading data from the segregated feeders, once the segregation work is completed.

**The Difference in transmission charges and Power purchase indicated in format D1 and Annexure-2.**

The figures shown in different formats are validated by the Commission, before the approval of the ARR.

**Analysis of the electricity tariff in other neighboring States and the tariff in Karnataka:**

The Reply furnished by BESCO is in Order.

**BESCOM has not objected to the tariff proposal of KPTCL due to an understanding between BESCOM and KPTCL:**

BESCOM has filed objections against KPTCL's APR for FY14.

**O & M cost to be applied as per Industry Norms**

The O & M expenses are being regulated as per the MYT Regulations issued by the Commission, which are based on the formula indicated in the Regulations. Hence, they cannot be regulated by industry norms.

**Regarding non-approval of BESCOMs "Cost to Serve" and limiting the tariff to plus or minus 20% of the cost of supply.**

The Tariff Policy states that tariff should be within the range of +/- 20% of the average cost of supply. But due to difference in average cost of supply for different consumer categories, bringing tariff in line with the Tariff Policy norms of +/- 20% has to be achieved in a phased manner which, otherwise may result in sudden heavy burden to some of the Consumers.

The distribution network of Karnataka is such that, it is difficult to segregate the common cost between voltage levels. However, average cost is determined by the Commission in the Tariff Order.

**Results of implementation of the ToD tariff:**

Reply furnished by BESCOM is in order. However, BESCOM should demonstrate whether the introduction of ToD concept has really helped in shifting the demand and if so to what extent.

**Capitalisation of Consumers' Deposit and Interest payable on Consumers' Deposit:**

The Commission has not allowed any interest on the Capitalised consumers' deposit in this order. The rate of interest payable is as per Section 47(4) of the Electricity Act, 2003, and interest equivalent to Bank Rate as on 1<sup>st</sup> April of the relevant financial year is being allowed as per the provisions of the Regulations.

**Tariff of UPCL determined by CERC and not by KERC:**

The UPCL is an inter-state power producing company, with PPA with another State for selling part of the power produced by it. Hence, as per the Electricity Act, CERC is the Appropriate Commission for determination of tariff of UPCL.

**Setting up of generation plants with small gestation period by the Government:**

It is a policy decision to be taken by the Government of Karnataka.

**BESCOM to explain the deviations in the Capex over approved capex:**

BESCOM has explained the reasons for the variations in Capex. Also, the Commission is conducting prudence check of the capex before allowing interest and depreciation on the capitalized assets.

**Payment of interest on delayed payment of Power purchase:**

The Commission is not allowing any interest on the delayed payment of power purchases in the ARR. The Commission is allowing only the interest on working capital as per the norms prescribed in the MYT Regulations.

**Subsidy on consumption of BJ/KJ installations as per actual:**

Reply furnished by BESCOM is in order.

**KPC & KPTCL are not being managed efficiently and they have failed to reduce transmission losses and unearth theft of electricity:**

The O & M expenses, which include salaries and allowances of employees, are being regulated as per MYT Regulations. The licensees are adhering to loss reduction targets set by the Commission.

**Increase in tariff burdening the farmers and Traders:**

BESCOM's reply is in order.

**Approval of power purchase cost at reduced levels:**

The power purchase cost constitutes about 80% of the total ARR and the same being uncontrollable expenditure, has to be allowed as per the actuals. As the power purchase mix is changing every year due to limited availability of hydel resources, the costs of power purchase would vary year on year depending upon the mix of power purchase from different sources.

**Increase in Solar water heater rebate up to Rs.100.**

The incentive is introduced to encourage more number of people to use solar water heaters. The Commission considers that there is no case for increasing the solar water heater rebate.

**Use of wind and solar energy to compensate shortage of power:**

BESCOM's reply is in order.

**Use of CFL and LED bulbs instead of incandescent Bulbs:**

BESCOM's reply is in order.

**Spending heavy amounts on furniture, computers mobile phones, walkie-talkies etc. resulting in wasteful expenditure:**

BESCOM's reply is not satisfactory. Though the expenses on furniture, computers and mobile phone are essential for running the operations, it has to make efforts to identify wasteful expenditure, if any, and avoid such expenses in order to prevent burden on the consumers who are paying these expenses through tariff.

**Providing Power supply to un-authorized layouts:**

The supply of power to the owners and occupants of any premises is mandatory as per the Electricity Act.

**Procurement of materials at prices above the bid price.**

Though BESCOM has indicated that the procurement is being made as per rules, it should ensure that the prices paid are reasonable as compared to other ESCOMs/ other States in the southern region, to ensure that the materials are not purchased at a premium. The Commission would also keep an oversight while carrying out prudence check of capital expenditure.

**Steps to improve efficiency in distribution business:**

BESCOM's reply is in order.

**Curbing unauthorized use and replacing old equipments.**

BESCOM's reply is in order.

**Unscientific extension of lines and installing low capacity transformers, resulting in losses:**

BESCOM's reply is in order.

**Introduction of pre-paid meters:**

As per BESCO's reply prepaid meters are being installed in Indiranagar Division on a pilot basis. The Commission is of the view that pre-paid meters should be encouraged as it will ensure prompt collection of revenue to BESCO. The Commission would consider issuing a suitable directive on this issue after examining the results of the pilot project.

**Registering consumers' complaints by a number:**

The reply of BESCO is in order. BESCO has introduced a system of registering complaints over phone and through SMS which is working satisfactorily. However, suggestions, if any, to improve the present system may be made to BESCO, by the consumers.

**Measures for optimum utilization of power and minimization of Losses:**

Though BESCO has furnished the necessary reply, the Commission is of the view that currently, the energy accounting and auditing at the division and sub-division levels needs to be strengthened by installing boundary meters and conducting DTC wise energy audit to identify pilferage or higher loss level in specific areas. The concept of SBU needs to be introduced in all the divisions to bring in financial accountability for the energy drawn by each of the division/subdivision.

**BJ Connections given to rich people:**

BESCO has furnished necessary reply to this issue raised.

**Removal of transformers from foot paths:**

BESCO has stated that since consumers are unable to provide space, the transformers are being installed on foot paths. The Commission is however concerned about the safety of human and other lives, which are exposed to high risk due to installing transformers on foot paths. Though BESCO has pleaded its inability to remove all the transformers from the foot paths, it should evolve strategies to minimize the risk to the human lives due to placing the transformers in foot paths and other public places by designing and installing

more compact transformers and structures and undertaking prompt and strict maintenance of transformers.

**Non-compliance of Commission's directives on HVDS, DTC metering etc.:**

BESCOM has furnished necessary reply to this issue raised.

**Unscheduled Load shedding adversely affecting industry:**

Though BESCOM has furnished reply, it should endeavor to ensure that the consumers in general and the industry in particular are not adversely affected due to scheduled and un-scheduled load shedding and also improve its communication mechanism to make it more useful to the consumers'

**Poor progress in execution of NJY works:**

BESCOM shall take suitable measures to complete all the phases of NJY works with a view to ensure quality and reliable power supply to domestic and irrigation consumers in rural areas.

**Non-completion of IP sets metering and un-authorized IP sets, consumer indexing etc.:**

BESCOM's reply is in order. However, Commission is of the view that after the survey and consumer indexing work is completed, it should conduct energy audit of all the DTC meters and report the results thereon on a regular basis. The Commission would consider fixing a time line for this.

**Technical Audit of RLMS works:**

BESCOM has furnished reply to this issue raised.

**Make metering to all installations mandatory and link subsidy to farmers to metering of IP sets:**



BESCOM has furnished replies on this point. However, the Commission considers that the GoK may take a policy decision on linking the release of subsidy to metering of IP sets in the State.

**Scrapping of NJY scheme:**

BESCOM's reply is in order.

**Open Access to consumers of less than one MW:**

BESCOM's reply is in order.

**Discontinuation of cross subsidy for Wind projects:**

BESCOM's reply is in order.

**BWSSB's request to continue the present tariff:**

BESCOM's reply is acceptable.

**KASSIA's request to treat software companies under commercial category:**

The classification of IT/BT companies as industry is as per the policy decision of the Government of Karnataka to encourage them.

**Making consumer's / farmer's representative as a Board Member of BESCOM to address their issues:**

This is a policy issue to be decided by the Government of Karnataka.

**Providing independent feeders for industry-Request of KASSIA:**

BESCOM has furnished acceptance reply on this point.

**Request of KASSIA to reduce tariff to make industry more competitive:**

The Commission is of the view that industry should not be burdened with ever increasing tariffs. Hence, BESCOM should strive to manage its operations more efficiently with the objective of reducing the overall costs.

**Laghu Udyog's request to charge commercial tariff to residences partly used as offices:**

BESCOM's reply is in order.

**Koramangala Residents request not to increase tariff of domestic consumers:**

Due to increase in cost of supply, the increase in tariffs inevitable in larger interests of all the stakeholders. Hence, it is not feasible to exclude any particular class of consumers from tariff increase.

**3.8 Response to objections raised during Public Hearing:**

BESCOM has furnished replies to the objections raised during the public hearing held on 6<sup>th</sup> February, 2015. Most of the issues raised by the objectors are covered under the replies and commission' views discussed above.

The Commission has also taken note of these objections while deciding on the tariff revision in this order.

In the matter of assessment of power consumption by irrigation pump sets, the Commission had asked the ESCOMs to meter the consumption of IP sets on a sample basis and compare the data obtained from DTC meters catering predominantly or exclusively to IP sets. More recently the Commission had asked the ESCOMs to base their assessment by recording the power supplied to exclusively agricultural feeders which have been now separated from the composite rural feeders under the feeder segregation programme

called Niranthara Jyothi Yojana (NJY). This approach would enable reasonable assessment of consumption by IP sets.

## **CHAPTER – 4**

### **ANNUAL PERFORMANCE REVIEW FOR FY14**

#### **4.0 *BESCOM's Application for APR for FY14:***

BESCOM, in its application dated 8<sup>th</sup> December, 2014, has sought approval of its Annual Performance Review (APR) for FY14 based on the Audited Accounts for the year.

The Commission in its letter dated 12<sup>th</sup> December, 2014 had communicated its preliminary observations. BESCOM, in its letter dated 19<sup>th</sup> December, 2014 has furnished its replies to the preliminary observations of the Commission.

The Commission in its Multi Year Tariff (MYT) Order dated 6<sup>th</sup> May, 2013 had approved BESCOM's Annual Revenue Requirement (ARR) for FY14 – FY16. Further, in its Tariff Order dated 12<sup>th</sup> May, 2014, the Commission had approved the APR for FY13 and had revised the ARR for FY15 along with Retail Supply Tariff for FY15.

The Annual Performance Review for FY14 based on BESCOM's Audited Accounts is discussed in this Chapter.

#### **4.1 *BESCOM's Submission:***

BESCOM has submitted its proposals for revision of ARR for FY14 based on the Audited Accounts as follows:

**TABLE – 4.1**  
**Revised ARR for FY14 – BESCO's Submission**  
Amount in Rs.Crs.

Sl. No	Particulars	As Filed
1	Energy @ Gen Bus	27928
2	Energy @ Interface in MU	26786
3	Distribution Losses in %	13.89%
	<b>Sales in MU</b>	
4	Sales to other than IP & BJ/KJ	17776.21
5	Sales to IP & BJ/KJ	5289.16
	<b>Total Sales</b>	<b>23065.37</b>
	<b>Revenue at existing tariff in Rs Crs</b>	
6	Revenue from tariff and Misc. Charges	10736.90
7	Tariff Subsidy	812.78
	<b>Total Existing Revenue</b>	<b>11549.68</b>
	<b>Expenditure in Rs Crs</b>	
8	Power Purchase Cost	9782.24
9	Transmission charges of KPTCL	1053.61
10	SLDC Charges	0
	<b>Power Purchase Cost including cost of transmission</b>	<b>10835.85</b>
11	Employee Cost	814.06
12	Repairs & Maintenance	51.66
13	Admin & General Expenses	159.95
	<b>Total O&amp;M Expenses</b>	<b>1025.67</b>
14	Depreciation	185.1
	<b>Interest &amp; Finance charges</b>	
15	Interest on Loans	353.49
16	Interest on Working capital	63.24
17	Interest on belated payment on PP Cost	0
18	Interest on consumer deposits	179.79
19	Other Interest & Finance charges	9.77
20	Less interest & other expenses capitalised	38.95
	<b>Total Interest &amp; Finance charges</b>	<b>567.34</b>
21	Other Debits	-25.01
22	Net Prior Period Debit/Credit	-187.74
23	RoE	105.4
24	Provision for taxation	4.95
25	Funds towards Consumer Relations/Consumer Education	1.00
26	Other Income	205.94
	<b>Revised ARR</b>	<b>12306.62</b>

27	Regulatory asset	82.94
28	<b>Net ARR</b>	<b>12389.56</b>

Considering the revenue of Rs.11549.68 Crores against a net ARR of Rs.12389.56 Crores, BESCOM has reported a gap in revenue of Rs.839.88 Crores for FY14.

#### 4.2 BESCOM's Financial Performance as per Audited Accounts for FY14:

An overview of the financial performance of BESCOM for FY14 as per their Audited Accounts is given below:

**TABLE – 4.2**  
**Financial Performance of BESCOM for FY14**

Amount in Rs. Crs.		
Sl. No	Particulars	FY14
	<b>Receipts</b>	
1	Revenue from Tariff and misc. charges	10804.48
2	Tariff Subsidy	812.87
3	<b>Total Revenue</b>	<b>11617.35</b>
	<b>Expenditure</b>	
4	Power Purchase Cost	9649.14
5	Transmission charges of KPTCL	1053.61
6	SLDC Charges	0.00
7	<b>Power Purchase Cost including cost of transmission</b>	<b>10702.75</b>
8	O&M Expenses	968.29
9	Depreciation	126.18
	<b>Interest &amp; Finance charges</b>	
10	Interest on Loans	151.69
11	Interest on Working capital	202.20
12	Interest on belated payments on PP Cost	3.09
13	Interest on consumer deposits	179.79
14	Other Interest & Finance charges	9.76
15	Less interest and other expenses capitalised	38.95
16	<b>Total Interest &amp; Finance charges</b>	<b>507.58</b>
17	Other Debits	-28.14
18	Net Prior Period Debit/Credit	-30.67
19	Additional Tariff Subsidy (True up) from GoK as per KERC Order	-524.53
20	Exceptional items	43.50
21	Other income	228.66
22	Income tax	4.95
	<b>Net ARR</b>	<b>11541.25</b>

As per the Audited Accounts, BESCO has earned a profit of Rs.76.10 Crores for FY14. The profits / losses reported by BESCO in its audited accounts in the previous years are as follows:

**TABLE – 4.3**  
**BESCO's Accumulated Losses**

Particulars	Amount in Rs.Crs
Accumulated losses as at the end of FY10	(350.88)
Profit earned in FY11	0.20
Profit earned in FY12	118.14
Loss incurred in FY13	(432.77)
Profit earned in FY14	76.10
<b>Accumulated losses as at the end of FY14</b>	<b>(589.21)</b>

As seen from the above table, the accumulated losses are Rs.589.21 Crores.

**Commission's analysis and decisions:**

The Annual Performance Review for FY14 has been taken up duly considering the actual expenditure as per the Audited Accounts against the expenditure approved by the Commission in its Tariff Order dated 6<sup>th</sup> May, 2013. The item-wise review of expenditure and the decisions of the Commission thereon are as discussed in the following paragraphs:

**4.2.1 Sales for FY14:**

The Commission, in its Tariff order dated 6<sup>th</sup> May, 2013, had approved total sales of 24978 MU to various consumer categories for FY14 as against BESCO's projected sales of 25387 MU. The actual sales of BESCO for FY14, as per their APR filing is 23065 MU, indicating a shortfall in sales to an extent of 1912 MUs as compared to the approved sales.

The Commission notes that, as against approved sales of 19146.51 MU to categories other than BJ/KJ and IP sets categories, the actual sales achieved by BESCO is 17776.21 MU, indicating a shortfall in sales by 1370.30 MU. Further, BESCO has sold 5289.16 MU to BJ/KJ and IP categories as against approved sales of 5831.09 MU resulting in reduced sales by 541.93 MU to these categories. The actual share of sales to categories other than BJ/KJ and IP sets categories is 77.07% as against the estimated share of 76.65% resulting in 0.41% increase in share to these categories, while the actual share of sales to BJ/KJ and IP sets categories has decreased by the same percentage. The Commission notes that the categories other than IP Sets categories, contributing to the reduction in sales are LT -2(a) (275 MU), LT-3 (136 MU), HT Industries (474 MU) and HT Commercial (569 MU) and the sales to IP sets has decreased by 538 MU.

The Commission notes that in the year FY14, as per the actuals, sales to categories other than BJ/KJ and IP sets categories, has grown at a rate of 5%, while the remaining categories have shown negative growth rate of 10%, with the overall growth rate at 1%.

The reasons for reduction in sales have been explained by BESCO as under:

- a. The reduction in HT sales is due to increase in wheeled energy, which was 43 MU in FY12 has increased to 648.38 MU in FY14 and the present growth rate in wheeling is about 38-40%.
- b. Increased growth rate in wheeling is due to increased energy charges, relaxed law in captive generation to group captive consumers and drastic reduction in cross subsidy surcharge

BESCO has therefore, requested to increase the demand charges for HT categories rather than increasing the energy charges. Further, BESCO has requested to relieve ESCOMs from universal obligation to supply to HT consumers who participate in wheeling and to charge temporary tariff for backup/standby energy supplied to avoid cherry picking.



In this regard, the Commission is of the view that, Section 43 of the Electricity Act, 2003 mandates all distribution licensees to supply electricity on an application by owner or occupier of any premises and Section 42(2) of the said Act mandates Open Access, which are binding. As regards, the backup/standby charges, the same is governed by the Open Access Regulations issued by the Commission and any upward revision as sought by BESCO would be against the spirit of open access provided under Section 42(2).

#### **4.2.2 Sales to IP Sets:**

The Commission had approved a specific consumption of IP Sets as 8284 units/installation/annum for FY14, whereas the specific consumption arrived at on the basis of the actual consumption reported by the BESCO works out to 7795 units/installation/annum which indicates a decrease in the specific consumption of 489 units/ installation/ annum. The IP set consumption reported for FY14 by the BESCO was 5238.10 MU as against 5775.89 MU sales quantities approved by the Commission. The difference in consumption between the approved and the actual was 537.79 MU. Thus, the quantum of sales to IP Sets category had decreased by 537.79 MU to that of approved by the Commission in FY 14.

Further, the Commission had approved 7,12,727 as the number of installations which would be serviced in FY14; whereas the actual numbers of installations reported by the BESCO were 6,91,785 only. The difference in number of installations was 20,942.

The Commission had raised the issue of decrease in specific consumption and sales to IP Sets category with BESCO in its preliminary observations. BESCO has stated that, consumption of IP sets has decreased when compared to the approved figures due to the fact that restricted power supply was provided on exclusive agricultural feeders segregated under NJY scheme and further the number of installations serviced was also less than the projected for FY 14. During the validation meeting also, the BESCO has reiterated the same and requested the Commission to approve the sales for FY14 as furnished to the Commission.

It is noted that the shortfall in sales IP sets for FY14 can be attributed to the fact that the BESCO has not serviced as many IP sets as it had projected.

The category wise sales approved by the Commission in its tariff order 2013 and the actuals for FY14 are indicated below:

**TABLE – 4.4  
APPROVED & ACTUALS SALES FOR FY14**

<b>Category</b>	<b>Approved in T.O 2013</b>	<b>Actuals</b>	<b>Difference</b>
LT-2a*	5557.97	5282.49	275.48
LT-2b	41.13	36.32	4.81
LT-3	1673.34	1536.91	136.43
LT-4b	6.16	4.89	1.27
LT-4c	5.55	3.59	1.96
LT-5	1161.90	1109.44	52.46
LT-6	504.80	467.07	37.73
LT-6	418.48	394.45	24.03
LT-7	135.01	147.76	-12.75
HT-1	521.18	612.92	-91.74
HT-2a	5543.38	5069.15	474.23
HT-2b	3424.99	2855.68	569.31
HT-2c	0	89.68	-89.68
HT-3a & b	6.37	9.22	-2.85
HT-4	129.56	109.75	19.81
HT-5	16.69	46.90	-30.21
<b>Sub total</b>	<b>19146.51</b>	<b>17776.21</b>	<b>1370.30</b>
BJ/KJ	55.20	51.06	4.14
IP	5775.89	5238.10	537.79
<b>Sub total</b>	<b>5831.09</b>	<b>5289.16</b>	<b>541.93</b>
<b>Grand total</b>	<b>24977.60</b>	<b>23065.37</b>	<b>1912.22</b>

\*Includes BJ/KJ consuming more than 18 units/month

In the light of the above discussion the Commission approves the actual sales of 23065.37 MU for FY14.

#### 4.2.3 Distribution Losses for FY14:

##### BESCOM's Submission:

The Commission had approved distribution loss for FY14 as shown in the table below:

Range	FY14
Upper limit	14.00%
<b>Average</b>	<b>13.80%</b>
Lower Limit	13.60%

BESCOM has reported a loss level of 13.89% in its annual accounts.

1	Energy at Interface Points in MU	26786
2	Total sales in MU	23065
3	Distribution losses as a percentage of input energy at IF points	13.89%

#### Commission's analysis and decision:

The distribution losses of 13.89% reported by BESCOM are within the range of distribution loss approved by the Commission for FY14. Hence BESCOM is not entitled / liable for any incentive /penalty for FY14.

#### 4.2.4 Power Purchase:

##### 1. BESCOM's POWER PURCHASE FOR FY14

The Commission in its Tariff order dated 6<sup>th</sup> May, 2013 had approved source wise quantum and cost of power purchase for FY14. BESCOM, in its application for Annual Performance Review has submitted the details of actual power purchase for FY14, as follows:

**TABLE – 4.5**  
**BESCOM's POWER PURCHASE FOR FY 14**

Sources	Actuals			Approved		
	Energy in MU (Million Unit)	Total Cost (Crs)	Cost per Kwh (Rs/Kwh)	Energy in MU (Million Unit)	Total Cost (Crs)	Cost per Kwh (Rs/Kwh)
KPCL Hydel Stations	4032.58	203.71	0.51	3966.34	234.28	0.59
KPCL-Thermal Stations	7308.54	2821.53	3.86	8701.91	3247.04	3.73
Total	11341.11	3025.24	2.67	12668.25	3481.32	2.75
CGS	6156.98	1850.54	3.01	6978.67	2066.85	2.96

Major IPPs	3883.62	1676.03	4.32	4636.73	1918.15	4.14
IPPs -Minor (NCE Projects)	3160.71	1130.16	3.58	3080.74	1094.20	3.55
Other States Projects	10.64	0.88	0.83	0.00	0.00	0.00
Short /Medium term	4012.93	1947.63	4.85	2800.43	1290.95	4.61
Section 11	11.56	6.51	5.63	0.00	0.00	0.00
UI Charges	-119.56	-21.25	1.78	0.00	0.00	0.00
Banked Energy	0.00	4.03	0.00	0.00	0.00	0.00
Transmission Charges System	0.00	1295.98	0.00	0.00	1053.80	0.00
Operating Charges (I)	0.00	13.21	0.00	0.00	9.33	0.00
Energy Balancing	-529.79	-230.33	4.35	0.00	0.00	0.00
PCKL Rev Exp	0.00	4.09	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>27928.21</b>	<b>10702.75</b>	<b>3.83</b>	<b>30164.82</b>	<b>10914.80</b>	<b>3.62</b>

#### **Commission's analysis and decisions;**

The actual power purchase for FY14 as filed by BESCO for approval of Annual Performance Review is 27928.21 MU amounting to Rs.10702.75 Crores as against the approved quantum of 30164.82 MU amounting to Rs.10914.60 Crores. This represents reduction in quantum of power purchase to an extent of 2236.61 MU and cost by Rs.2857.58 Crores.

On an analysis of the source-wise approved and actual power purchases, the following deviations in quantum of energy and its cost of purchase are found:

- i. As against the approved quantum of 30164.82 MU the actual power purchased by BESCO is 27928.21 MU for FY14, indicating a short fall of 2236.61 MU which is 7.41% of the approved quantum.
- ii. This shortfall in Power Purchase is mainly due to the reduction in sales by 1912.22 MU.
- iii. The reduction in sales is reflected in reduced purchase of energy.
- iv. The shortfall from Thermal stations has been made good from Short term/Medium term power purchases.

- v. Further, BESCO has incurred PGCIL charges of Rs.242.37 Crores which has resulted in an increase in rate per unit by 8 Paisa.
  - vi. In addition, BESCO has incurred Rs.125.39 Crores towards short claims in energy balancing of previous years resulting in an increase in per unit cost by 4 Paisa.
  - vii. All these factors including the change in the source wise mix of supply and reconciliation of energy and its cost among ESCOMs have resulted in increased average power purchase cost of BESCO at Rs.3.83 per KWh as against the approved rate of Rs.3.62 per KWh leading to an overall increase by Rs.0.21 per unit.
2. The Status of Receivables and payable for the energy exchange between ESCOMs, as per the reconciled statement, is as follows.

Name of the ESCOM	BESCO's				Net Payables (-) Receivables (+) of BESCO
	Payable		Receivable		
	Energy in Mus	Amount in Crs.	Energy in Mus	Amount in Crs.	Amount in Crs
GESCO	0	0	814.68	382.46	382.46
HESCO	0	0	2114.4	675.13	675.13
MESCO	-345.31	-126.04	457.84	137.3	11.26
CESC	0	0	687.87	133.31	133.31
<b>TOTAL</b>	<b>-345.31</b>	<b>-126.04</b>	<b>4074.79</b>	<b>1328.2</b>	<b>1202.16</b>

- i. It is seen from the above table that, as on 31<sup>st</sup> March, 2014, BESCO has to receive a net amount of Rs.1202.16 Crores from other ESCOMs. The Commission notes that, for settlement of inter - ESCOM Power Purchase dues, no mechanism has been put in place. It is therefore directed that BESCO should move the Government to effect necessary adjustments in the tariff subsidy payable to ESCOMs and ensure that there are no inter-ESCOM payments outstanding in the Account.
- ii. BESCO is also directed to reconcile the inter ESCOM energy exchanges and its costs duly making necessary adjustments, to ensure proper accounting of energy and its cost.

3. In terms of the MYT Regulations, the Power Purchase cost is an uncontrollable expenditure and the Commission having recognized the above facts, decides to consider 27928.21 MU at a cost of Rs.10702.75 Crores towards power purchase of BESCO for approving the Annual Performance Review of BESCO for FY14.

#### 4.2.5 Operation and Maintenance Expenses:

##### BESCO's Submission:

BESCO has sought approval of O&M expenditure of Rs.1025.67 Crores for FY14. It has requested the Commission to consider indexation of CPI : WPI at 83 : 17 for working out the rate of inflation at 12.48% and arrive at the normative O&M expenditure after factoring in the CAGR of growth in the number of consumers. BESCO has projected the normative O&M expenses as follows:

**TABLE – 4.6**

##### **Normative O & M Expenses – BESCO's submission**

<b>Particulars</b>	<b>FY13</b>	<b>FY14</b>
No. of installations as per actual as per Annual Accounts	8355820	8875987
Consumer growth as per actual		6.23%
Weighted Inflation Index		12.48%
Approved O&M Cost of FY13 including uncontrollable expenditure Rs.in Crs.	871.34	
O&M Index= O&M (t-1)*(1+WII+CGI-X) Rs.in Crs.		<b>1025.67</b>

The Commission in its tariff order dated 6<sup>th</sup> May, 2013 had allowed uncontrollable O&M expenses of Rs.167.05 Crores towards revision of pay, pension and gratuity contribution, increase in DA and increase in HRA. The Commission in its preliminary observations and subsequent validation meeting had sought the data of actual additional employee cost incurred for FY14. BESCO in its replies to the observations made during the validation meeting has informed that an amount of Rs.144.80 Crores is incurred as additional O & M expenses as detailed below:

**TABLE – 4.7**

##### **Additional O&M Expenses for FY14- BESCO's Submission**

Amount in Rs.crs.

Particulars	Amount
Increase in HRA consequent to Government Order	14.28
Terminal benefits	130.52
<b>Additional O&amp;M Expenses for FY14</b>	<b>144.80</b>

**Commission's analysis and decisions:**

The Commission had approved O&M expenses for FY14 as detailed below:

**TABLE – 4.8**

**Approved O&M Expenses as per Tariff Order dated 06.05.2013**

Amount in Rs.Crs.

Particulars	FY14
No. of installations as per actuals as per Audited Accts	8791239
Weighted Inflation Index	5.49%
CGI based on 3 Year CAGR	4.47%
Normative O&M expenses for FY12 excluding P&G contribution	682.52
O&M Index= O&M (t-1)*(1+WII+CGI-X)	810.33
Additional O&M expenses (uncontrollable)	167.05
<b>Total Approved O&amp;M Expenses for FY14</b>	<b>977.38</b>

As per the Annual Audited Accounts of BESCO for FY14, the actual O&M expenditure is as follows:

**TABLE – 4.9**

**O&M Expenses of BESCO as per application for FY14**

Amount In Rs.Crs.

Repairs & Maintenance	51.66
Employee Expenses	814.06
A&G expenses	159.95
<b>O&amp;M expenses</b>	<b>1025.67</b>

Considering the Wholesale Price Index (WPI) as per the data available from the Ministry of Commerce & Industry, Government of India and Consumer Price Index (CPI) as per the data available from the Labour Bureau, Government of India and adopting the methodology followed by CERC with CPI and WPI in a ratio of 80 : 20, the allowable inflation for FY14 is computed as follows:

Year	WPI	CPI	Composite Series	Yt/Y1=Rt	Ln Rt	Year (t-1)	Product [(t-1)* (LnRt)]
2002	87.92	103	99.984				
2003	92.6	107	104.12	1.04	0.04	1	0.04

2004	98.72	111	108.544	1.09	0.08	2	0.16
2005	103.37	116	113.474	1.13	0.13	3	0.38
2006	109.59	123	120.318	1.20	0.19	4	0.74
2007	114.94	131	127.788	1.28	0.25	5	1.23
2008	124.92	142	138.584	1.39	0.33	6	1.96
2009	127.86	157	151.172	1.51	0.41	7	2.89
2010	140.08	176	168.816	1.69	0.52	8	4.19
2011	153.35	192	184.27	1.84	0.61	9	5.50
2012	164.93	209	200.186	2.00	0.69	10	6.94
2013	175.35	232	220.67	2.21	0.79	11	8.71
A= Sum of the product column							32.75
B= 6 Times of A							196.49
C= (n-1)*n*(2n-1) where n= No of years of data=12							3036.00
D=B/C							0.06
g(Exponential factor)= Exponential (D)-1							0.0669
e=Annual Escalation Rate (%)=g*100							<b>6.69</b>

For the purpose of determining the normative O & M expenses for FY14, the Commission has considered the following:

- The actual O & M expenses for FY13 excluding contribution to Pension and Gratuity Trust.
- The three year compounded annual growth rate (CAGR) of the number of installations considering the actual number of installations as per audited accounts up to FY14.
- The weighted inflation index (WII) at 6.69% as computed above.
- Efficiency factor at 1% as considered in the earlier two control periods.

Thus, the normative O & M expenses for FY14 will be as follows:

**TABLE – 4.10**  
**Allowable Normative O & M Expenses – FY14**

Particulars	FY14
No. of Installations as per actuals as per Audited Accts	8875987
Weighted Inflation Index	6.69%
Consumer Growth Index (CGI) based on 3 Year CAGR	5.41%
O & M expenses for FY13 excluding P&G contribution - Rs.Crs.	737.09
<b>O&amp;M Index= O&amp;M (t-1)*(1+WII+CGI-X)- Rs.Crs.</b>	<b>818.90</b>

The above normative O & M expenses have been computed without considering the revision of HRA and contribution to pension and gratuity trust.



The Commission has earlier treated certain employee costs on account of pay revision, contribution to P&G Trust and change in HRA and change in employee costs on account of recruitment as uncontrollable O&M expenses. This component has been allowed beyond the normative O&M expenses to enable ESCOMs to meet their actual employee costs.

BESCOM was asked to furnish data on additional employee costs on account of the above factors. BESCOM has sought an amount of Rs.144.80 Crores to be allowed as additional employee cost for FY14 in view of revision of pay, increase in House Rent Allowance, change in Dearness Allowance and increase in the contribution to pension and gratuity trust.

Considering the request of BESCOM to treat increase in pay due to revision and pension and gratuity contribution as uncontrollable O & M expenses, the Commission has computed the uncontrollable O & M expenses for FY14 as follows:

**TABLE – 4.11**  
**Approved Uncontrollable O & M Expenses**

Amount in Rs.Crs.

Particulars	FY14
P&G contribution as per audited accounts	130.52
Increase in HRA @ 2% on basic pay	8.04
<b>Total Uncontrollable O&amp;M Expenses -FY14</b>	<b>138.56</b>

Some of the consumers have objected to allowing bonus as part of O&M expenses. The Commission has been allowing O&M expenses on normative basis as per Regulations which is less than the actual expenses incurred by BESCOM. Hence, disallowance of bonus paid by BESCOM separately does not arise.

Thus, the allowable O & M expenses for FY14 will be as follows:

**TABLE – 4.12**  
**Allowable O & M Expenses for FY14**

Amount in Rs.Crs.		
Sl. No.	Particulars	FY14
1	Normative O & M expenses	818.90
2	Additional employee cost (uncontrollable O & M expenses)	138.56
<b>3</b>	<b>Allowable O &amp; M expenses for FY14</b>	<b>957.46</b>

The Commission decides to allow an amount of Rs.957.46 Crores as O&M expenses for FY14.

#### 4.2.6 Depreciation:

##### BESCOM's Submission:

BESCOM has claimed an amount of Rs.185.10 Crores as depreciation worked out after deducting an amount of Rs.63.12 Crores towards depreciation withdrawn on account of contributions / subsidies as per Accounting Standards (AS) – 12.

**TABLE – 4.13**  
**Depreciation for FY14 – BESCOM's Submission**

Amount in Rs. Crs.	
Particulars	FY14
Gross fixed assets at the beginning of the year	4796.14
Additions during the year	938.07
Deductions during the year	133.00
Gross fixed assets at the end of the year	5601.21
Depreciation provided	248.22
Average rate of Depreciation	4.92%
Less: Depreciation withdrawn from contribution as per AS 12	63.12
<b>Depreciation</b>	<b>185.10</b>

The average rate of depreciation works out to 4.92%. BESCOM has requested the Commission to allow a depreciation amount of Rs.185.10 Crores for FY14.

##### Commission's analysis and decisions:

The depreciation is determined by the Commission in accordance with the KERC (Terms and Conditions for Determination of Tariff) Regulations, 2006 as amended on 1<sup>st</sup> February, 2012. Considering the opening and closing gross blocks of fixed assets for FY14 and the depreciation as per annual accounts, the weighted average rate of depreciation works out to 4.79%.

As per the audited accounts for FY14, an amount of Rs.122.65 Crores on account of depreciation on assets created out of grants and contribution on actual basis is considered for computation of allowable depreciation for FY14.

**Based on the above, the Commission decides to allow the actual depreciation of Rs.126.18 Crores for FY14.**

#### 4.2.7 Capital Expenditure for FY14

BESCOM has reported a capital expenditure of Rs.1224.12 Crores as against an approved capex of Rs.848 Crores for FY14. The following table indicates the details of actual expenditure incurred for FY14 as against the approved capex:

**TABLE – 4.14**

**Capital Works Approved and Actual Expenditure for FY14**

Amount in Rs.Crs.

Sl. No	Schemes	Approved	Actual expenditure for FY14 (Provisional)
1	E&I		
A	11 KV Lines for New Stations	20	33.40
B	11 KV Other Work+ DTCs including dedicated DTCs for DWS Schemes.	15	80.89
C	Re- conducting of ACSR /Rabbit to Coyote in Bangalore Urban	10	22.59
D	Re-conducting of LT line using Rabbit conductor	5	4.60
E	Re- conducting (Improvement works on 11 KV Rural Feeders)	10	
F	Strengthening of 11 KV UG cable Network with RMUs	10	172.71
2	NJY	370	138.50

3	Providing infrastructure to Un authorized IP Sets	20	54.39
4	(A) DTC Metering Programme Non RAPDRP Area	10	32.85
	(B) Replacing Mechanical Meter By Electrostatic.	40	21.86
	( C ) Smart Meter, HT- TOD Meter Replacing MNR etc.	20	0.00005
5	RAPDRP & DAS	150	228.54
6	Service connections	25	79.15
7	Replacement of failure DTCs by new ones	15	86.73
8	A)Civil Engineering works, DSM & Others	25	11.38
	B)Consumer Education	1	0.00
9	HVDS	30	1.69
10	Providing fault locators	5	0.00
11	Electrification Hamlets /Villages	6	
12	Energisation of IP Sets	6	6.53
13	T &P and Computers	5	10.60
14	Other works including Safety measures fund, Local Planning	20	62.63
15	Providing AB Cable	30	3.33
	<b>Grand total</b>	<b>848</b>	<b>1052.35</b>

The year-wise expenditure incurred by BESCO against the approved Capex during the last four years is shown in the following Table:

**TABLE- 4.15**  
**Approved and Actual Capex incurred**

Amount in Rs. Crs.

Particulars	FY11	FY12	FY13	FY14
Capital investment as proposed by BESCO and approved by the Commission	750	660	510	848
Actual capital investment incurred as per audited accounts	449.55	557.68	851	1052
Shortfall	300.45	102.32	-341	-204
Percentage achievement	59.94	84.49	167%	124%

BESCOM has furnished item wise break-up of expenditure incurred during FY14 amounting to Rs.1052.35 Crores against the approved capex of Rs.848 Crores. This accounts for an increase by 24% over the approved level. It is noted that, the capital expenditure of BESCOM is increasing year after year from FY13.

Further, the Commission notes that, during FY14 BESCOM has exceeded its capex achievement vis a vis the approved capex in respect of the following works:

- service connection - more than three times
- 11 KV works including DTCs for DWS schemes - more than 5 times
- Re-conductoring of ACSR/Rabbit to Coyote conductors- two times
- Strengthening 11 kV UG cable with RMUs – 17 times
- Infrastructure of Un-authorized IP Sets-two times
- DTC metering in non RAPDRP area -three times
- Safety measures and local planning- three times

It is also noted that, the Commission in its tariff order dated 28<sup>th</sup>October, 2011 had issued directives to implement HVDS and complete the NJY project already taken up in the previous year, but, BESCOM has achieved 5.6% expenditure in HVDS and 37.43% of the approved capex for implementation of NJY.

**From the above, the Commission notes that, there are significant variations in the actual execution and the capex proposal made. This indicates lack of proper planning while executing the capex during FY14.** It is also to be noted that, any investment beyond the approved levels will have an impact on the ARR and retail supply tariff.

In the preliminary observations, the Commission had pointed out the excess achievement of capex in certain category like, Ganga Kalyan works and Service connections, 11kV evacuation lines& strengthening of HTUG cables and other works including the safety and local planning and directed BESCOM to furnish reasons for the excess capex achievement.

**In reply to the preliminary observations, BESCOM has stated that, Ganga Kalyan works being Government programs had to be taken up on a fast track, 11kV evacuation line & strengthening of HTUG cable was required to meet load growth and evacuation of power from newly constructed substations, and bifurcation of feeders to take care of the growing loads. Further, additional DTCs were taken up for reducing the overloading and failure of existing DTCs.**

From the reply submitted by BESCOM as well as, on a review of the items of expenditure incurred beyond approved levels, it is observed that, investments in 11kV evacuation lines, providing additional DTCs/Enhancement of DTCs, providing infrastructure to unauthorized IP sets, service connection works and drinking water schemes along with safety works are

likely to enable BESCO to improve the quality and reliability of supply besides meeting the requirements of catering power supply to new consumers.

**The Commission therefore decides to allow the actual capital expenditure of Rs.1052.35 Crores for FY14 after disallowing some of the capex not meeting the norms of prudence as discussed in the following paragraphs. However, the Commission hereby directs BESCO to strictly adhere to the approved capital program for the respective financial years and obtain prior approval for any likely deviations before taking up the works.**

#### 4.2.8 (i) Prudence check of FY13 and FY14:

**The prudence check of capex of BESCO was taken in two parts:**

- i) Prudence check of execution of the capital works of FY13 & FY14
- ii) Prudence check of Material Procurement process of FY13 & FY14

#### **i) Prudence check of execution of the capital works of FY13 & FY14**

The Commission has been allowing the capital expenditure as proposed by BESCO subject to prudence check. Therefore, the Commission has undertaken prudence check of the capital expenditure incurred by BESCO for the period FY13& FY14 by engaging the services of M/s. Power Research and Development Consultants Pvt. Ltd. (PRDCL) to evaluate the capital expenditure incurred during FY13 & FY14 in respect of completed and categorized works.

As per the report of the consultants, the following are the salient features:

#### **Summary of Prudence check findings for FY13 & FY14**

<b>Particulars</b>	<b>Numbers</b>	<b>Amount in Rs. Crs.</b>
No. of works costing Rs. 10 Lakhs and above examined	108	83.74
No. of works costing less than Rs10 Lakhs examined	78	4.14
No. of works not meeting the norms of prudence as stipulated in the guidelines issued by this Commission	2	3.53

The other findings on the prudence check carried out by the consultants are summarized in the following Table:

Particulars	Status of the Project
Number of works completed with delay up to 6months	39
Number of works completed with delay between 6months to 1 year	14
Number of works completed with delay of more than a year	23
Number of works exceeding estimated cost up to 20%	30
Number of works exceeding estimated cost by between 20% to 50%	13
Number of works exceeding estimated cost more than 50%	01

The Commission had forwarded the copy of the Report of the Consultant on the Prudence check seeking BESCO's comments thereon. The reply submitted by BESCO is summarized below:

**TABLE- 4.16**

**Summary of Replies furnished by BESCO**

Sl. No.	Details of Works considered as imprudent with reasons in brief	Amount Rs. in Lakhs	Replies furnished by BESCO to Justify the capex
1	Evacuation of new 11kV feeder from Brigade Station from feeder NO.4 to Harishchandraghat Circle RMU by providing a intermediate RMU (2 OD+3VL) in C-1 Sub-Division.(3.5km)	162.82	After the laying of cable power supply was to be tapped from F4 feeder of Brigade MUSS inside the brigade campus. The Brigade representatives and residential forum did not allow entering the campus for tapping the power supply. Since the 66KV GIS substation was established under self execution scheme.
2	New 11kv line from REMCO MUSS to police quarters RMU, Mysore Road through 3Cx400sqmm HT UG Cable to a distance of 4.3 km with 2OD+4VL and 2OD+1VL RMUs and installing new breaker at REMCO MUSS to reduce over load on F-15 feeder of REMCO MUSS in O&M-8 unit.	190.00	It was proposed to extend a new 11KV line using 3x400sq mm UG cable from Remco Sub Station upto Police quarters RMU along Mysore Road to reduce the load on the existing F15 Feeder of Remco Muss. Considering the ground realities of Flyover work at Nayandahalli junction, Metro Work along Mysore Road and Road was being widened from Sirsi circle towards Mysore, the under loaded F10 Feeder Remco Muss was made use of for RMU at AR Compound and the loads on F15 were re-arranged after installing the RMUs & continuity of power supply has been maintained.

Since BESCO has not furnished satisfactory reply and justifications to the findings of the Consultant on the non-prudent works, the Commission is constrained to take a view that, two works amounting to Rs.3.53 Crores in the samples selected by the consultants during

FY13 & FY14 do not qualify for being treated as prudent and consequently the corresponding depreciation and interest on loans allowed by the Commission in the tariff have to be disallowed in APR of FY14 as detailed below:

**Details of Amounts disallowed in APR FY14**

Particulars	Amount in Rs.Crs.
<b>Total cost of categorized works eligible for prudence check</b>	<b>1386.24</b>
<b>Total cost of the sample works</b>	<b>87.88</b>
<b>Cost of sample works meeting prudence norms</b>	<b>84.35</b>
<b>Cost of sample works not meeting prudence norms</b>	<b>3.53</b>
<b>Percentage of cost not meeting prudence norms</b>	<b>4.02%</b>
<b>Overall cost of capex not meeting prudence norms</b>	<b>55.68</b>
<b>Amount to be disallowed towards works not meeting prudence norms calculated on the basis of weighted average interest &amp; weighted average depreciation on the capex to be disallowed.</b>	<b>5.60</b>

**4.2.9 (ii) Prudence Check of Capital Investment for the period FY10 to FY12:**

The Commission had conducted prudence check of capital expenditure incurred by BESCOM for FY10 to FY12, while approving the Annual performance for FY13 and ARR for FY15. Based on the report of the consultant, who conducted the prudence check the Commission had disallowed interest and depreciation of Rs.7.29 Crores pertaining to 16Nos. of works which were considered as not meeting prudence norms. Further, considering the fact that the prudence check of capital investment being taken up by the Commission is first of its kind, the Commission had provided one more opportunity to BESCOM to justify the investment made on such works by furnishing sufficient justification duly supported by documents.

In response, BESCOMs had submitted its reply, but it was found to be not adequately supported with documents to justify the prudence of expenditure on those works. In view of this, the Commission decided to get the same validated through the consultant, who is conducting the prudence check of capital expenditure of BESCOM for FY13 & FY14.

The consultant has reviewed 16 no. of works and a separate report has been submitted. A summary of the finding is as under:

- a) In respect of four works, amounting to Rs.73.16 lakhs, it is stated that no work has been taken up by BESCOM (even though they were given as completed works during the



earlier prudence check). Two works were belonging to DAS projects and seven works were completed in FY13 and thereafter (even though they were given as completed works during the earlier prudence check).

- b) Only one work has been completed and are found to be meeting the requirement of prudence norms and
- c) Two works are found to be not meeting the norms of prudence at all.

The Commission after reviewing the report has noted that, out of 16 works, two works are found to be not meeting the norms of prudence check,

**Since BESCO in spite of being given ample opportunities to justify and prove the prudence of these works, has not provided necessary justification, the Commission hereby decides to disallow a capex of Rs.1.64 Crores incurred towards works which have not met prudence norms. Hence an amount of Rs.2.36 Crores is disallowed in the APR of FY14.**

**ii) Prudence check of Material Procurement process of FY13 & FY14:**

The Capital investment works in BESCO are executed on Total turnkey, Partial turnkey and labour contract. BESCO procures major materials like, distribution transformers, poles, conductor and insulators etc and issues them to the partial turnkey contractor, and also to labour contractor. The partial turnkey contractors will execute the work as per award and includes some of the associated materials viz., crossarm, bolt & nuts, earthing materials etc required for completion of works for which payments will be made as per the quoted/accepted rates of the Tender. The complete materials for labour contract works will be supplied by the BESCO for the will execute the works.

BESCO at their Corporate Office will procure all the major materials like U.G.cable, A.B.Cables, Transformers, Poles, DTC meters and consumer meters. It was found that the cost of major material procurement forms around 24% and 12% in the capex of respective years and hence the major material procurement process was also reviewed as a part of prudence check of capital investment for the years FY13 & FY14. The Major materials are procured by the procurement wing at corporate office.

The procurement procedures followed by BESCO is as follows:

1. The action plan for procurement by the central procurement cell will start as early as 2 to 3 months in advance of the start of next financial year after the process of assessing the requirement of materials for works and general stock for the ensuing year. By a parallel and simultaneous process, the technical wing will also plan for the annual program of works to be undertaken in the ensuing year and approval will be obtained for the budgetary allocation for the planned works and special scheme works.
2. The general requirement of materials for the capital investment works for the ensuing year will be compiled at the procurement section, after obtaining the material requirement data from all the O&M division and O&M circle.
3. The same will be validated with the available historic/ logistic data of consumption of materials in each division in the past years. Special requirements of materials if any for the year under consideration will also be taken in to consideration.
4. The factual requirement of each major material for procurement purpose will be decided after taking into account the availability of such materials in stock of departmental stores and the availability of budgetary allocation for the purpose.
5. The store budget for procurement of materials will normally constitute about 65 to 70% of the total capital expenditure envisaged for the ensuing year.

It is stated by the consultants that, on a perusal of records, it is found that BESCO has considered all these aspects in prudence and procured the materials as per the requirement after due process of "e-tendering" duly following the transparency act. However the govt. of Karnataka has exempted the utilities from the above KTPP act in respect of purchase of materials directly from a few firms without calling for tenders. Some materials are also purchased through rate contract basis from the firms after necessary bidding processes.

It was found that the inventory of transformers in stock at all stores is of limited value when compared with quantum of work involved and the total transformers that exist in service. Only 1143 distribution transformers were found to be in stock against procurement of 23146 Nos of transformers, this shows that, only 4.94% of transformers were available in store stock which is reasonable.

#### **4.2.10 Interest and Finance Charges**

**a) Interest on loan:**

**BESCOM's Submission:**

BESCOM has claimed an amount of Rs.183.28 Crores towards interest on loans. The details of interest on loans claimed by BESCOM are as follows:

**TABLE – 4.17**  
**Interest on Loans- BESCOM's Submission**

Amount in Rs.Crs.	
Particulars	FY14
Long term Loan outstanding as on 31.03.2013	1094.64
Fresh Borrowings	1285.77
Repayment	55.90
Long term Loan outstanding as on 31.03.2014	2324.51
<b>Interest on Loans</b>	<b>183.28</b>

Considering the opening balance of loans, fresh borrowings and the repayment of loans during FY14, the weighted average rate of interest on the average loan amount works out to 10.72%. BESCOM has requested the Commission to allow an amount of Rs.183.28 Crores for FY14 towards interest on loans.

**Commission's analysis and decisions:**

The Commission has noted the status of opening and closing balances of loans as per the audited accounts and format D9 of the filings as shown below:

**TABLE – 4.18**  
**Allowable Interest on Loans – FY14**

Amount in Rs. Crs.	
Particulars	FY14
Opening Balance Secured Loans	1134.45
Opening Balance Un-secured Loans	53.31
<b>Total opening balance of loans</b>	<b>1187.76</b>
Less Short term loans/ Over draft	0.00
Less Interest accrued & dues	0.00
Total Long term secured & unsecured loans	1187.76
Add new Loans	1830.23
Less Repayments	512.83

<b>Total loan at the end of the year</b>	<b>2505.16</b>
<b>Average Loan</b>	<b>1846.46</b>
Interest on long term loans as per audited accounts for FY14	<b>151.69</b>

Considering the average loan of Rs.1846.46 Crores and an amount of Rs.151.69 Crores incurred towards interest on long term loans, the weighted average of interest works out to 8.22%.

Further, considering the actual capitalization of interest of Rs.38.96 Crores as per audited accounts, **the net amount of Rs.121.25 Crores is allowed towards interest on loan for FY14.**

#### 4.2.11 Interest on Working Capital:

##### **BESCOM's Submission:**

BESCOM has incurred an amount of Rs.202.20 Crores towards interest on bank overdrafts and short term loans. However, as per the provisions of MYT Regulations, an amount of Rs.233.45 Crores has been claimed towards interest on working capital as under:

**TABLE – 4.19**  
**Interest on Working Capital - BESCOM's Submission**

<b>Particulars</b>	<b>Amount in Rs. Crs</b>	
	<b>FY14</b>	
One-twelfth of the amount of O&M Expenses	80.41	
Opening GFA as per Audited Accounts	4796.14	
Stores, materials and supplies at 1% of Opening balance of GFA	47.96	
One-sixth of the Revenue	1924.94	
Total Working Capital	2053.31	
Rate of Interest (% p.a.)	14.45%	
Interest on Working Capital	296.70	
Actual Interest incurred for FY-14	170.21	
Difference of interest incurred and interest on normative basis	126.49	
50% of Rs.126.49 Crores	63.24	
<b>Allowable interest on Working capital</b>	<b>233.45</b>	

##### **Commission's analysis and decisions:**

As per audited accounts, BESCO has incurred an interest of Rs.100.27 Crores on short term borrowings and Rs.101.54 Crores on bank overdraft during FY14. Thus an amount of Rs.201.81 Crores has been incurred as interest on working capital during FY14.

As per the KERC (Terms and Conditions for Determination of Tariff) Regulations, 2006 as amended on 1<sup>st</sup> February, 2012, the Commission has computed the allowable interest on working capital for FY14 as follows:

**TABLE – 4.20**  
**Allowable Interest on Working Capital for FY14**

Amount in Rs.Crs.	
Particulars	FY 14
One-twelfth of the amount of O&M Expenses	91.33
Opening GFA	4798.27
Stores, materials and supplies 1% of Opening balance of GFA	47.98
One-sixth of the Revenue	1924.95
Total Working Capital	2064.26
Rate of Interest (% p.a.)	11.75%
Normative Interest on Working Capital	242.55
Actual interest on WC as per audited accounts for FY14	201.81
<b>Allowable Interest on Working Capital</b>	<b>222.18</b>

The Commission decides to allow an amount of Rs.222.18 Crores towards interest on working capital for FY14.

#### 4.2.12 Interest on Consumer Deposits:

##### **BESCO's Submission:**

BESCO has claimed an amount of Rs.179.79 Crores towards payment of interest on security deposits for FY14.

**TABLE – 4.21**  
**Interest on consumer deposits for FY14 – BESCO's Submission**

Amount in Rs.Crs.	
Particulars	FY14
Closing balance of consumer deposits.	2179.24
Interest on consumer deposits	179.79
Rate of Interest	8.25%

##### **Commission's analysis and decisions:**

The Commission notes that, the interest on consumer deposits amounting to Rs.179.79 Crores claimed by BESCOM works out to a weighted average rate of interest of 8.25%. As per KERC (Interest on Security Deposit) Regulations, 2005 the interest on consumer deposits is to be allowed as per the bank rate prevailing on the 1<sup>st</sup> of April of the relevant year. The bank rate as on 1<sup>st</sup> April, 2013 was 8.50%. **Since the actual weighted rate of interest is within the allowable bank rate, the Commission decides to allow an amount of Rs.179.79 Crores incurred towards interest on consumer deposits for FY14.**

#### 4.2.13 Other Interest and Finance charges:

BESCOM has claimed an amount of Rs.9.77 Crores towards other interest and finance charges for FY14 which includes charges payable to banks / financial institutions and guarantee commission payable to GoK. The Commission notes that the claims are as per audited accounts and hence decides to allow the same for FY14.

#### Capitalisation of Interest:

BESCOM has capitalized interest of Rs.30.45 Crores during FY14. The Commission to consider same for computation of APR for FY14.

Thus the abstract of allowable interest and finance charges for FY14 are as follows:

**TABLE – 4.22**  
**Allowable Interest and Finance Charges**  
Amount in Rs.Crs.

Sl. No.	Particulars	FY14
1.	Interest on Loan capital	151.69
2.	Interest on working capital	222.18
3.	Interest on consumer deposits	179.79
4.	Other interest and finance charges	9.77
5.	Less Interest capitalized	30.45
<b>6.</b>	<b>Total interest and finance charges</b>	<b>532.98</b>

#### 4.2.14 Other Debits:

##### BESCOM's Submission:

BESCOM, in its application has claimed an amount of Rs.25.01 Crores towards other debits as detailed below:

**TABLE – 4.23**  
**Other Debits-BESCOM's Submission**

Amount in Rs. Crs.

Sl No	Particulars	FY14
1	Small and Low value items written off	0.16
2	Losses/gains relating to Fixed assets	4.15
3	Assets decommissioning cost	0.90
4	Bad debts written off	0.02
5	Miscellaneous losses and write offs	2.38
6	Material cost variance	-32.62
	<b>Total</b>	<b>(25.01)</b>

**Commission's analysis and decisions:**

The Commission notes that as per the audited accounts, the allowable other debits for FY14 is as detailed below:

**TABLE – 4.24**  
**Allowable Other Debits**

Amount in Rs. Crs.		
Sl No	Particulars	FY14
1	Small and Low value items written off	0.16
2	Material cost variance	(32.62)
3	Losses relating to fixed assets	4.15
4	Assets decommissioning cost	0.90
5	Bad debts written off	0.02
6	Miscellaneous losses and write offs	2.41
7	Others	0.92
	<b>Total</b>	<b>(24.06)</b>

The Commission decides to consider an amount of Rs.24.06 Crores as credit balance under other debits for FY14.

#### 4.2.15 Other Expenses Capitalised:

##### BESCOM's Submission:

BESCOM has claimed an amount of Rs.8.51 Crores towards capitalisation of other expenses for FY14 as follows:

**TABLE – 4.25**  
**Capitalisation of Other Expenses – BESCOM's Submission**

Amount in Rs. Crs.	
Particulars	FY14
Employees Cost	2.39
A&G Expenditure	6.12
<b>Total</b>	<b>8.51</b>

##### Commission's analysis and decisions:

The Commission notes that, as per the audited accounts the other expenses capitalized are Rs.2.39 Crores on account of capitalization of employee cost and A&G expenses of Rs.6.12 Crores. **The Commission decides to allow an amount of Rs.8.51 Crores towards capitalization of other expenses for FY14.**



#### 4.2.16 Net Prior Period Charges:

##### BESCOM's Submission:

BESCOM has claimed an amount of Rs.187.74 Crores towards Net Prior Period Credits as detailed below:

**TABLE – 4.26**  
**Net Prior Period Charges-BESCOM's Submission**

Amount in Rs. Crs.	
Particulars	FY14
Credit relating to earlier years	197.22
Debit relating to earlier years	9.48
<b>Net prior period credits</b>	<b>187.74</b>

However, as per the audited accounts, BESCOM has indicated an amount of Rs.30.67 Crores as net prior period credit for FY14.

##### Commission's analysis and decisions:

As per the Audited Accounts for FY14, the prior period debit is Rs.9.48 Crores on account of employee costs, A&G expenses and under provided depreciation of earlier years. Further the prior period credit of Rs.40.15 Crores is on account of excess depreciation and other expenses provided. **Hence the Commission decides to allow a net prior period credit of Rs.30.67 Crores for FY14.**

#### 4.2.17 Return on Equity:

##### BESCOM's Submission:

BESCOM has computed its claims of Return on Equity for FY14 as follows:

**TABLE – 4.27**  
**Return on Equity – BESCOM's Submission**

Amount in Rs.Crs.	
Particulars	FY14
Equity held as on 31.03.2013	546.91

Share deposit	133.08
Total	679.99
<b>Return on Equity for FY14@15.50%</b>	<b>105.39</b>

**Commission's analysis and decisions:**

As per the KERC (Terms and Conditions for Determination of Tariff) Regulations, 2006 as amended on 1<sup>st</sup> February, 2012 and in accordance with the Order of the Hon'ble ATE in Appeal No.46 of 2014 dated 17<sup>th</sup> September, 2014, the Commission has computed the allowable Return on Equity at 15.5% on equity plus reserves and surplus besides allowing taxes as per actuals . The allowable RoE for FY14 is determined as follows:

**TABLE – 4.28**

**Allowable Return on Equity**

Particulars	Amount in Rs. Crs.	
		Amount in Rs. Crs
Paid up share capital		546.92
Share deposit		97.50
Less Re-capitalised consumer security deposit as networth		100.00
Reserves and surplus as on 31.03.2013		(665.31)
<b>Total Equity</b>		<b>(120.89)</b>

**Considering negative net worth of Rs.120.89 Crores, the Commission decides not to allow any Return on Equity for FY14.**

**Revision of RoE for FY12 & FY13:**

In accordance with the orders of the Hon'ble ATE dated 17<sup>th</sup> September, 2014 in Appeal No.46/2014, the following is the difference of RoE for FY12 & FY13 to be factored in the ARR for FY16:

Particulars	Amount in Rs.Crs.
Difference of RoE to be withdrawn on account of considering recapitalized security deposit of consumers as networth for FY12 and FY13	31.00

**Net amount to be deducted in the ARR for FY16                      31.00**

**The Commission decides to deduct net amount of Rs.31.00 Crores in the APR for FY14.**

#### 4.2.18 Income tax :

As per the audited accounts, BESCOM has incurred an expenditure of Rs.4.95 Crores towards payment of income tax for FY14. The Commission decides to allow the actual income tax of Rs.4.95 Crores for FY14.

#### 4.2.19 Other Income:

##### **BESCOM's Submission:**

As per the audited Accounts, an amount of Rs.205.94 Crores is shown as Other Income for FY14. This amount includes income from interest on fixed deposits, sale of scrap, excess provision of power purchase etc. withdrawn / written back, material cost variation and rent from staff quarters.

BESCOM has earned Rs.128.88 Crores as incentive towards payments for power purchase. BESCOM has retained an amount of Rs.12.89 Crores i.e. 10% of the incentive earned. The details as per BESCOM filing are as under:

**TABLE – 4.29**  
**Other Income – BESCOM's Submission**

Amount in Rs. Crs.	
Particulars	FY14
Interest on Bank fixed deposits and other interest	13.14
<b>Other non-operating income</b>	
Loss on sale of stores	(0.74)
Rent	2.49
Incentives received	116.00
Value of materials found excess during physical verification	0.27
Rate fluctuation - power purchase	45.88
Miscellaneous	26.22
Rebate at 0.5% for collection of Electricity Duty	2.67
<b>Total other income</b>	<b>205.93</b>

##### **Commission's analysis and decisions:**

As per the audited accounts, in the other income of Rs.228.67 Crores for FY14, an amount of Rs.9.85 Crores is included as prior period subsidy received from GoK.

As decided in the Tariff Order dated 12<sup>th</sup> May, 2013, the Commission continues to allow 10% of the total incentive amounting to Rs.12.89 Crores on account of prompt payment of power purchase to be retained by BESCO for FY14. Thus after deducting the subsidy amount of Rs.9.85 Crores and incentive of Rs.12.89 Crores, **the Commission decides to allow an amount of Rs.205.93 Crores as other income for FY14.**

**Adjustment of Advance Against Depreciation (AAD) as per Commission's Order in Case No.B/06/9 dated 17<sup>th</sup> October 2013:**

The Commission in its Order dated 17.10.2013 in case No. B/06/9 had decided to adjust the advance against depreciation provided during FY11 in the APR for FY14. **As per this Order, an amount of Rs.40.26 Crores is deducted in the APR for FY14.**

**Fund towards Consumer Relations / Consumer Education:**

The Commission had allowed an amount of Rs.1.00 Crore towards funds for consumer relations / consumer education. BESCO in its replies to the observations, has reported that an amount of Rs.78.94 lakhs has been spent during the year towards conducting consumer awareness programs.

The Commission has considered this actual expenditure of Rs.78.94 lakhs to be allowed separately in the APR.

**4.3 Abstract of Approved ARR for FY14:**

As per the above item-wise decisions of the Commission, the consolidated Statement of ARR for FY14 is as follows:

**TABLE – 4.30**  
**Approved ARR for FY14 as per APR**

Amount in Rs.Crs.

Sl. No	Particulars	APR FY14		
		As Appd	As Filed	As per APR
	<b>Revenue at existing tariff in Rs Crs</b>			
1	Revenue from tariff and Misc Charges	11698.71	10736.9	10804.57
2	Tariff Subsidy	882.54	812.78	812.78
3	<b>Total Existing Revenue</b>	<b>12581.25</b>	<b>11549.68</b>	<b>11617.35</b>
	<b>Expenditure in Rs Crs</b>			
4	Power Purchase Cost	9851.67	9782.24	9649.14
5	Transmission charges of KPTCL	1053.80	1053.61	1053.61
6	SLDC Charges	9.33	0	
7	<b>Power Purchase Cost including cost of transmission</b>	<b>10914.80</b>	<b>10835.85</b>	<b>10702.75</b>
8	Employee Cost		814.06	
9	Repairs & Maintenance		51.66	
10	Admin & General Expenses		159.95	
11	<b>Total O&amp;M Expenses</b>	<b>977.38</b>	<b>1025.67</b>	<b>957.46</b>
12	Depreciation	176.86	185.1	126.18
	<b>Interest &amp; Finance charges</b>			
13	Interest on Loans	114.52	353.49	151.69
14	Interest on Working capital	253.61	63.24	222.18
15	Interest on belated payment on PP Cost	0	0	0
16	Interest on consumer deposits	190.56	179.79	179.79
17	Other Interest & Finance charges	7.63	9.77	9.77
18	Less interest & other expenses capitalised	40.00	38.95	38.96
19	<b>Total Interest &amp; Finance charges</b>	<b>526.32</b>	<b>567.34</b>	<b>524.47</b>
20	Other Debits	0	-25.01	-24.06
21	Net Prior Period Debit/Credit	0	-187.74	-30.67
22	RoE	86.15	105.4	0.00
23	Provision for taxation	0	4.95	4.95
24	Funds towards Consumer Relations/Consumer Education	1.00	1.00	0.79
25	Other Income	184.2	205.94	205.93
26	<b>Net ARR</b>	<b>12498.31</b>	<b>12306.62</b>	<b>12055.94</b>
27	Deficit for FY12 carried forward	82.94		0
28	Regulatory asset	0.00	82.94	0
29	Adjustment of AAD as per Order dated 17.10.2013			40.26
30	Less - Excess RoE allowed in FY12 & FY13 - ATE 46/2014			31.00

31	Net ARR	12581.25	12389.56	11984.68
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#### **4.3.1 Gap in Revenue for FY14:**

As against an approved ARR of Rs.12581.25 Crores, the Commission after the Annual Performance Review of BESCOM decides to allow an ARR of Rs.11984.68 Crores for FY14. Considering the revenue of Rs.11617.35 Crores, a deficit of Rs.367.33 Crores is determined for the year FY14.

The Commission decides to carry forward the deficit of Rs.367.33 Crores of FY14 to the proposed ARR for FY16 as discussed in the subsequent Chapter of this Order.



## CHAPTER – 5

### REVISED ANNUAL REVENUE REQUIREMENT FOR FY16

#### 5.0 Revised ARR for FY16 - BESCOM's Filing:

BESCOM in its application dated 8<sup>th</sup> December, 2014, has sought approval of its revised ARR for FY16. The summary of the proposed revised ARR for FY16 is as follows:

**TABLE – 5.1**

#### Proposed Revised ARR for FY16

Amount in Rs.Crs.

Sl. No.	Particulars	FY16
	<b>Revenue at existing tariff in Rs. Crs</b>	
1	Revenue from tariff and Misc. Charges	12252.12
2	Tariff Subsidy	1298.63
3	<b>Total Existing Revenue</b>	<b>13550.75</b>
	<b>Expenditure in Rs. Crs</b>	
4	Power Purchase Cost	11248.88
5	Transmission charges of KPTCL	1063.00
6	<b>Power Purchase Cost including cost of transmission</b>	<b>12311.88</b>
7	Employee Cost	962.05
8	Repairs & Maintenance	61.67
9	Admin & General Expenses	209.68
10	<b>Total O&amp;M Expenses</b>	<b>1233.40</b>
11	Depreciation	229.71
	<b>Interest &amp; Finance charges</b>	
12	Interest on Loans	252.71
13	Interest on Working capital	316.64
14	Interest on belated payment on PP Cost	0.00
15	Interest on consumer deposits	210.51
16	Other Interest & Finance charges	7.63
17	Less interest & other expenses capitalised	39.99
18	<b>Total Interest &amp; Finance charges</b>	<b>747.50</b>
19	Other Debits	0.00
20	Net Prior Period Debit/Credit	0.00
21	RoE	105.40
22	Provision for taxation	0.00
23	Funds towards Consumer Relations/Consumer Education	1.00
24	Other Income	197.52

25	<b>ARR</b>	<b>14431.37</b>
26	Deficit for FY14 carried forward	-839.88
27	Regulatory asset for FY13	-342.16
<b>28</b>	<b>Net ARR</b>	<b>15613.41</b>

BESCOM has requested the Commission to approve the revised Annual Revenue Requirement of Rs.15613.41 Crores for FY16. Further, BESCOM has proposed increase in retail supply tariff by 80 paise per unit in respect of all categories of consumers including BJ/KJ and IP set consumers for FY16, in order to bridge the gap in revenue of Rs.2062.66 Crores.

## **5.1 Annual Performance Review for FY14 & FY15:**

As discussed in the preceding chapter of this order, the Commission has carried out the Annual Performance Review for FY14 based on the audited accounts furnished by BESCOM. Accordingly, a deficit of Rs.367.33 Crores of FY14, is required to be carried forward in to the ARR of FY16.

As regards APR for FY15, the current financial year (i.e. FY15) is yet to be completed. Hence, the Commission decides to take up the APR of FY15 during the revision of ARR / Retail Tariff for FY17.

## **5.2 Annual Revenue Requirement for FY16:**

### **5.2.1 Capital Investments for FY16:**

The Commission in its MYT Order dated 6<sup>th</sup> May, 2013 had approved a capex of Rs.627 Crores for FY16. BESCOM, in its filing, has projected a revised capex of Rs.2050 Crores indicating major changes in the proposed capex as against the approved capex. Some of the major changes mentioned by BESCOM are:

- i. Providing infrastructure to unauthorized IP sets;
- ii. Replacement of existing Electromechanical meters by Static meters;
- iii. Prioritizing the works related to drinking water supply, Ganga Kalyana and other special component works;
- iv. Niranthara Jyothi Yojana Plan III in the erstwhile RLMS areas.

The work-wise break-up of capex of Rs.2050 Crores under various heads, proposed by BESCOM for FY16, is shown in the following table:

**TABLE – 5.2**  
**Proposed capital investment for FY16**

Amount in Rs.Crs.

Sl. No	Schemes	Approved	Proposed capex
<b>1</b>	<b>Extension &amp; Improvement Works</b>		
A	11 KV Lines for New Stations	80	100
B	11 KV Other Work+ DTCs including dedicated DTCs for DWS Schemes.	70	45
C	Re- conducting of ACSR /Rabbit to Coyote in Bangalore Urban	30	30
D	Re-conductoring of LT line using Rabbit conductor	20	20
E	Re- conducting (Improvement works on 11 KV Rural Feeders)	20	0
F	Strengthening of 11 KV UG cable Network with RMUs	25	25
2	Niranthara Jyothi Yojana		80
3	Providing infrastructure to Un-authorized IP Sets	60	150
4	(A) DTC Metering Programme Non-RAPDRP Area	30	20
	(B) Replacing Mechanical Meters by Electrostatic.	20	154
	( C ) Smart Meter, HT- TOD Meter Replacing MNR etc.	30	96
5	Service connections	25	60
6	Replacement of failed DTCs by new ones	15	30
7	A)Civil Engineering works, DSM & Others	25	45
	B)Consumer Education	1	
8	High Voltage Distribution System		
9	Providing fault locators	1	
10	Electrification of Hamlets /Villages	5	
11	Energisation of IP Sets	20	10
12	T &P and Computers	10	10
13	Other works including Safety measures fund, Local Planning	20	70
14	Providing AB Cable	120	50
15	Ganga Kalyana		40
16	IT initiative		15
17	Spill Over		1000
	<b>Total</b>	<b>627</b>	<b>2050</b>

### **Preliminary observations & reply:**

In the preliminary observation, BESCO was asked to explain the reasons for revision of capex for FY16 to Rs.2050 Crores against the approved capex of Rs.627 Crores and also, the means of financing its capex of FY16 at Rs.2050 Crores as it has shown only an amount of Rs.604.10 Crores as proposed loan for capex in FY16.

BESCO in its reply has stated that, the government programs like Ganga Kalyana works, infrastructure to un-authorized IP sets, NJY – III in the earlier RLMS areas and Replacement of Existing Electromechanical meters by Static meters has increased the capex from the earlier approved level to the proposed level of Rs. 2050 Crores. Regarding the loans for meeting the capex of FY16, BESCO has stated that, a loan of Rs.250 Crores for replacement of electromechanical meters would be funded by REC, NJY-III would be met from Deendayal Upadhyaya Scheme sponsored by Gol and Ganga Kalyana works would be funded by GoK.

### **Commission's analysis and decision:**

It is seen from the above Table that BESCO has proposed an increase in the outlay by Rs.1423 Crores as over the earlier approved capex of Rs.627 Crores (increase by 227%). The proposed increased outlay in respect of some of the projects, as against the approved works, is as follows:

**TABLE – 5.3**

#### **Major changes in the proposed capex against the approved capex**

Amount in Rs. Crores

<b>SI No.</b>	<b>Schemes</b>	<b>Approved capex for FY16</b>	<b>Proposed Capex for FY16</b>
1	Service connection	25	60
2	Electrification of Hamlets/Villages and Energisation of IP sets	5	20
3	Hamlets/Villages	5	0
4	Energisation of IP sets	20	10
5	NJYIII	0	80
6	Replacement of Existing Electromechanical meters by Static meters	20	154

7	Smart meter, HT-TOD meter, replacing MNR meters etc	30	96
8	Providing infrastructure to unauthorized IP sets	60	150
9	Local planning	20	70
10	Spill over works	0	1000

It is seen from the above Table that BESCO has proposed capex of more than 3 times the approved capex. One of the major items added is the spillover works of Rs.1000 Crores for which details have not been furnished.

The Commission notes that, BESCO has incurred capital expenditure of Rs. 851 Crores during FY13 and Rs.1052 Crores during FY14 as against approved capex of Rs.510 Crores and Rs.848 Crores respectively. Thus BESCO is incurring huge amounts of capex over and above the approved amounts without prior approval of the Commission. The Commission also notes that, the capital expenditure of BESCO is increasing year after year but the categorization of assets (Capitalization of assets) is not in the same proportion of capex incurred as could be seen from the flowing table:

**TABLE – 5.4**  
**Approved Vs Actual capital investment**

Year	Capex Incurred Rs.Crs.	Categorization of Assets. Rs.Crs.	Percentage of assets categorized to capex
2012	660	333.24	50.49%
2013	848	680.13	80.20%
2014	1052	938.06	89.16%

This disproportionate categorization is resulting in accumulation of huge work in progress over the years. If the capex incurred does not result in timely creation of assets, the benefits likely to be derived from the investments are not realized on time and thus the very purpose of incurring capex is defeated.

It is worthwhile to note that, the Commission had decided to retain capex of Rs.763 Crores for FY15 which was approved in MYT order as against the BESCO proposal of Rs.2199 Crores, for the reason that DPRs in respect of high value projects proposed by BESCO,

were yet to be prepared. As per the data furnished by BESCO, the actual capex as at the end of December, 2014 against approved capex for FY15 is as follows:

**TABLE – 5.5**

**Actual capital expenditure incurred for FY15 (till December, 2014)**

Amount in Rs.Crs.

SI No	Particulars		Approved Capex For FY15	Actual expenditure up to Dec' 2014
1	Ganga Kalyana Works			
2	Service connection works	Water Works	25	65.50
3		Other Works		
4		Providing Infra. to general IP Set		
5	Electrification Hamlets/Villages		6	
6	Energisation of IP sets		20	
7	11 KV Evacuation line		50	8.12
8	Providing Additional DTC's /Enhancement of DTCs		40	5.62
9	Reconductoring of HT lines in Nos./Circuit kms		30	1.65
10	Reconductoring of LT lines in Nos./circuit kms		5	
11	Strengthening of HT&LT network in BMAZ under Reconductoring		10	1.05
12	Providing AB cable		90	
13	NJY phase II			109.07
14	RAPDRP (Part A)		140	53.36
15	RAPDRP (Part B)			
16	DAS			
17	HVDS		120	131
18	Civil Engineering Works		25	5.32
19	DSM			
20	Replacement of Existing Electromechanical meters by Static meters		70	48.06
21	Replacement of MNR meters			
22	Metering of DTCs non RAPDRP area		25	31.19
23	Replacement faulty transformers by New transformers/Buffer stock		15	1.21
24	Refurbishment of DTC's			
26	Spill Over Works			
27	Providing Infrastructure to Un authorized IP sets		60	21.91
28	Local planning	Other Works	20	16.35
29		Safety works		5.67
30	Training			

31	IT Initiatives		
32	Providing Fault Locators	1	
33	Consumer Education	1	
34	Urgent/New Works		
35	Emergency / Calamity Works		
36	Others (Tool & Plant etc.,)	10	0.76
37	RGGVY 12th plan		
38	Conversion of RLMS to NJY (Phase III)		
40	Spill over		186.32
	<b>Total</b>	<b>763</b>	<b>691.95</b>

BESCOM was directed to approach the Commission for approval if any additional capex was required during the financial year. However, BESCOM has not approached the Commission in the matter during FY15.

BESCOM has proposed an amount of only Rs.604.10 Crores towards loan for capex in FY16 and no definite means of financing the capex are proposed to fully achieve the proposed capex of Rs.2050 Crores.

**In the above context, the Commission directs BESCOM to seek separate approval for any item wise additional capex requirement beyond 25% of approved quantum or Rs.10 Crores whichever is higher. Further, the additional capex requirement should be sought from the Commission with due justification indicating the sources of funding and the benefits that would accrue by such additional investments.**

Further, the Commission has observed that major works like DTC metering and replacement of existing consumer meters by static meters are being taken up in large scale and spread across the entire area of the ESCOM. Such approach would not help in identifying the benefits accrued out of such large scale investments. Hence, the Commission directs the ESCOM to take up works like DTC metering and consumer metering Division wise so that the benefits accrued are easily measurable and analysed for improvements in each Division. This approach would ensure the ESCOM to complete the task in a phased manner covering the entire area of operation over a period of time.

Also, the BESCO is directed to indicate the manner of usage / disposal of the released meters.

**In view of the above facts, the Commission decides to consider capex amount of Rs.627 Crores for FY16, as originally proposed by BESCO, for the purpose of Depreciation and interest on loans, subject to Prudence check to be conducted by the Commission during APR. Further, if BESCO requires any additional amount to be incurred during FY16, over and above the approved amount, separate approval shall be sought as detailed above. The Commission would look into the merits of such investments and decide on its approval.**

### **5.2.2 Sales Forecast for FY16:**

BESCO in its filing has proposed the quantum of sales at 25787.19 MU and the number of installations as 10129951. The Commission in its preliminary observations, regarding the number of installations had noted that the growth rate proposed by BESCO for LT-4(b), LT & HT Water supply, HT-2(a), HT-3 & HT-4 categories are on the higher side compared to the normal growth rates. Further, regarding the energy sales, the Commission had noted that the overall growth rate of 4.91% considered by BESCO is lower as compared to the normal growth which is in the range of 7.0 % to 8.0 % and that the growth rates considered by the BESCO are lower for LT domestic, LT commercial, LT Industries, LT water Supply, LT Street lights, HT commercial and HT Residential. Also, it was observed that the sales growth rate considered for HT Water Supply is higher. In addition, it is noted that, even though positive growth is considered for installations in case of LT-4(b), LT-4(c), LT-6 Street lights and HT-4, no energy sales growth is envisaged for these categories.

BESCO in its replies has stated that the number of installations as well as energy sales for FY16 is worked out based on half yearly data for FY15 and the estimates of number of installations and sales for FY16 for categories other than BJ/KJ and IP sets consumers is computed considering 3 - years' CAGR. Further, it is stated that, in the light of energy sales not reaching the estimated values in FY14 and FY15, optimistic sales projections would be



detrimental to the financial health of BESCO and therefore, BESCO has revised the sales for FY16.

The Commission notes that the low growth in one year may be an outlier and cannot be the basis for estimating future sales and past trends should be kept in mind while estimating sales for future years, as also factors that would affect the trend. The approach of the Commission in estimating the number of installations as well as sales to various categories is discussed in the following paragraphs:

**Commission's approach for estimating the number of installations and sales for FY16:**

The methodology adopted by the Commission to estimate the number of installations and energy sales to categories other than BJ/KJ and IP sets is discussed below:

**i) No. of Installations for FY16:**

While estimating the number of installations (excluding BJ/KJ and IP sets consumers), the following approach is adopted:

- a. The base year number of installations for FY15 is considered as proposed by BESCO.
- b. Wherever the number of installations estimated by BESCO for FY16 is within the range of the estimates based on the CAGR for the period FY09 – FY14 and for the period FY11 - FY14, the estimates of BESCO are retained.
- c. Wherever the number of installations estimated by BESCO for FY16 is lower than the estimates based on the CAGRs for the period FY09 – FY14 and for the period FY11 - FY14, the estimate based on the lower of the CAGRs are considered.
- d. Wherever the number of installations estimated by BESCO for FY16 is higher than the estimates based on the CAGRs for the period FY09 – FY14 and for the period FY11 - FY14, the estimate based on the higher of the CAGRs are considered.
- e. For LT-4(b), LT-4(c), LT-7 and HT-5 categories, the estimates of BESCO are retained as the growth rate for this category varies from year to year.

- f. For HT-2(c) category, the estimates of BESCOM are retained as there is no trend available for this category.

**Based on the above approach, the total number of installations (excluding BJ/KJ and IP sets installations) estimated by the Commission works out to 8761970 as against the BESCOM's estimate of 8792505.**

**ii) Energy Sales:**

For categories other than BJ/KJ and IP sets, generally the sales are estimated considering the following approach:

- a. The base year sales for FY15 are estimated duly considering the actual sales upto November, 2014 and the sales for the remaining period are estimated based on the previous year growth rate for the same period except in the case of LT-2(a), LT-4(b) and (c), LT-6 Street lights, LT-7, HT-2(c) and HT-5 categories. For LT-2(a) categories, the sales are estimated on pro-rata basis and for LT-6 Street lights categories, sales is estimated considering the specific consumption per installation of FY14. For LT-4(b) and (c), LT-7, HT-2(c) and HT-5 categories, estimates of BESCOM are retained.
- b. Wherever the sales estimated by BESCOM for FY16 is within the range of the estimates based on the CAGR for the period FY09 – FY14 and for the period FY11 - FY14, the estimates of BESCOM are retained.
- c. Wherever the sales estimated by BESCOM for FY16 is lower than the estimates based on the CAGRs for the period FY09 – FY14 and for the period FY11- FY14, the estimate based on the lower of the CAGRs are considered.
- d. Wherever sales estimated by BESCOM for FY16 is higher than the estimates based on the CAGRs for the period FY09 – FY14 and for the period FY11 - FY14, the estimate based on the higher of the CAGRs are considered.

However, the Commission has adopted the following approach to the categories mentioned below:

- a. For LT-2(a), LT-3 and LT-6 Street lights categories, the specific consumption per installation as per FY14 data is considered to arrive at the estimates.

- b. For LT-7 and HT-5 categories, the estimates of BESCO are retained as the growth rate for this category is inconsistent.
- c. For LT-4(b) and 4(c) categories, the estimates are based on the specific consumption of FY15. (As BESCO has not indicated any increase in sales to these categories even though it has indicated increase in the number of installations).
- d. For HT-2(C)category, the estimates of BESCO are retained as there is no trend available for this category

**Based on the above approach, the sales to categories other than BJ/KJ and IP sets works out to 19658 MU against BESCO's estimate of 19657 MU.**

**a) Sales to BJ/KJ and IP sets categories:**

**i) Sales to BJ/KJ installations:**

As per the replies furnished by BESCO to the preliminary observations the break-up of installations and the energy consumption for FY14 is as indicated below:

<b>Particulars</b>	<b>No. of Installations</b>	<b>Consumption in MU</b>	<b>Specific consumption per installation per month (kWh)</b>
Installations consuming less than 18 units	529699	51.06	8.03
Installations consuming more than 18 units and billed under LT2(a)	202331	72.81	29.98

Considering the number of installations as proposed by BESCO, for installations consuming less than 18 units, the sales in FY16 would be 58.64 MU, with a Specific consumption per installation per month at 8.03 units.

Further, the consumption pertaining to the remaining BJ/KJ installations consuming more than 18 units in FY16 works out to 57.10 MU [i.e. specific consumption of 29.98 units per installation per month], which is indicated separately.

**iii) Sales to IP Sets**

The Commission had fixed a specific consumption as 8,284 units / installation / annum for the control period of FY14 to FY16 by considering the existence of unauthorized IP Sets in the distribution system. However, as per the actual data of Sales to IP Sets during FY14, BESCO has reported Sales of 5,238.1 MU against 6,91,785 numbers of IP set installations, which translates into a specific consumption of 7,795 units / installation / annum. It is observed that the actual specific consumption reported by the BESCO for FY14 is less than the approved figure by 489 units /installation/annum which can be attributed to the fact that a large number of agriculture feeders segregated under NJY have been commissioned, regulating the power supply to IP Sets during the year which could have contributed to reduction in the agricultural consumption. In absolute terms also, the sales to IP Sets for FY14 as reported by the BESCO is 5,238.1 MU as against the Commission's approved sales quantity of 5,775.89 MU for the same year. This indicates a decrease in sales to an extent of 537.79 MU which can be clearly attributed to regulation of power supply on Agriculture feeders. In view of this, the Commission is unable to consider the specific consumption of 8,284 units/installation/annum for projections of IP Set Sales in FY16, which was approved in the previous Tariff Orders for the control period of FY14 to FY16. Instead, the Commission decides to revise the specific consumption for FY16 as 7,795 units / installation / annum which has been achieved by BESCO in FY14 as against 8,284 units / installation / annum approved by the Commission for the control period of FY14 to FY16.

It is noted that the number of IP Set installations projected by the BESCO for FY16 in the present Tariff filing is 7,29,150 taking into consideration of number of un-authorized IP sets to be regularized and the growth of installations. In view of this, the Commission has considered the figures furnished by the BESCO for F16. Hence, based on the estimated number of installations for FY15 and FY16, the midyear number of installations is determined and the Sales to IP Set consumers are indicated as below:

Particulars	As per filing by BESCOM	As approved by the Commission
No. of IP Set installations for FY 15	7,14,150	7,14,150
No. of IP Set installations for FY 16	7,29,150	7,29,150
Mid Year No. of Installation for FY 16	7,21,650	7,21,650
Specific consumption in units / installation / annum	8,370	7,795
Sales in MU	6,040.28	5,625.26

As per the above discussion, the Commission approves 5,625.26 MU as energy sales to IP sets as against the BESCOM's sales projections of 6,040.28 MU for FY16. However, any variation in sales would be trued up during the Annual Performance Review for FY16.

As discussed in the preceding chapter on APR for FY14, BESCOM has already segregated 462 numbers of agriculture feeders from rural loads under NJY and in future the energy consumed by the IP sets could be more accurately measured at the 11 KV feeder level at the sub-stations after duly allowing for 11 KV and LT distribution system losses. The BESCOM is directed to report the total IP Set consumption on the basis of data from agriculture feeder energy meters only instead of assessing the IP set consumption based on the readings taken from energy meters fixed to DTCs feeding predominantly IP sets loads. BESCOM is also directed to furnish feeder wise IP Sets consumption based on feeder energy meter data to the Commission every month in respect of agriculture feeders segregated under NJY.

Based on the above discussions, the category-wise approved sales vis-à-vis the estimates made by BESCOM is indicated as below:

**TABLE – 5.6**  
**Approved Sales for FY16**

Category	Sales for FY-16		No. of installation for FY-16	
	Approved MU	BESCOM's estimate MU	Approved Nos.	BESCOM's estimate Nos.
LT-2a*	5824.79	5928.80	6871371	6899538
LT-2b	43.07	41.39	10745	10745
LT-3	1712.49	1705.62	918961	918945
LT-4 (b)	3.71	3.07	747	747
LT-4 (c)	6.11	5.40	1681	1681
LT-5	1167.20	1132.12	184558	184558

LT-6	474.54	473.21	67478	69335
LT-6	449.53	394.45	62114	62488
LT-7	167.43	167.43	630641	630641
HT-1	743.65	814.59	211	217
HT-2 (a)	5804.90	5750.45	6221	6339
HT-2 (b)	2969.56	2928.82	5730	5730
HT2C	89.68	89.68	446	446
HT-3(a)& (b)	18.98	45.85	35	36
HT-4	116.07	109.75	299	326
HT-5	66.30	66.30	733	733
BJ/KJ	58.64	89.98	608296	608296
IP	5625.26	6040.28	729150	729150
<b>Total</b>	<b>25341.90</b>	<b>25787.19</b>	<b>10099416</b>	<b>10129951</b>

\*Includes BJ/KJ consuming more than 18 units per month

Thus the Commission decides to approve sales of 25341.90 MU for FY16.

### 5.2.3 Distribution Losses for FY16:

#### BESCOM's Submission:

As per the audited accounts for FY14, BESCOM has reported distribution loss of 13.89% as against an approved loss level of 13.80%. The Commission in its Tariff Order dated 6<sup>th</sup> May, 2013 had fixed the target level of loss for FY16 at 13.40%. BESCOM in its filing has proposed to achieve a loss level of 13.40% for FY16.

#### Commission's Analysis and Decisions:

The performance of BESCOM in achieving the loss targets set by the Commission in the past five years is as follows:

**TABLE – 5.7**  
**Approved & Actual Distribution Losses-FY10 to FY14**

Particulars	FY10	FY11	FY12	Figures in % Losses	
				FY13	FY14
Approved Distribution losses	16.00	14.75	14.50	14.00	13.80
Actual distribution losses	15.09	14.48	14.46	14.20	13.89

From the above data, it is evident that BESCO has been able to bring down its distribution loss levels from 15.09% in FY10 to 13.89% in FY14 i.e. a reduction by 1.20%. Further, it has proposed loss levels of 13.40% as set by the Commission for FY16.

Reduction of distribution loss as proposed by BESCO should be possible with proposed Capital expenditure on new infrastructure / augmentation of existing infrastructure and capex incurred in the past.

**Therefore, considering the proposal of BESCO, the Commission retains the following range of distribution loss levels as specified in its Order dated 6<sup>th</sup> May, 2013:**

**TABLE – 5.8**  
**Approved Distribution Losses for FY16**

Figures in % Losses	
Particulars	FY16
Upper limit	13.60
<b>Average</b>	<b>13.40</b>
Lower limit	13.20

#### **5.2.4 Power Purchase for FY16:**

##### **BESCO's Proposal:**

In its application for revision of ARR for FY16, BESCO has proposed power purchases of 30985.19 MU amounting to Rs.12311.89 Crores for FY16. The revised projections including the transmission and system operating charges is indicated in the following table:

**TABLE – 5.9****Consolidated revised projections filed by BESCO**

Source	Revised Projections for FY-16 as per filings		
	Energy in MU (Million Unit)	Total Cost (Cr)	Cost per Kwh (Rs/Kwh)
KPCL Hydel Stations	3641.51	218.02	0.60
KPCL-Thermal Stations	10415.42	4131.47	3.97
Total	14056.93	4349.49	3.09
CGS	7340.55	2523.68	3.44
Major IPPs	4992.53	2143.55	4.29
Minor-IPPs (NCE Projects)	3555.32	1385.21	3.90
Other States Projects	80.89	32.34	4.00
Contingent Power purchases (Short term/Medium term/Exchange Purchases)	958.97	499.01	5.20
Transmission Charges		1377.09	
System Operating Charges		1.52	
<b>TOTAL</b>	<b>30985.19</b>	<b>12311.89</b>	<b>3.97</b>

**Commission's analysis and decisions;**

Based on the energy sales and the approved distribution and transmission losses in the system, as discussed in the preceding paragraphs, the energy requirement to be allowed for FY16 in respect of ESCOMs including HRECS is computed as follows:

**TABLE - 5.10****Energy requirement allowed for FY-16**

Particulars	BESCO	MESCO	CESC	HESCO & HRECS	GESCO	Total
<b>Energy at IF point (MU)</b>	29263.16	5086.65	6719.10	11466.77	7707.66	<b>60243.35</b>
<b>% Transmission Losses</b>	3.80	3.80	3.80	3.80	3.80	<b>3.80</b>
<b>Total Energy Requirement (MU)</b>	<b>30419.09</b>	<b>5287.58</b>	<b>6984.51</b>	<b>11919.71</b>	<b>8012.13</b>	<b>62623.02</b>

The above figure includes the projection of:

- (i) Hukeri Rural Electric Co-operative Society Limited: 249.29 MU and



(ii) Mangalore SEZ: 80.84 MU

It is seen from the above table that the quantum of power purchase is 62623.02 MU and the overall cost of power purchase for the entire state is estimated at Rs.22514.13 Crores.

The energy requirement of ESCOMs is being met by Karnataka Power Corporation Limited (KPCL), Central Generating Stations (CGS), Major Independent Power producers (Major IPPs) and Renewable Energy sources (Minor IPPs- NCE Sources). The available quantum of energy from these sources is projected by the Power Company of Karnataka Ltd., (PCKL) based on the data furnished by the Karnataka Power Corporation Ltd., Southern Region Power Committee and the State Load Despatch Centre.

The month wise availability of electricity in terms of Mega Watts and Million Units for FY16 has been furnished by PCKL. Except for the short term / medium term power purchase rates, the power purchase rates considered are the current rates admitted for payment by ESCOMs. The power purchase rates considered for the Short term / Medium term sources is at Rs.5.25 per unit, the current weighted average rate admitted by PCKL.

The Commission, while reviewing the power position and power purchase in State from time to time, approves short term/medium Term procurement at the rate determined through competitive bidding. During FY14, ESCOMs have purchased short-term power of 6483.66 MU out of the total procurement of 57724.78 MU, which accounts for 11.23% of the total quantum for the year. During FY13, the short-term power purchase was to the tune of 11046.36 MU out of total power purchase of 57182.73 MU, which accounts for 19.32% of the total power purchase for the year.

**Though the procurement of short term/medium term procurement has come down over the years, with a view to limit the cost of short-term power procurement, the Commission reiterates its earlier directive that, any short term/medium Term procurement of power over and above the rate Rs.4.50 per Kwh, shall be made by ESCOMs only with the prior approval of the Commission.**

Considering the ESCOMs' approved energy requirement of 62623.02 MU as indicated in the above Table 5.10, the available energy from individual sources for FY16 furnished by PCKL is assigned to each one of the ESCOMs as per the allocation made by the Government of Karnataka vide its order No: EN 47 PSR 2014, Bangalore dated 26.02.2015.

Any variations in actual quantum of energy and its cost against the quantum allocated as per the Government Order will be reviewed at the time of annual performance review of FY16.

Based on the above said energy requirement and the allocation given by GoK, the power purchase of BESCO from KPCL Generating stations, Central Generating Stations, Major IPPs, Minor IPPs, and Short term /medium term sources, for FY16 is worked out and consolidated as under table:

**TABLE - 5.11**  
**Approved Power Purchase for FY-16**

Source	Capacity Share in MW	Energy Share in %	Energy in MU (Million Unit)	Fixed charges (Crs)	Energy charges (Crs)	Total Cost (Crs)	Cost per Kwh (Rs/Kwh)
KPCL Hydel Stations	1076.47	26.62	3314.70	46.71	158.83	205.55	0.62
KPCL-Thermal Stations	2586.56	53.21	10793.62	986.72	3227.40	4214.12	3.90
KPCL Stations	4428.81	43.10	14108.32	1033.44	3386.23	4419.67	3.13
CGS	0.00	50.59	7265.97	494.91	1734.32	2229.28	3.07
Major IPPs	0.00	66.90	4992.75	867.24	1195.96	2063.20	4.13
Minor-IPPs (NCE Projects)	0.00	50.15	3277.10	0.00	1202.25	1202.25	3.67
Other States Projects	0.00	45.95	80.90	0.00	14.56	14.56	1.80
Contingent Power purchases (Short term/Medium term/Exchange Purchases)	0.00	51.32	694.06	0.00	364.38	364.38	5.25
Transmission Charges	0.00	0.00	0.00	1531.00	0.00	1531.00	0.00
System Operating Charges	0.00	0.00	0.00	15.81	0.00	15.81	0.00
<b>TOTAL</b>	<b>4428.81</b>	<b>48.57</b>	<b>30419.09</b>	<b>3942.40</b>	<b>7897.71</b>	<b>11840.15</b>	<b>3.89</b>

Source wise approved power purchase of ESCOMs in total and of BESCO for FY16 is shown in Annexure-1 and Annexure-2 respectively.

Any shortfall in the availability of energy beyond the above said approved quantum, shall be met through short term / medium term procurement through competitive bidding, on prior approval of the Commission.

The Commission notes that, consequent to the variation in actual quantum of power purchase against the quantum allocated as per GoK Order, inter- ESCOM power purchases have to be settled among ESCOMs. For settlement of inter ESCOM power purchase dues; no mechanism has been put in place. If the inter ESCOMs claims are not settled, it will lead to serious cash flow problems as well as distortion in the revenue/expenditure of the ESCOMs concerned. The Commission has therefore decided that, the inter ESCOM dues as agreed and confirmed by them should be paid out of the subsidy to be released from Government in respect of the power supply made by ESCOMs to IP set consumers and directs ESCOMs to furnish the details of payables in respect of other ESCOMs to the Government so as to enable the Government to effect necessary adjustments in the subsidy payable to ESCOMs and to ensure that there are no inter ESCOM payments outstanding in their accounts at the end of each year.

#### **5.2.5 O & M Expenses:**

##### **BESCOM's Proposal:**

BESCOM in its filing has requested the Commission to consider an inflation index of 7.462% and allow O & M expenses of Rs.1233.40 Crores for FY16.

BESCOM has considered the approved formula for determination of O & M expenses for the control period duly considering the weighted inflation index and the compounded annual growth rate of consumers. Accordingly, the O & M expenses projected for the control period are as follows:

**TABLE – 5.12****O & M Expenses - BESCO's Proposal**

Amount in Rs.Crs		
'O&M Cost t'	O&M cost of the Financial year	FY16
O&M Cost t-1	O&M Cost of the previous year	1110.95
WII	Weighted inflation index of CPI and WPI	7.462
CGI	Consumer growth index linked to CAGR	4.56%
X	Efficiency factor of BESCO	1%
<b>Total O&amp;M Expenses</b>		<b>1233.40</b>

**Commission's analysis & decision:**

As per the norms specified under the MYT Regulations, the Commission has computed the O & M expenses for FY16 duly considering the actual O & M expenses for the base year FY13.

The Commission notes that, the actual O& M expenses allowed for FY13 were Rs.901.15 Crores. Considering the Wholesale Price Index (WPI) as per the data available from the Ministry of Commerce & Industry, Government of India and Consumer Price Index (CPI) as per the data available from the Labour Bureau, Government of India and adopting the methodology followed by CERC with CPI and WPI in a ratio of 80 : 20, the allowable inflation for FY16 is computed as follows:

**TABLE – 5.13**  
**Computation of Inflation Index for FY16**

Year	WPI	CPI	Composite Series	Yt/Y1=Rt	Ln Rt	Year (t-1)	Product [(t-1)* (LnRt)]
2002	87.92	103	99.98				
2003	92.6	107	104.12	1.04	0.04	1	0.04
2004	98.72	111	108.54	1.09	0.08	2	0.16
2005	103.37	116	113.47	1.13	0.13	3	0.38
2006	109.59	123	120.32	1.20	0.19	4	0.74
2007	114.94	131	127.79	1.28	0.25	5	1.23
2008	124.92	142	138.58	1.39	0.33	6	1.96
2009	127.86	157	151.17	1.51	0.41	7	2.89
2010	140.08	176	168.82	1.69	0.52	8	4.19
2011	153.35	192	184.27	1.84	0.61	9	5.50
2012	164.93	209	200.19	2.00	0.69	10	6.94
2013	175.35	232	220.67	2.21	0.79	11	8.71
A= Sum of the product column							32.75
B= 6 Times of A							196.49

$C = (n-1)*n*(2n-1)$ where n= No of years of data=12	3036
$D=B/C$	6.47%
$g(\text{Exponential factor}) = \text{Exponential}(D)-1$	6.69%
$e = \text{Annual Escalation Rate } (\%) = g*100$	6.69

For the purpose of determining the normative O & M expenses for FY16, the Commission has considered the following:

- e) The actual O & M expenses for FY13 inclusive of contribution to Pension and Gratuity Trust.
- f) The three year compounded annual growth rate (CAGR) of the number of installations considering the actual number of installations as per audited accounts up to FY14 and as projected by BESCO for FY15 and FY16.
- g) The weighted inflation index (WII) at 6.69% as computed above.
- h) Efficiency factor at 1% as considered in the earlier two control periods.

Accordingly, the normative O & M expenses approved for FY16 are as follows:

**TABLE – 5.14**  
**Approved O & M expenses for FY16**

Particulars	FY16
No. of Installations	10099416
Weighted Inflation Index (WII)	6.69%
Consumer Growth Index (CGI) based on 3 Year CAGR	6.73%
Actual O & M expenses for FY13 in Rs.Crs	901.15
<b>O&amp;M expenses in Rs. Crs</b>	<b>1205.01</b>

**Thus, the Commission decides to approve O&M expenses of Rs.1205.01 Crores for FY16.**

#### **5.2.6 Depreciation:**

BESCO, in its ARR application has retained the depreciation of Rs.229.71 Crores as approved by the Commission in the MYT Order dated 6<sup>th</sup> May, 2013.

### Commission's analysis and decision:

In accordance with the provisions of the MYT Regulations and amendments thereon, the Commission has determined the depreciation for FY16 considering the following:

- a) The actual rate of depreciation of category wise assets is determined considering the depreciation and gross block of opening and closing balance of fixed assets as per audited accounts for FY14.
- b) This actual rate of depreciation is considered on the gross block of fixed assets projected by BESCO in its filing.
- c) The depreciation on account of assets created out of consumers contribution / subsidies are considered (deducted) as proposed by BESCO.

Accordingly, the depreciation for FY16 is as follows:

**TABLE – 5.15**  
**Approved Depreciation for FY16**

Amount in Rs. Crs	
Particulars	FY16
Buildings	2.76
Civil	0.14
Other Civil	0.05
Plant & M/c	77.44
Line, Cable Network	227.76
Vehicles	1.11
Furniture	0.56
Office Equipments	0.51
<b>Sub Total</b>	<b>310.35</b>
Less Depreciation on assets created from Consumer contribution/grants	143.04
<b>Depreciation for FY16</b>	<b>167.31</b>

**The Commission, therefore decides to approve an amount of Rs.167.31 Crores towards depreciation for FY16.**

## 5.2.7 Interest and Finance Charges:

### BESCOM's proposal:

BESCOM in its application has stated that, the Interest and Finance charges as approved by the Commission in the MYT Order dated 6<sup>th</sup> May, 2013 is retained. However, in format D9, BESCOM has claimed interest on loan of Rs.252.71 Crores as against the earlier approved amount of Rs.195.31 Crores. Thus BESCOM has claimed interest and finance charges of Rs.747.50 Crores as against an amount of Rs.690.09 Crores approved by the Commission in the MYT Order dated 6<sup>th</sup> May, 2013. The breakup of these interest and finance charges is as follows:

**TABLE – 5.16**

### Interest and finance charges for FY16 – BESCOM Proposal

Amount in Rs. Crs	
Particulars	FY16
Interest on Loan Capital	252.71
Interest on Working Capital	316.64
Interest on Consumers Deposit	210.51
Other Interest & Finance Charges	7.63
Less Interest and other expenses capitalised	39.99
<b>Total Interest &amp; Finance Charges</b>	<b>747.50</b>

## 5.2.8 Interest on Loans:

BESCOM has requested the Commission to approve interest on loans of Rs.252.71 Crores for FY16. The data as per Format D9 are as follows:

**TABLE – 5.17**

### Interest on Loan– BESCOM's Proposal

Amount in Rs. Crs	
Particulars	FY16
Opening balance of loans	4697.86
Addition of new loans	604.10
Less repayment	102.52
Closing balance of loans	5199.45
<b>Interest on loan</b>	<b>252.71</b>

### Commission's analysis and decision:

As per APR of FY14, BESCO had incurred weighted average rate of interest of 8.22% on long term loans. The Commission notes that, BESCO has proposed new loans of Rs.604.10 Crores as against the approved capex amount of Rs.627.00 Crores for FY16. BESCO in its application has stated that it has not changed the capital investment plan and hence it has retained the figures approved by the Commission for interest and finance charges. However, though BESCO has also indicated the proposed revised capex of Rs.2050.00 Crores, the figures in the corresponding formats have not been revised. Thus, the Commission has considered new loans of Rs.438.90 Crores which is 70% of the proposed capex of Rs.627.00 Crores for the purpose of computing interest on new loans. Further, the Commission has considered weighted average rate of interest as per actuals in FY14 for existing loans in FY16 and normative interest of 12% per annum for new loans in FY16.

The approved interest on loans for FY16 is as follows:

**TABLE – 5.18**  
**Approved Interest on Loans for FY16**

Particulars	Amount in Rs. Crs
	FY16
Opening balance of existing Loans	2914.98
Less Repayments	102.52
Total existing loan at the end of the year	2812.46
Average existing Loan	2863.72
Interest on existing loan at weighted average rate of interest of 8.22% as per actuals of FY14	235.26
New Loans at 70% of the capex of Rs.627 Crores	438.90
Interest on new loans at 12% p.a.	26.33
<b>Approved Interest on long term loans</b>	<b>261.59</b>

**Hence, the Commission hereby allows interest on loans of Rs.261.59 Crores for FY16**

### 5.2.9 Interest on Working Capital:

BESCO has claimed interest on working capital of Rs.316.64 Crores as approved by the Commission in its MYT Order dated 6<sup>th</sup> May, 2013.

### Commission's analysis and decision:



As per the norms specified under the MYT Regulations, the Commission has computed the interest on working capital which consists of one month's O & M expenses, 1% of opening GFA and two month's revenue. The Commission has considered the rate of interest at 11.75% p.a. Accordingly, the approved interest on working capital is as follows:

**TABLE – 5.19**

**Approved Interest on Working Capital for FY16**

Amount in Rs. Crs	
Particulars	FY16
One-twelfth of the amount of O&M Exp.	100.42
Opening GFA	6224.84
Stores, materials and supplies 1% of Opening balance of GFA	62.25
One-sixth of the Revenue	2286.41
Total Working Capital	2449.07
Rate of Interest (% p.a.)	11.75%
<b>Interest on Working Capital</b>	<b>287.77</b>

**The Commission decides to approve interest on Working capital at Rs.287.77 Crores for FY16.**

**5.2.10 Interest on Consumer Deposits:**

BESCOM in its filing has claimed an amount of Rs.210.51 Crores for FY16 as interest on consumer deposits as approved by the Commission in its Tariff Order dated 6<sup>th</sup> May, 2013.

**Commission's analysis and decision:**

In accordance with the KERC (Interest on Security Deposit) Regulations 2005, the interest rate to be allowed is the bank rate prevailing on the 1<sup>st</sup> of April of the relevant year. As per Reserve Bank of India notification dated 15<sup>th</sup> January, 2015, the bank rate is 8.75%. Accordingly, the Commission has considered such bank rate of 8.75% per annum for computation of interest on consumer deposits.

The Commission has considered the deposits as per audited accounts of FY14 and projected deposits for FY15 & FY16 on normative basis considering the past annual increase in deposits and has computed the allowable interest on consumer deposits as shown below:

**TABLE – 5.20**  
**Approved Interest on Consumer Deposits for FY16**

Amount in Rs. Crs	
Particulars	FY16
Average consumer deposits for FY16	2798.79
Rate of Interest at bank rate to be allowed as per regulations	8.75%
<b>Approved Interest on Consumer Deposits</b>	<b>244.89</b>

**Thus the Commission decides to approve Rs.244.89 Crores as interest on consumer deposits for FY16.**

#### **5.2.11 Other Interest and Finance Charges:**

BESCOM has claimed an amount of Rs.7.63 Crores towards other interest and finance charges. Keeping in view the expenditure on this item in the earlier years, the Commission decides to allow the same.

#### **5.2.12 Interest and other expenses Capitalised**

BESCOM has claimed an amount of Rs.39.99 Crores towards capitalization of interest and other expenses. Considering, the capital expenditure incurred and capitalized in the previous years, the Commission decides to allow an amount of Rs.50.00 Crores towards capitalization of interest and other expenses during FY16.

The abstract of approved interest and finance charges are as follows:

**TABLE – 5.21**  
**Abstract of approved Interest and finance charges for FY16**

Amount in Rs. Crs	
Particulars	FY16
Interest on Loan Capital	261.59
Interest on Working Capital	287.77
Interest on Consumers Deposits	244.89
Other Interest & Finance Charges	7.63
Less Interest & other expenses capitalised	50.00
<b>Total Interest &amp; Finance Charges</b>	<b>751.88</b>

### 5.2.13 Return on Equity:

BESCOM in its filing has computed RoE of Rs.105.40 Crores by considering an equity amount of Rs.679.99 Crores at 19.377%.

#### **Commission's analysis and decision:**

For the purpose of computing the RoE, the Commission has considered the actual amount of share capital, share deposits and reserves & surplus as per the audited accounts for FY14 as base values for arriving at the allowable RoE for FY16. Further, the Commission, in accordance with the provisions of the MYT Regulations has considered 15.5% of Return on Equity duly grossed up with the applicable Minimum Alternate Tax (MAT) of 20.00775%. This works out to 19.377% per annum. Further, in accordance with the Order of the Hon'ble ATE in Appeal No.46 of 2014 dated 17<sup>th</sup> September, 2014 an amount of Rs.100 Crores is deducted as recapitalized consumer security deposit as networth. Thus, the approved Return on Equity for FY16 is computed as follows:

**TABLE – 5.22**  
**Computation of RoE for FY16**

Amount in Rs. Crs	
Particulars	FY16
Paid Up Share Capital	546.92
Share Deposit	133.08
Less Re-capitalised consumer security deposit as networth	100.00
Reserves and Surplus	(589.21)
Total Equity	(9.22)
<b>Approved RoE with MAT (19.377%)</b>	<b>0.00</b>

Considering the negative networth of Rs.9.22 Crores as at the beginning of the year, the Commission decides not to allow any return on equity for FY16.

Further, in compliance to the Order of the Hon'ble ATE in appeal No. 46 of 2014, wherein it is directed to indicate the opening and closing balance of gross fixed assets along with break-up of equity and loan component in the tariff order hence forth, the details of GFA, debt and equity (Networth) for FY16 are as follows:

**TABLE – 5.23**  
**Debt and Equity component of GFA – FY16**

Particulars	Estimated GFA	Estimated Debt	Estimated Equity (Networth)	Normative Debt @ 70% of GFA	Normative Equity (Networth) @ 30% of GFA	% of actual Debt on GFA	% of actual Equity (Networth) on GFA
Opening balance	6231.08	2914.98	-9.22	4361.76	1869.32	46.78%	Negative
Closing balance	6720.18	3251.36	-9.22	4704.13	2016.05	48.38%	Negative

From the above table it is evident that the estimated debt is 48.38% as against normative debt of 70% on closing balance of GFA. Also the estimated equity (networth) is negative as against normative equity of 30%. Hence, the RoE on equity (Networth) has not been allowed as per Regulations.

Since the above data is based on the estimations, the Commission will review the same based on the actual data at the time of Annual Performance Review for FY16.

#### **5.2.14 Other Income:**

BESCOM has claimed an amount of Rs.197.52 Crores as other income for FY16 as approved by the Commission in the MYT Order dated 6<sup>th</sup> May, 2013. This item mainly includes income from incentives, miscellaneous recoveries, interest on bank deposits, rent from staff quarters and sale of scrap. The actual 'other income' as per the audited accounts for FY14 is Rs.205.93 Crores. **Hence, the Commission decides to approve an amount of Rs.219.44 Crores as other income for FY16.**

#### **5.2.15 Fund towards Consumer Relations / Consumer Education:**

The Commission has been allowing an amount of Rs.1.00 Crore per year towards consumer relations / consumer education. This amount is earmarked to conduct consumer awareness and grievance redressal meetings periodically and to institutionalize a mechanism for addressing common problems of the consumers. The Commission has already issued guidelines for consumer education and grievance redressal activities, and is monitoring its implementation.

The Commission decides to continue providing an amount of Rs.1.00 Crore for FY16 towards meeting the expenditure on consumer relations / consumer education.

The Commission directs BESCO to furnish a detailed plan of action for utilization of this amount within two months from the date of issue of this Tariff Order and also maintain a separate account of these funds and furnish the same at the time of APR.

### **5.3 Abstract of ARR for FY16:**

In the light of the above analysis and decisions of the Commission, the following is the approved ARR for the control period FY16:

TABLE – 5.24

## Revised Approved consolidated ARR for FY16

Amount in Rs. Crs.

Sl. No	Particulars	FY16		
		As Appd 06.05.2013	As Filed 08.12.2014	Revised Appd
	<b>Revenue at existing tariff in Rs Crs.</b>			
1	Revenue from tariff and Misc. Charges		12252.12	12545.09
2	Tariff Subsidy		1298.63	1173.36
3	<b>Total Existing Revenue</b>		<b>13550.75</b>	<b>13718.45</b>
	<b>Expenditure in Rs Crs.</b>			
4	Power Purchase Cost	13808.9	11248.88	10608.94
5	Transmission charges of KPTCL	1305.62	1063.00	1216.91
6	SLDC Charges	10.53		14.29
7	<b>Power Purchase Cost including cost of transmission</b>	<b>15125.05</b>	<b>12311.88</b>	<b>11840.15</b>
8	Employee Cost		962.05	
9	Repairs & Maintenance		61.67	
10	Admin & General Expenses		209.68	
11	<b>Total O&amp;M Expenses</b>	<b>1161.05</b>	<b>1233.40</b>	<b>1205.01</b>
12	Depreciation	229.71	229.71	167.31
	<b>Interest &amp; Finance charges</b>			
13	Interest on Loans	195.31	252.71	261.59
14	Interest on Working capital	316.64	316.64	287.77
15	Interest on belated payment on PP Cost	0.00	0.00	0.00
16	Interest on consumer deposits	210.51	210.51	244.89
17	Other Interest & Finance charges	7.63	7.63	7.63
18	Less interest & other expenses capitalised	40.00	39.99	50.00
19	<b>Total Interest &amp; Finance charges</b>	<b>690.10</b>	<b>747.50</b>	<b>751.88</b>
20	Other Debits	0.00	0.00	0.00
21	Net Prior Period Debit/Credit	0.00	0.00	0.00
22	RoE	114.93	105.4	0.00
23	Provision for taxation	0.00	0.00	0.00
24	Funds towards Consumer Relations/Consumer Education	1.00	1.00	1.00
25	Other Income	197.52	197.52	219.44
26	<b>ARR</b>	<b>17124.32</b>	<b>14431.37</b>	<b>13745.91</b>
27	Deficit for FY14 carried forward		-839.88	-367.33
28	Regulatory asset for FY13		-342.16	-305.50
29	<b>Net ARR</b>	<b>17124.32</b>	<b>15613.41</b>	<b>14418.74</b>

#### 5.4 Segregation of ARR into ARR for Distribution Business and ARR for Retail Supply Business:

As considered by the Commission in its MYT Order dated 6<sup>th</sup> May, 2013, the consolidated ARR is segregated into ARR for Distribution Business and ARR for Retail Supply Business based on the following allocation:

**TABLE – 5.25**  
**Segregation of ARR**

Particulars	Distribution Business	Retail Supply Business
O&M	56%	44%
Depreciation	88%	12%
Interest on Loans	100%	0%
Interest on Consumer Deposits	0%	100%
RoE	50%	50%
GFA	88%	12%
Non-Tariff Income	19%	81%

Accordingly, the following is the approved ARR for Distribution Business and Retail supply business:

**TABLE – 5.26**  
**APPROVED REVISED ARR FOR DISTRIBUTION BUSINESS**

Amount in Rs. Crs.

Sl. No	Particulars	FY16
1	O&M Expenses	674.81
2	Depreciation	147.23
	<b>Interest &amp; Finance Charges</b>	
3	Interest on Loans	261.59
4	Interest on Working capital	31.85
5	Interest on consumer deposits	0.00
6	Other Interest & Finance charges	7.63
7	Less interest & other expenses capitalised	50.00
8	Other Debits (incl. Prov for Bad debts)	
9	Extraordinary Items	
10	Other (Misc.)-net prior period credit	
	<b>Total</b>	<b>1073.11</b>
11	ROE	0.00

12	Other Income	41.69
13	Provision for taxes	0.00
	<b>NET ARR</b>	<b>1031.42</b>

**TABLE – 5.27**  
**APPROVED ARR FOR RETAIL SUPPLY BUSINESS**

Amount in Rs.Crs.

Sl. No	Particulars	FY16
1	Power Purchase	10623.23
2	Transmission Charges	1216.91
3	O&M Expenses	530.20
4	Depreciation	20.08
	<b>Interest &amp; Finance Charges</b>	
5	Interest on Loans	0.00
6	Interest on Working capital	255.92
7	Interest on consumer deposits	244.89
8	Other Interest & Finance charges	0.00
9	Less interest & other expenses capitalised	0.00
10	Other Debits (incl. Prov for Bad debts)	0.00
11	Extraordinary Items	0.00
12	Other (Misc.)-net prior period credit	0.00
	<b>Total</b>	<b>12891.24</b>
13	ROE	0.00
14	Other Income	177.75
15	Provision for taxes	0.00
16	Fund towards Consumer Relations / Consumer Education	1.00
	<b>NET ARR</b>	<b>12714.49</b>

### 5.5 Gap in Revenue for FY16:

The Commission had, in its Tariff Order issued on 12<sup>th</sup> May, 2014, determined an unfilled revenue gap of Rs. 1559.31 Crores in respect of BESCO for FY15. Out of this, an amount of Rs. 948.31 Crores was built into the revised tariff for FY15. The remaining uncovered gap of Rs. 611 Crores was set apart as Regulatory Asset, to be recovered over two years, i.e., FY16 and FY17. As discussed in Chapter-IV of this Order, Rs. 367.33 Crores of unfilled revenue gap for FY14 is also to be added to the above gap of Rs.611 Crores for being recovered in the coming financial years. Considering the approved ARR for FY2016 at



Rs.13745.91 Crores and the estimated revenue at the existing tariff of Rs.13718.45 Crores, the gap in revenue for FY16 will be Rs.27.46 Crores. Thus, the total gap in revenue in FY16 amounts to Rs.1005.79 Crores.

The Commission has noted that the cost of procurement of power, which went up substantially between FY11 and FY13, has since stabilized and has shown a marginal decline in the years FY14 and FY15. There are also indications of a significant decline over the next two years in the cost of procurement of power, particularly from thermal power stations, due to the declining trend in prices of imported coal. Even though this may be somewhat offset by the increased cost of power procured from renewable sources of energy, particularly the solar and wind energy sources, the overall unit cost of power to be procured over the next two years is likely to remain stable or show a marginal decline.

For the above reasons, the Commission considers it advisable to spread the recovery of the unfilled revenue gap of Rs.1005.79 Crores to be recovered in the two years of FY16 and FY17 to ensure a more even trajectory of tariff determination. Therefore, the Commission proposes that the gap to be filled by increase in tariff for FY16 should be limited to Rs.455.86 Crores in the case of BESCO. The tariff at the rate as determined for FY16 will be approximately adequate to recover the remaining unfilled gap of Rs. 549.93 Crores during FY17.

Further, the Commission while reviewing the prudence of capital investment for FY10 to FY14 as discussed in Chapter 4 of this order has decided to disallow the following amount towards imprudent investments:

Sl. No.	Particulars	Amount in Rs.Crs.
1	Disallowance of interest and finance charges and depreciation on imprudent investments in FY10 – 12	2.36
2	Disallowance of interest and finance charges and depreciation on imprudent investments in FY13 – 14	5.60
	<b>TOTAL</b>	<b>7.96</b>

Thus the Regulatory Asset to be carried forward for FY17 will be Rs.541.97 Crores.

In the light of the above analysis, the Commission determines the additional revenue to be raised by revision of tariff for FY16 at Rs. 455.86 Crores. The net ARR and the gap in revenue for FY16 are shown in the following table:

**TABLE – 5.28**  
**Revenue gap for FY16**

Particulars	FY16
Net ARR including carry forward gap of FY14 (in Rs. Crores)	14418.74
Approved sales (in MU)	25341.90
Average cost of supply for FY16 (in Rs./unit)	5.69
Revenue at existing tariff (in Rs. Crores)	13718.45
Gap in revenue for FY16 (in Rs. Crores)	700.29
Regulatory asset to be recovered in FY17 (in Rs. Crores)	541.97
<b>Balance revenue gap to be collected by revision of tariff for FY16 (in Rs. Crores)</b>	<b>455.86</b>
<b>Average cost of supply for FY16 (in Rs./unit) (Without Regulatory Asset)</b>	<b>5.59</b>

The determination of revised retail supply tariff on the basis of the above approved ARR is detailed in the following Chapter. The additional revenue from the revision of tariff to different categories of consumers other than IP sets and BJ/KJ households is estimated at Rs.455.86 Crores.

## CHAPTER – 6

### DETERMINATION OF TARIFF FOR FY16

#### 6.0 BESCO'S Proposal and Commission's Analysis for FY16:

#### 6.1 **Tariff Application**

As discussed in the preceding Chapters, BESCO has projected an unmet gap in revenue of Rs.2062.66 Crores for FY16. In order to bridge this gap in revenue, BESCO, in its Tariff Application, has proposed a tariff increase of 80 paise per unit in respect of all the categories of consumers.

#### 6.2 **Statutory Provisions guiding determination of Tariff**

As per Section 61 of the Electricity Act 2003, the Commission is guided inter-alia, by the National Electricity Policy, the Tariff Policy and the following factors, while, determining the tariff:

- that the distribution and supply of electricity are conducted on commercial basis;
- that competition, efficiency, economical use of resources, good performance, and optimum investment are encouraged;
- that the tariff progressively reflects the cost of supply of electricity, and also reduces and eliminates cross subsidies within the period to be specified by the Commission;
- that efficiency in performance is to be rewarded : and
- that a multi-year tariff framework is adopted:

Section 62(5) of the Electricity Act 2003, read with Section 27(1) of the KER Act 1999, empower the Commission to specify, from time to time, the methodologies and the procedure to be observed by the licensees in calculating the Expected Revenue from Charges (ERC). The Commission determines the Tariff in accordance with the Regulations and the Orders issued by the Commission from time to time.

#### 6.3 **Consideration for Tariff setting:**

The Commission has considered the following relevant factors for determination of retail supply tariff:

a) **Tariff Philosophy:**

As discussed in the earlier tariff orders, the Commission continues to fix tariff below the average cost of supply for consumers whose ability to pay is considered inadequate and fix tariff at or above the average cost of supply for categories of consumers whose ability to pay is considered to be higher. As a result the system of cross subsidy continues. However, the Commission has taken due care to progressively bring down the cross subsidy levels as envisaged in the Tariff Policy of the Government of India dated 6<sup>th</sup> January, 2006.

b) **Average Cost of Supply:**

The Commission has been determining the retail supply tariff on the basis of the average cost of supply. The KERC (Tariff) Regulations, 2000 require the licensees to provide details of embedded cost of electricity voltage / consumer category wise. The distribution network of Karnataka is such that, it is difficult to segregate the common cost between voltage levels. Therefore, the Commission has decided to continue the average cost of supply approach for recovery of the ARR. With regard to the indication of voltage wise cross subsidy with reference to the voltage wise cost of supply, the decision of the Commission is noted in the subsequent para of this Chapter.

c) **Differential Tariff:**

Beginning with its tariff order dated 25<sup>th</sup> November, 2009, the Commission has been determining differential retail supply tariff for consumers in urban and rural areas. The Commission decides to continue the same in the present order also.

#### **6.4 Revenue at existing tariff and deficit for FY16:**

The Commission in its preceding Chapters has decided to carry forward the gap in revenue of FY14 to the ARR of FY16. Further, the Commission has decided to set aside Rs.244.43 Crores as Regulatory Asset. The balance unmet gap in revenue for FY16 is

proposed to be filled up by revision of Retail Supply Tariff as discussed in the following paragraphs of this Chapter.

Considering the approved ARR for FY16 and the revenue as per the existing tariff, the gap in revenue for FY16 is as follows:

**TABLE – 6.1**  
**Revenue Deficit for FY16**

Amount Rs. in Crs.

Particulars	Amount
Approved Net ARR for FY16 including gap of FY14	14418.74
Revenue at existing tariff	13718.45
Surplus / deficit	(700.29)
Carried forward Regulatory Asset of FY15 proposed to be collected in FY17.	305.50
Total Deficit at the end of FY16.	(1005.79)
Additional Revenue to be realised by Revision of Tariff	455.86
Disallowances for imprudent expenditure	7.96
Regulatory Asset set aside for FY17 including the Regulatory Asset of FY15.	(541.97)

Accordingly, in this Chapter, the Commission has proceeded to determine the Retail Supply Tariff for FY16. The category-wise tariff as existing, as proposed by BESCO and as approved by the Commission are as follows:

## 1. LT-1 Bhagya Jyothi:

The existing tariff and the tariff proposed by BESCOM are given below:

Sl. No	Details	Existing as per 2014 Tariff Order	Proposed by BESCOM
1	Energy charges (including recovery towards service main charges)	536 Paise / Unit Subject to a monthly minimum of Rs.30 per installation per month.	616 Paise / Unit Subject to a monthly minimum of Rs.30 per installation per month.

### Commission's Views/ Decision

The GoK, as a policy, has extended free power to all BJ/KJ consumers, whose consumption is not more than 18 units per month. The tariff payable by these consumers is revised to Rs.5.59 per unit.

Further, the ESCOMs have to claim subsidy for only those consumers who consume 18 units or less per month per installation. If the consumption exceeds 18 units per month or any BJ/KJ installation is found to have more than one out let, it shall be billed as per the Tariff Schedule LT 2(a).

The Commission determines the tariff (CDT) in respect of BJ / KJ installations as follows:

#### LT – 1 Approved Tariff for BJ / KJ installations

Commission determined Tariff	Retail Supply Tariff determined by the Commission
559 paise per unit, Subject to a monthly minimum of Rs.30 per installation per month.	-Nil- Fully subsidized by GoK

**\*Since GOK is meeting the full cost of supply to BJ / KJ, the Tariff payable by these Consumers is shown as nil. However, if the GOK does not release the subsidy in advance, a Tariff of Rs.5.59 per unit subject to a monthly minimum of Rs.30 per installation per month shall be demanded and collected from these Consumers.**

**Note:** If the consumption exceeds 18 units per month or any BJ/KJ installation is found to have more than one light point being used, it shall be billed as per Tariff Schedule LT 2(a).

## 2. LT2 - Domestic Consumers:

## LT2 (a) Domestic Consumers:

### BESCOM's Proposal:

The details of the existing and proposed tariff under this category are given in the Table below:

### Proposed Tariff for LT-2 (a)

#### LT-2 a (i) Domestic Consumers Category

Applicable to areas coming under Bruhat Bangalore Mahanagara Palike (BBMP),  
Municipal Corporation and all Urban Local Bodies

Details	Existing as per 2014 Tariff Order	Proposed by BESCOM
Fixed Charges per Month	For the first KW Rs.25	For the first KW Rs.25
	For every additional KW Rs.35	For every additional KW Rs.35
Energy Charges 0-30 units (life line Consumption )	0 to 30 units:270 paise/unit	0 to 30 units: 350 paise/unit
Energy Charges exceeding 30 units per month	31 to 100 units:400 paise/unit	31 to 100 units: 480 paise / unit
	101 to 200 units:525 paise /unit	101 to 200 units:605 paise /unit
	Above 200 units:625 paise /unit	Above 200 units:705 paise /unit

#### LT-2(a) (ii) Domestic Consumers Category

Applicable to Areas under Village Panchayats

Details	Existing as per 2014 Tariff Order	Proposed by BESCOM
Fixed charges per Month	For the first KW Rs.15	For the first KW Rs.15
	For every additional KW Rs.25	For every additional KW Rs.25
Energy Charges 0-30 units ( life line Consumption )	0 to 30 units:260 paise /unit	0 to 30 units:340 paise /unit
Energy Charges	31 to 100 units:370 paise / unit	31 to 100 units:450 paise / unit

exceeding 30 Units per month	101 to 200 units: 495 paise /unit	101 to 200 units: 575 paise /unit
	Above 200 units: 575 paise /unit	Above 200 units:655 paise /unit

### Commission's decision

The Commission decides to continue the two tier tariff structure in respect of the domestic consumers as shown below:

- (i) Areas coming under Bruhat Bangalore Mahanagara Palike (BBMP) Area, Municipal Corporation and all Urban Local Bodies.
- (ii) Areas under Village Panchayats.

The Commission approves the tariff for this category as follows:

#### Approved Tariff for LT 2 (a) (i) Domestic Consumers Category:

**Applicable to Areas coming under Bruhat Bangalore Mahanagara Palike (BBMP) Area, Municipal Corporation and all Urban Local Bodies**

Details	Tariff approved by the Commission
Fixed charges per Month	For the first KW: Rs.25/-
	For every additional KW Rs.35/-
Energy Charges up to 30 units per month (0-30 units)- <b>life line consumption.</b>	Upto 30 units: 270 paise/unit
Energy Charges in case the consumption exceeds 30 units per month	31 to 100 units:400 paise/unit
	101 to 200 units:540 paise/unit
	Above 200 units: 640 paise/unit

#### Approved Tariff for LT-2(a) (ii) Domestic Consumers Category:

**Applicable to Areas under Village Panchayats**

Details	Tariff approved by the Commission
Fixed Charges per Month	For the first KW: Rs.15/-
	For every additional KW Rs.25/-
Energy Charges up to 30 units per month (0-30 Units)-	Upto 30 units: 260 paise/unit



<b>Lifeline Consumption</b>	
Energy Charges in case the consumption exceeds 30 units per month	31 to 100 units: 370 paise/unit
	101 to 200 units: 510 paise/unit
	Above 200 units: 590 paise/unit

**LT2 (b) Private and Professional Educational Institutions & Private Hospitals and Nursing**

**Homes :**

**BESCOM's Proposal:**

The details of the existing and the proposed tariff by BESCOM under this category are given in the Table below:

**LT 2 (b) (i) Applicable in BBMP Areas, Municipal Corporation Areas and all areas under urban Local Bodies**

<b>Details</b>	<b>Existing as per 2014 Tariff Order</b>	<b>Proposed by BESCOM</b>
Fixed Charges per Month	Rs.35 Per KW subject to a minimum of Rs.65 per month	Rs.35 Per KW subject to a minimum of Rs.65 per month
Energy Charges	For the first 200 units 600 paise per unit	For the first 200 units 680 paise per unit
	For the balance units 720 paise per unit	For the balance units 800paise per unit

**LT 2 (b)(ii) Applicable in Areas under Village Panchayats**

<b>Details</b>	<b>Existing as per 2014 Tariff Order</b>	<b>Proposed by BESCO</b>
Fixed Charges per Month	Rs.25 per KW subject to a minimum of Rs.50 per Month	Rs.25 per KW subject to a minimum of Rs.50 per Month
Energy Charges	For the first 200 units: 550 paise per unit	For the first 200 units:630 paise per unit
	For the balance units: 670 paise per unit	For the balance units:750 paise per unit

**Commission's decision**

As in the previous Tariff Order dated 12<sup>th</sup> May, 2014, the Commission decides to continue the tariff at two levels i.e.

- (i) BBMP Areas, Municipal Corporation Areas and Areas coming under urban local bodies.
- (ii) Areas under Village Panchayaths.

**Approved Tariff for LT 2 (b) (i) Private Professional and other private Educational Institutions, Private Hospitals and Nursing Homes  
Applicable in BBMP Areas, Municipal Corporation Areas and all areas coming under other urban Local Bodies**

<b>Details</b>	<b>Tariff approved by the Commission</b>
Fixed Charges per Month	Rs. 35 per KW subject to a minimum of Rs.65 per Month
Energy Charges	0-200 units: 600 paise/unit
	Above 200 units: 720 paise/unit

**Approved Tariff for LT 2 (b) (ii) Private Professional and other private Educational Institutions, Private Hospitals and Nursing Homes  
Applicable in Areas under Village Panchayats**

Details	Tariff approved by the Commission
Fixed Charges per Month	Rs. 25 per KW subject to a minimum of Rs. 50 per Month
Energy Charges	0-200 units: 550 paise/unit
	Above 200 units: 670 paise/unit

3. **LT3- Commercial Lighting, Heating & Motive Power:**

**BESCOM's Proposal:**

The existing and proposed tariff is as follows:

**LT- 3 (i) Commercial Lighting, Heating & Motive Power**

**Applicable in Areas coming under BBMP, Municipal Corporation and urban local bodies**

Details	Existing as per 2014 Tariff Order	Proposed by BESCOM
Fixed charges per Month	Rs.40 per KW	Rs.40 per KW
Energy Charges	For the first 50 units:675 paise per unit	For the first 50 units:755 paise per unit
	For the balance units: 775 paise per unit	For the balance units: 855 paise per unit

**Demand based tariff (optional) where sanctioned load is above 5 KW but below 50 KW.**

Details	Existing as per 2014 Tariff Order	Proposed by BESCOM
Fixed charges	Rs.55 per KW	Rs.55 per KW
Energy Charges	For the first 50 units:675 paise per unit	For the first 50 units:755 paise per unit
	For the balance units:775 paise per unit	For the balance units:855 paise per unit

**LT-3 (ii) Commercial Lighting, Heating & Motive  
Applicable in areas under Village Panchayats**

Details	Existing as per 2014 Tariff Order	Proposed by BESCO
Fixed Charges per Month	Rs.30 per KW	Rs.30 per KW
Energy Charges	For the first 50 units:625 paise per unit	For the first 50 units:705 paise per unit
	For the balance units:725 paise per unit	For the balance units:805 paise per unit

**Demand based tariff (optional) where sanctioned load is above 5 KW but below 50 KW**

Details	Existing as per 2014 Tariff Order	Proposed by BESCO
Fixed Charges per Month	Rs.45 per KW	Rs.45 per KW
Energy Charges	For the first 50 units:625 paise per unit	For the first 50 units:705 paise per unit
	For the balance units:725 paise per unit	For the balance units:805 paise per unit

**Commission's Views/ Decision**

As in the previous Tariff Order dated 12<sup>th</sup> May, 2014, the Commission decides to continue tariff at two levels i.e.

- (i) BBMP Areas, Municipal Corporation Areas and Areas coming under other urban local bodies
- (ii) Areas under Village Panchayats

**Approved Tariff for LT- 3 (i) Commercial Lighting, Heating& Motive**

**Applicable to areas under BBMP, Municipal Corporation and areas under other Urban Local Bodies**

Details	Approved by the Commission
Fixed Charges per Month	Rs.40 per KW
Energy Charges	For the first 50 units: 695 paise/ unit
	For the balance units: 795 paise/unit

**Approved Tariff for Demand based tariff (Optional) where sanctioned load is above 5 kW but below 50 kW.**

<b>Details</b>	<b>Approved by the Commission</b>
Fixed Charges per Month	Rs.55 per KW
Energy Charges	For the first 50 units: 695 paise /unit
	For the balance units: 795 paise/unit

**Approved Tariff for LT-3 (ii) Commercial Lighting, Heating and Motive  
Applicable to areas under Village Panchayats**

<b>Details</b>	<b>Approved by the Commission</b>
Fixed charges per Month	Rs.30 per KW
Energy Charges	For the first 50 units: 645 paise per unit
	For the balance units: 745 paise per unit

**Approved Tariff for Demand based tariff (Optional) where sanctioned load is above 5 kW but below 50 kW**

<b>Details</b>	<b>Approved by the Commission</b>
Fixed Charges per Month	Rs.45 per KW
Energy Charges	For the first 50 units: 645 paise per unit
	For the balance units: 745 paise per unit

**4. LT4-Irrigation Pump Sets:**

**BESCOM's Proposal:**

The existing and proposed tariff for LT4 (a) is as follows:

**LT-4 (a) Irrigation Pump Sets  
Applicable to IP sets up to and inclusive 10 HP**

<b>Details</b>	<b>Existing as per 2014 Tariff Order</b>	<b>Proposed by BESCO</b>
Fixed charges per Month	Nil	Nil
Energy charges	CDT 203 paise per unit	Free (In case GoK does not release the subsidy in advance, CDT of 283 paise per unit will be demanded and collected from consumers)

**Commission's Views/ Decision**

The Government of Karnataka has extended free supply of power to farmers as per Government Order No.EN 55 PSR 2008 dated 04.09.2008. As per this policy of GoK, **the entire cost of supply** to IP sets up to and inclusive of 10 HP is being borne by the GoK through tariff subsidy. In view of this, all the categories under the existing LT-4a tariff are covered under free supply of power.

Considering the cross subsidy contribution from categories other than IP Sets and BJ/KJ Categories, the Commission determines the tariff for IP Sets under LT4(a) category as follows:

**Approved CDT for IP Sets for FY16**

<b>Particulars</b>	<b>BESCO</b>
Approved ARR in Rs. crore	14418.74
Revenue from other than IP & BJ/KJ in Rs. crore	12802.72
Amount to be recovered from IP & BJ/KJ in Rs. crore	1371.59
Regulatory Asset Rs.in Crores	244.43
Approved Sales to BJ/KJ in MU	58.64
Revenue from BJ/KJ at Average Cost of supply in Rs. crore	32.78

Amount to be recovered from IP Sets category in Rs. crore	1338.81
Approved Sale to IP Sets in MU	5625.26
<b>Commission Determined Tariff (CDT) for IP set Category for FY16 in Rs/Unit</b>	<b>2.38</b>

Accordingly, the Commission decides to approve tariff of Rs.2.38 per unit as CDT for FY16 for IP Set category under LT4 (a). In case the GoK does not release the subsidy in advance, a tariff of Rs.2.38 per unit shall be demanded and collected from these consumers.

**Approved by the Commission**

**LT-4 (a) Irrigation Pump Sets**

**Applicable to IP sets upto and inclusive of 10 HP**

<b>Details</b>	<b>Approved by the Commission</b>
Fixed charges per Month Energy charges	<b>Nil*</b>
CDT (Commission Determined Tariff): 238 paise per unit	

**\* In case the GoK does not release the subsidy in advance, a tariff of Rs.2.38 per unit shall be demanded and collected from these consumers.**

**PAYMENT OF SUBSIDY BY GOVERNMENT OF KARNATAKA FOR FY16:**

BESCOM's ARR for FY 2016 approved by the Commission includes estimated revenue of Rs.1338.81 Crores to be obtained against supply of 5625.26 MUs of power to 729150 IP sets at the Commission determined tariff of Rs. 2.38 per unit. This amount is to be released by the Government of Karnataka as subsidy in view of the Government's policy of supplying electricity free of cost to farmers with irrigation pump sets with less than 10 HP capacity.

Several consumers have expressed before the Commission their view that ESCOMs may be showing part of their AT&C losses against IP Set consumption reported by them. The Commission had earlier issued several directives for Energy Auditing at the Distribution Transformer Centre (DTC) level to enable detection and prevention of commercial losses

and to assess the consumption of power by IP sets more accurately. These directions of the Commission have not been fully complied with so far. The Commission, therefore, is of the view that the ESCOMs should be mandated to achieve definite milestones in regard to a more accurate assessment of consumption of power for irrigation pumpsets and to adopt measures to assess Billed Energy as against Input Energy in respect of each feeder, including agricultural feeders. In this regard, the Commission has decided to advise the State Government to release 90% of the subsidy assessed above in monthly instalments. The balance 10% is to be withheld till towards the end of the financial year subject to BESCOM's compliance with the requirement of assessing IP Set consumption and carrying out energy auditing as specified below.

**BESCOM shall implement the monthly reading of the energy supplied from every DTC along with reading of consumer meters commencing with all the DTCs in at least ten per cent of the feeders (other than separated IP Set feeders) from April 2015 and introducing the system in all its feeders by the end of January 2016. In the case of feeders separated under NJY, supplying energy exclusively for irrigation purposes, the feeder level meter reading shall be recorded on 1<sup>st</sup> of every month to assess the feeder wise consumption by the IP sets.** In the case of BESCOM the amount of subsidy to be linked to the compliance of the following during FY16 shall be Rs.133.88 Crores.

BESCOM shall submit results of the above energy audit in each feeder and the IP sets consumption recorded in respect of agricultural feeders to the Commission in prescribed formats every month. The Commission will in the last quarter of the financial year advise the Government to release the balance 10 % of the subsidy for the year on satisfactory compliance of the above directions.

**LT4 (b) Irrigation Pump Sets above 10 HP:**

**BESCOM's Proposal**

The Existing and proposed tariff for LT-4(b) is as follows:

LT-4 (b) Irrigation Pump Sets:  
Applicable to IP Sets above 10 HP

<b>Details</b>	<b>Existing as per 2014 Tariff Order</b>	<b>Proposed by BESCOM</b>
Fixed charges per Month	Rs.30 per HP	Rs.30 per HP
Energy charges for	215 paise per unit	295 paise per unit



the entire consumption		
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The existing and proposed tariff for LT4(c) is as follows:

**LT-4 (c) (i) Irrigation Pump Sets:**

**Applicable to Private Horticultural Nurseries, Coffee, Tea & Rubber plantations up to & inclusive of 10 HP**

Details	Existing as per 2014 Tariff Order	Proposed by BESCO
Fixed charges per Month	Rs.20 per HP	Rs.20 per HP
Energy charges for the entire consumption	215 paise per unit	295 paise per unit

**LT-4 (c) (ii) Irrigation Pump Sets:**

**Applicable to Private Horticultural Nurseries, Coffee, Tea & Rubber plantations above 10 HP**

Details	Existing as per 2014 Tariff Order	Proposed by BESCO
Fixed charges per Month	Rs.30 per HP	Rs.30 per HP
Energy charges for the entire consumption	215 paise per unit	295 paise per unit

**Approved Tariff:**

The Commission decides to revise the tariff in respect of these categories as shown below:

**LT-4 (b) Irrigation Pump Sets:**

**Applicable to IP Sets above 10 HP**

Fixed charges per Month	Rs.30 per HP per month.
Energy charges for the entire consumption	240 paise/unit

**LT4(c) (i) Irrigation Pump Sets**

**Applicable to Horticultural Nurseries, Coffee, Tea & Rubber plantations up to & inclusive of 10 HP**

Fixed charges per Month	Rs.20 per HP per month.
Energy charges	240 paise / unit

**LT4 (c)(ii) Irrigation Pump Sets**

**Applicable to Horticultural Nurseries, Coffee, Tea & Rubber plantations above 10 HP**

Fixed charges per Month	Rs.30 per HP per month.
Energy charges	240 paise/unit

## 5. LT5 Installations-LT Industries:

### BESCOM's Proposal:

The existing and proposed tariffs are given below:

### LT-5 (a) LT Industries: Applicable to Bruhat Bangalore Mahanagara Palike (BBMP) and Other Municipal Corporation areas

#### i) Fixed charges

Details	Existing as per 2014 Tariff Order	Proposed by BESCOM
Fixed charges per Month	i) Rs. 30 per HP for 5 HP & below ii) Rs. 30 per HP for above 5 HP & below 40 HP iii) Rs. 40 per HP for 40 HP & above but below 67 HP iv) Rs. 110 per HP for 67 HP & above	i) Rs. 30 per HP for 5 HP & below ii) Rs. 30 per HP for above 5 HP & below 40 HP iii) Rs. 40 per HP for 40 HP & above but below 67 HP iv) Rs. 110 per HP for 67 HP & above

#### Demand based Tariff (Optional)

Details	Description	Existing Tariff as per 2014 Tariff Order	Proposed by BESCOM
Fixed Charges per Month	Above 5 HP and less than 40 HP	Rs.50 per KW of billing demand	Rs.50 per KW of billing demand
	40 HP and above but less than 67 HP	Rs.70 per KW of billing demand	Rs.70 per KW of billing demand
	67 HP and above	Rs.160 per KW of billing demand	Rs.160 per KW of billing demand

#### ii) Energy Charges

Details	Existing as per 2014 Tariff Order	Proposed by BESCOM
For the first 500 units	475 paise per unit	555 paise/ unit
For the balance units	585 paise per unit	665 paise /unit

### LT-5 (b) LT Industries:

Applicable to all areas other than those covered under LT-5(a)

#### i) Fixed charges

Details	Existing as per 2014 Tariff Order	Proposed by BESCO	Demand based Tariff (optional)
<b>Fixed Charges per Month</b>	i)Rs.25 per HP for 5 HP & below ii) Rs.30 per HP for above 5 HP & below 40 HP iii) Rs.35 per HP for 40 HP & above but below 67 HP iv)Rs.100 per HP for 67 HP & above	i) Rs.25 per HP for 5 HP & below ii) Rs.30 per HP for above 5 HP & below 40 HP iii) Rs.35 per HP for 40 HP & above but below 67 HP iv)Rs.100 per HP for 67 HP & above	

Details	Description	Existing Tariff as per 2014 Tariff Order	Proposed by BESCO
Fixed Charges per Month	Above 5 HP and less than 40 HP	Rs.45 per KW of billing demand	Rs.45 per KW of billing demand
	40 HP and above but less than 67 HP	Rs.60 per KW of billing demand	Rs.60 per KW of billing demand
	67 HP and above	Rs.150 per KW of billing demand	Rs.150 per KW of billing demand

## ii) Energy Charges

Details	Existing as per 2014 Tariff Order	Proposed by BESCO
For the first 500 units	455 paise per unit	535 paise/ unit
For the next 500 units	535 paise per unit	615 paise/ unit
For the balance units	565 paise per unit	645 paise/ unit

## Existing ToD Tariff for LT5 (a) & (b): At the option of the consumers

### ToD Tariff

Time of Day	Increase (+) / reduction (-) in energy charges over the normal tariff applicable
22.00 Hrs to 06.00 Hrs	(-) 125 paise per unit
06.00 Hrs to 18.00 hrs	0
18.00 Hrs to 22.00 Hrs	(+) 100 paise per unit

**Proposed ToD Tariff for LT5 (a) & (b): At the option of the consumers**

**ToD Tariff**

<b>Time of Day</b>	<b>Increase (+ )/ reduction (-) in energy charges over the normal tariff applicable</b>
22.00 Hrs to 06.00 Hrs	(-) 125 paise per unit
06.00 Hrs to 18.00 hrs	0
18.00 Hrs to 22.00 Hrs	(+) 100 paise per unit

**Commission's Views / Decisions:**

**Time of the Day Tariff:**

As per the decision of the Commission in its earlier Tariff Orders the mandatory Time of Day Tariff for HT2(a), HT2(b) and HT2(c) consumers with a contract demand of 500 KVA and above is continued. The optional ToD would continue as existing earlier for HT2(a), HT2(b) and HT2(c) consumers with contract demand of less than 500 KVA. Further, for LT5 and HT1 consumers, the optional ToD is continued as existing earlier.

The Commission has decided to continue with two levels of tariff introduced in the previous Tariff Orders, which are as follows:

- i) LT5 (a): For areas falling under BBMP, Municipal Corporations
- ii) LT5 (b): For areas other than those covered under LT5 (a) above.

Further, the Commission decides to re-classified the consumer using power supply for exclusive ironing and exclusive tailoring shop hitherto classified under LT3 Tariff schedule under LT5 Tariff Schedule.

**Approved Tariff:**

The Commission approves the tariff under LT 5 (a) and LT 5 (b) as given below:

**Approved Tariff for LT 5 (a):**

**Applicable to areas under BBMP and other Municipal Corporations**

**i) Fixed charges**

<b>Details</b>	<b>Approved by the Commission</b>
Fixed Charges per Month	i) Rs. 30 per HP for 5 HP & below ii) Rs. 30 per HP for above 5 HP & below 40 HP iii) Rs. 40 per HP for 40 HP & above but below 67 HP iv) Rs. 110 per HP for 67 HP & above

**Demand based Tariff (optional)**

Fixed Charges per Month	Above 5 HP and less than 40 HP	Rs. 50 per KW of billing demand
	40 HP and above but less than 67 HP	Rs. 70 per KW of billing demand
	67 HP and above	Rs. 160 per KW of billing demand

**ii) Energy Charges**

Details	Approved by the Commission
For the first 500 units	490 paise/unit
For the balance units	600 paise/ unit

**Approved Tariff for LT 5 (b):**

**Applicable to all areas other than those covered under LT-5(a)**

**i) Fixed charges**

Details	Approved Tariff
Fixed Charges per Month	i) Rs. 25 per HP for 5 HP & below ii) Rs30per HP for above 5 HP & below 40 HP iii) Rs. 35 per HP for 40 HP & above but below 67 HP iv)Rs. 100 per HP for 67 HP & above

**ii) Demand based Tariff (optional)**

Details	Description	Approved Tariff
Fixed Charges per Month	Above 5 HP and less than 40 HP	Rs.45 per KW of billing demand
	40 HP and above but less than 67 HP	Rs.60 per KW of billing demand
	67 HP and above	Rs.150 per KW of billing demand

**iii) Energy Charges**

Details	Approved tariff
For the first 500 units	470 paise/ unit
For the next 500 units	550 paise/ unit
For the balance units	580 paise/unit

**Approved ToD Tariff for LT5 (a) & (b): At the option of the consumers**

**ToD Tariff**

Time of Day	Increase (+) / reduction (-) in energy charges over the normal tariff applicable
22.00 Hrs to 06.00 Hrs	(-)125 paise per unit
06.00 Hrs to 18.00 hrs	0
18.00 Hrs to 22.00 Hrs	(+)100 paise per unit

**6. LT6 Water Supply Installations and Street Lights:**

**BESCOM's Proposal:**

The existing and the proposed tariffs are given below:

**LT-6(a) : Water Supply**

<b>Details</b>	<b>Existing as per 2014 Tariff Order</b>	<b>Proposed by BESCOM</b>
Fixed charges per Month	Rs.35/HP/month	Rs.35/HP/month
Energy charges	330 paise/unit	410 paise/unit

**LT-6 (b) : Public Lighting**

<b>Details</b>	<b>Existing as per 2014 Tariff Order</b>	<b>Proposed by BESCOM</b>
Fixed charges per Month	Rs.50/KW/month	Rs.50/KW/month
Energy charges	485 paise/unit	565 paise/unit

**Commission's decision:**

**The Commission decided to include surveillance cameras at traffic locations belonging to Government under LT6(b) Tariff schedule.**

**The Commission approves the tariff for this category as follows:**

**Tariff Approved by the Commission for LT-6 (a): Water supply**

<b>Details</b>	<b>Approved Tariff</b>
Fixed Charges per Month	Rs.35 /HP/month
Energy charges	340 paise/unit

**Tariff Approved by the Commission for LT-6 (b): Public Lighting**

<b>Details</b>	<b>Approved Tariff</b>
Fixed charges per Month	Rs.50 /KW/month
Energy charges	500 paise/unit
LED Lighting	400 paise/unit

**7. LT 7- Temporary Supply & Advertising Hoardings:**

**BESCOM's Proposal:**

**The existing rate and the rate proposed are given below:  
Temporary Supply**

<b>Details</b>	<b>Existing as per 2014 Tariff Order</b>	<b>Proposed by BESCOM</b>
a) Less than 67 HP:	Energy charge at 900 paise per unit subject to a weekly minimum of Rs.160 per KW of the sanctioned load.	Energy charge at 980 paise per unit subject to a weekly minimum of Rs.160 per KW of the sanctioned load.

**Commission's decision**

As decided in the Tariff Order dated 12<sup>th</sup> May, 2014, the tariff specified for installations with sanctioned load / contract demand above 67 HP is covered under the HT temporary tariff category under HT5.

**Further, the Commission decides to bifurcate the existing LT7 tariff schedule applicable to both for temporary and permanent connection basis into two levels of tariff category under LT7(a) applicable to temporary power supply for all purposes and LT7(b) power supply on permanent connection basis.**

The Commission decides to approve the tariff for LT-7 category as follows:



### TARIFF SCHEDULE LT-7(a)

Applicable to Temporary Power Supply for all purposes.

LT 7(a)	Details	Approved Tariff
Temporary Power Supply for all purposes.	Less than 67 HP:	Energy charge at 900 paise / unit subject to a weekly minimum of Rs.160 per KW of the sanctioned load.

### TARIFF SCHEDULE LT-7(b)

Applicable to Hoardings & Advertisement boards, Bus Shelters with Advertising Boards, Private Advertising Posts / Sign boards in the interest of Public such as Police Canopy Direction boards, and other sign boards sponsored by Private Advertising Agencies / firms on permanent connection basis.

LT 7(b)	Details	Approved Tariff
Power supply on permanent connection basis	Less than 67 HP:	Fixed Charges at Rs 40 per KW / month Energy charges at 900 paise / unit

#### 8. H.T. Categories:

##### Time of Day Tariff (ToD)

The Commission decides to continue the mandatory Time of Day Tariff for HT2 (a), HT (b) and HT2(c) consumers with a contract demand of 500 KVA and above. Further, the optional ToD would continue as existing earlier for HT2 (a), HT (b) and HT2 (b) consumers with contract demand of less than 500 KVA. The details of ToD tariff are indicated under the respective tariff category.

9. **HT1- Water Supply & Sewerage**  
**BESCOM's Proposal:**

**The Existing and the proposed tariff**

Sl. No.	Details	Existing tariff as per 2014 Tariff Order	Proposed Tariffs
1	Demand charges	Rs. 180 / kVA of billing demand / month	Rs. 180 / kVA for billing demand / month
2	Energy charges	400 paise per unit	480 paise per unit

**Existing ToD tariff to HT-1 tariff to Water Supply & Sewerage installations at the option of the consumer**

Time of day	Increase (+) / reduction (-) in the energy charges over the normal tariff applicable
22.00 Hrs to 06.00 Hrs next day	(-) 125 Paise per unit
06.00 Hrs to 18.00 Hrs	0
18.00 Hrs to 22.00 Hrs	(+) 100 Paise per unit

**Proposed ToD Tariff to HT-1**

Time of day	Increase (+) / reduction (-) in the energy charges over the normal tariff applicable
22.00 Hrs to 06.00 Hrs next day	(-) 125 Paise per unit
06.00 Hrs to 18.00 Hrs	0
18.00 Hrs to 22.00 Hrs	(+) 100 Paise per unit

**Commission's decision:**

**The Commission approves the tariff for HT 1 Water Supply & Sewerage category as below:**

Details	Approved Tariff for HT 1
Demand charges	Rs. 180 / kVA of billing demand / month
Energy charges	410 paise/ unit

**Approved ToD tariff to HT-1 tariff to Water Supply & Sewerage installations at the option of the consumer**

Time of day	Increase (+) / reduction (-) in the energy charges over the normal tariff applicable
22.00 Hrs to 06.00 Hrs next day	(-)125 paise per unit

06.00 Hrs to 18.00 Hrs	0
18.00 Hrs to 22.00 Hrs	(+) 100 paise per unit

**10. HT2 (a) – HT Industries & HT 2(b) – HT Commercial**

**BESCOM's Proposal:**

**Existing & proposed tariff – HT – 2 (a) (i) – HT Industries  
Applicable to Bruhat Bangalore Mahanagara Palike (BBMP) & Municipal Corporation area**

Details	Existing tariff as per Tariff Order 2014	Proposed by BESCOM
Demand charges	Rs. 180 / kVA of billing demand / month	Rs. 180 / kVA of billing demand / month
Energy charges (i) For the first one lakh units	575 paise per unit	655 paise per unit
(ii) For the balance units	615 paise per unit	695 paise per unit

**Existing & proposed tariff – HT – 2 (a) (ii) - HT Industries  
Applicable to areas other than those covered under HT-2(a)(i)**

Details	Existing tariff as per Tariff Order 2014	Proposed by BESCOM
Demand charges	Rs. 170 / kVA of billing demand / month	Rs. 170 / kVA of billing demand / month
Energy charges (iii) For the first one lakh units	570 paise per unit	650 paise per unit
(iv) For the balance units	600 paise per unit	680 paise per unit

**Railway traction and Effluent Plants {both Under HT2 (a)(i) & HT2a(ii)}**

<b>Details</b>	<b>Existing tariff as per Tariff order 2014</b>	<b>Proposed by BESCO</b>
Demand charges	Rs. 180 / kVA at billing demand / month	Rs. 180 / kVA of billing demand / month
Energy charges	540 paise per unit for all the units	620 paise per unit for all the units

**Existing ToD Tariff to HT-2(a)**

<b>Time of day</b>	<b>Increase (+) / reduction (-) in the energy charges over the normal tariff applicable</b>
22.00 Hrs to 06.00 Hrs next day	(- ) 125 Paise per unit
06.00 Hrs to 18.00 Hrs	0
18.00 Hrs to 22.00 Hrs	(+) 100 Paise per unit

**Proposed ToD Tariff to HT-2(a)**

<b>Time of day</b>	<b>Increase (+) / reduction (-) in the energy charges over the normal tariff applicable</b>
22.00 Hrs to 06.00 Hrs next day	(- ) 125 Paise per unit
06.00 Hrs to 18.00 Hrs	0
18.00 Hrs to 22.00 Hrs	(+) 100 Paise per unit

**Tariff for Metro Rail Corporation**

<b>Details</b>	<b>Existing tariff as per Tariff Order 2014</b>	<b>Proposed by BESCO</b>
Demand charges	Rs. 180 / kVA of billing demand / month	Rs. 180 / kVA of billing demand / month
Energy charges	520 paise per unit for all the units	600 paise per unit for all the units

## Commission's Views/Decision

### Approved Tariff for HT – 2 (a) (i) :

The Commission approves the tariff for HT 2(a) category as below:

#### i) Approved Tariff for HT2(a)(i)

Applicable to areas under BBMP and Municipal Corporations

Details	Tariff approved by the Commission
Demand charges	Rs.180 / kVA of billing demand / month
Energy charges	
For the first one lakh units	590 paise/ unit
For the balance units	630 paise/ unit

#### ii) Approved Tariff for HT – 2 (a) (ii)

Applicable to areas other than those covered under HT-2(a) (i)

Details	Approved Tariff
Demand charges	Rs.170 / kVA of billing demand / month
Energy charges	
For the first one lakh units	585 paise/ unit
For the balance units	615 paise/ unit

#### iii) Railway Traction & Effluent Treatment Plants applicable to both HT2a(i) & HT2 a(ii)

Details	Tariff approved by the Commission
Demand charges	Rs. 180 / kVA of billing demand / month
Energy charges	555 paise / unit for all the units

#### iv) Approved Tariff for Metro Rail Corporation

Details	Tariff Approved by the Commission
Demand Charges	Rs.180 per KVA of the billing demand
Energy Charges for entire consumption	535 paise per unit

## 11. HT-2 (b) HT Commercial

### BESCOM's Proposal:

#### Existing and proposed tariff HT – 2 (b) (i) HT Commercial Applicable to BBMP& Municipal Corporation Area

Details	Existing tariff as per Tariff Order 2014	Proposed by BESCOM
Demand charges	Rs. 200 / kVA of billing demand / month	Rs. 200 / kVA of billing demand / month
Energy charges		
(i) For the first two lakh units	735 paise per unit	815 paise per unit
(ii) For the balance units	765 paise per unit	845 paise per unit

#### Existing and proposed tariff HT – 2 (b) (ii) HT Commercial Applicable to areas other than those covered under HT-2(b) (i)

Details	Existing tariff as per Tariff Order 2014	Proposed by BESCOM
Demand charges	Rs.190 / kVA of billing demand / month	Rs.190 / kVA of billing demand / month
Energy charges		
(i) For the first two lakh units	715 paise per unit	795 paise per unit
(ii) For the balance units	745 paise per unit	825 paise per unit

### Commission's Views/Decision

The Commission approves the following tariff for HT 2 (b) consumers:

#### Approved tariff for HT – 2 (b) (i) Applicable to areas under BBMP & Municipal Corporations

Details	Tariff approved by the Commission
Demand charges	Rs.200 / kVA of billing demand / month
Energy charges	
(i) For the first two lakh units	755 paise per unit
(ii) For the balance units	785 paise per unit

#### Approved tariff for HT – 2 (b) (ii) - HT Commercial

**Applicable to all areas other than covered under HT-2(b) (i) above**

Details	Tariff approved by the Commission
Demand charges	Rs.190 / kVA of billing demand / month
Energy charges	
(i) For the first two lakh units	735 paise per unit
(ii) For the balance units	765 paise per unit

**Note: The above tariff under HT2 (b) is not applicable for construction of new industries. Such power supply shall be availed under the temporary category HT5.**

**12. HT – 2 (c) – Applicable to Hospitals and Educational Institutions:**

**Existing and proposed tariff for HT – 2 (c) (i)**

**Applicable to Government Hospitals & Hospitals run by Charitable Institutions & ESI Hospitals  
and  
Universities, Educational Institutions belonging to Government, Local Bodies and Aided Institutions and  
Hostels of all Educational Institutions**

Details	Existing tariff as per Tariff Order 2014	Proposed by BESCO
Demand charges	Rs.170 / kVA of billing demand / month	Rs.170 / kVA of billing demand / month
Energy charges		
(i) For the first one lakh units	540 paise per unit	620 paise per unit
(ii) For the balance units	590 paise per unit	670 paise per unit

**Existing and proposed tariff for HT – 2 (c) (ii) –**

**Applicable to Hospitals and Educational Institutions other than those covered under HT2(c) (i)**

Details	Existing tariff as per Tariff Order 2014	Proposed by BESCO
Demand charges	Rs. 170 / kVA of billing demand / month	Rs. 170 / kVA of billing demand / month
Energy charges		
(i) For the first one lakh units	640 paise per unit	720 paise per unit
(ii) For the balance units	690 paise per unit	770 paise per unit

**Approved tariff for HT – 2 (c) (i)**

**Applicable to Government Hospitals & Hospitals run by Charitable Institutions & ESI Hospitals  
and  
Universities, Educational Institutions belonging to Government, Local Bodies and Aided Institutions and  
Hostels of all Educational Institutions**

<b>Details</b>	<b>Approved Tariff</b>
Demand charges	Rs.170/ kVA of billing demand / month
Energy charges	
(i) For the first one lakh units	560 paise per unit
(ii) For the balance units	610 paise per unit

**Approved tariff for HT – 2 (c) (ii)**

**Applicable to Hospitals/Educational Institutions other than those covered under HT2(c) (i)**

<b>Details</b>	<b>Approved Tariff</b>
Demand charges	Rs.170 / kVA of billing demand / month
Energy charges	
(i) For the first one lakh units	660 paise per unit
(ii) For the balance units	710 paise per unit

**Approved ToD Tariff to HT-2(a), HT-2(b) and HT2(c)**

<b>Time of day</b>	<b>Increase (+) / reduction (-) in the energy charges over the normal tariff applicable</b>
22.00 Hrs to 06.00 Hrs next day	(-) 125 Paise per unit
06.00 Hrs to 18.00 Hrs	0
18.00 Hrs to 22.00 Hrs	(+) 100 Paise per unit

**13. HT-3(a) Lift Irrigation Schemes under Government Departments / Government owned Corporations/ Lift Irrigation Schemes under Pvt ./Societies:**

The existing and proposed tariff is given below:



**Existing and proposed tariff for HT – 3 (a) –Lift Irrigation Schemes**

**HT 3(a) (i) Applicable to LI Schemes under Government Departments / Government owned Corporations**

<b>Details</b>	<b>Existing charges as per Tariff Order 2014</b>	<b>Proposed charges by BESCO</b>
Energy charges/ Minimum charges	150 paise / unit Subject to an annual minimum of Rs.1000 per HP / annum	230 paise / unit Subject to an annual minimum of Rs. 1000 per HP / annum

**HT 3(a) (ii) Applicable to Pvt. LI Schemes and Lift Irrigation Societies:  
Fed through Express / Urban feeders**

<b>Details</b>	<b>Existing Tariff as per Tariff Order 2014</b>	<b>Proposed by BESCO</b>
Fixed charges	Rs. 30 / HP / Month of sanctioned load	Rs. 30 / HP / Month of sanctioned load
Energy charges	150 paise / unit	230 paise / unit

**HT 3(a) (iii) Applicable to Pvt. LI Schemes and Lift Irrigation Societies:  
other than those covered under HT-3 (a)(ii)**

<b>Details</b>	<b>Existing Tariff as per Tariff Order 2014</b>	<b>Proposed by BESCO</b>
Fixed charges	Rs. 10 / HP / Month of sanctioned load	Rs. 10 / HP / Month of sanctioned load
Energy charges	150 paise / unit	230 paise / unit

**Commission's Analysis & Decision:**

The approved Tariff is as follows:-

**Approved tariff for HT 3 (a) (i)  
Applicable to LI schemes under Govt. Dept. / Govt. owned Corporations**

Energy charges / Minimum charges	170 paise/ unit subject to an annual minimum of Rs. 1000 per HP / annum
-------------------------------------	--

**Approved tariff for HT 3 (a) (ii)**

**Applicable to Pvt. LI Schemes and Lift Irrigation Societies fed through express / urban feeders**

Fixed charges	Rs.30 / HP / Month of sanctioned load
Energy charges	170 paise / unit

**Approved tariff for HT 3 (a) (iii)**

**Applicable to Pvt. LI Schemes and Lift Irrigation Societies other than those covered under HT 3 (c) (ii)**

Fixed charges	Rs.10 / HP / Month of sanctioned load
Energy charges	170 paise / unit

**HT3 (b) Irrigation & Agricultural Farms, Government Horticulture farms, Private Horticulture Nurseries, Coffee, Tea, Coconut & Arecanut Plantations:**

**BESCOM's Proposal:**

The existing and the proposed tariff are given below:

**HT3 (b)- Irrigation & Agricultural Farms, Government Horticulture farms, Private Horticulture Nurseries, Coffee, Tea, Coconut & Arecanut Plantations:**

Details	Existing Tariff Order 2014	Proposed tariff by BESCOM
Energy charges / minimum charges	350 paise / unit subject to an annual minimum of Rs. 1000 per HP of sanctioned load	430 paise / unit subject to an annual minimum of Rs. 1000 per HP of sanctioned load

**Commission's Views/Decision**

The Commission approved the tariff for this category as indicated below:

**Approved Tariff**

**HT3 (b)- Irrigation & Agricultural Farms, Government Horticulture farms, Private Horticulture Nurseries, Coffee, Tea, Rubber, Coconut & Arecanut Plantations:**

Details	Approved Tariff
Energy charges / minimum charges	370 paise / unit subject to an annual minimum of Rs. 1000 per HP of sanctioned load

**14. HT4- Residential Apartments/ Colonies**

**BESCOM's Proposal:**

The existing and the proposed tariff for this category is given below:

**Existing and proposed tariff for HT – 4 - Residential Apartments/ Colonies  
HT – 4 Applicable to all areas.**

Details	Existing Tariff Order 2014	Proposed tariff by BESCO
Demand charges	Rs. 100 / kVA of billing demand	Rs. 100 / kVA of billing demand
Energy charges	530 paise per unit	610 paise/ unit

**Commission's Views/Decision**

The approved Tariff is as follows:-

**Approved tariff  
HT – 4 Residential Apartments/ Colonies Applicable to all areas**

Demand charges	Rs. 100 / kVA of billing demand
Energy charges	550 paise/ unit

**15. TARIFF SCHEDULE HT-5**

**BESCO's Proposal:**

The existing and the proposed tariffs are given below:

**HT – 5 – Temporary supply**

67 HP and above:	Existing	Proposed
Fixed charges / Demand Charges	Rs.210/HP/month for the entire sanction load / contract demand	Rs.210/HP/month for the entire sanction load / contract demand
Energy Charge	900 paise / unit (weekly minimum of Rs.160/- per KW is not applicable)	980 paise / unit (weekly minimum of Rs.160/- per KW is not applicable)

**Commission's Views/Decisions:**

**TARIFF SCHEDULE HT-5**

As approved in the Commission Tariff Order dated 6<sup>th</sup> May, 2013, Tariff is applicable to 67 HP and above hoardings and advertisement boards and construction power for industries excluding those category of consumers covered under HT2 (b) Tariff schedule availing

power supply for construction power for irrigation and power projects and also applicable to power supply availed on temporary basis with the contract demand of 67 HP and above of all categories.

**Approved Tariff for HT – 5 – Temporary supply**

<b>67 HP and above:</b>	<b>Approved Tariff</b>
Fixed Charges / Demand Charges	Rs.210 /HP/month for the entire sanction load / contract demand
Energy Charge	900 paise / unit

The Approved Tariff schedule for FY16 is enclosed in **Annex – III** of this Order.

## **6.5 Other Issues**

### **Tariff for Green Power:**

In order to encourage generation and use of green power in the State, the Commission decides to continue the existing Green Tariff of 50 paise per unit as the additional tariff over and above the normal tariff to be paid by HT-consumers, who opt for supply of Green power from out of the renewable energy procured by distribution utilities over and above their Renewable Purchase Obligation (RPO).

## 6.6 Determination of wheeling charges

### Wheeling

BESCOM in their filing have proposed the Wheeling charges depending upon the point of injection and point of drawal, as indicated below:

Injection Point →	HT	LT
Drawal Point ↓		
HT	13.00 [3.79%]	45.00 [9.52%]
LT	45.00 [9.52%]	32.00 [5.73%]

Note: Figures in brackets are applicable loss.

BESCOM has stated that the above wheeling charges would be applicable to all the Open Access/Wheeling transactions for using the BESCOM network, except for energy wheeled from NCE sources to the consumers in the State.

**The approach of the Commission regarding wheeling & banking charges is discussed in the following paragraphs:**

The Commission has considered the ARR pertaining to distribution wires business as done in the previous years.

### 6.6.1 Wheeling within BESCOM Area:

The allocation of the distribution network costs to HT and LT networks for determining wheeling charges is done in the ratio of 30:70, as was being done earlier. Based on the approved ARR for distribution business, the wheeling charges to each voltage level is worked out as under:

**TABLE – Wheeling Charges**

Distribution ARR-Rs. Crs	1031.42
Sales-MU	25341.90
Wheeling charges- paise/unit	40.70
	<b>Paise/unit</b>
HT-network	12.21
LT-network	28.49

In addition to the above, the following technical losses are applicable to all open access/wheeling transactions:

Loss allocation	% loss
HT	3.79
LT	8.49

**Note: Total loss is allocated to HT, LT & Commercial loss based on energy flow diagram furnished by BESCO.**

The actual wheeling charges payable (after rounding off) will depend upon the point of injection & point of drawal as under:

paise/unit		
Injection point →	HT	LT
Drawal point ↓		
<b>HT</b>	12[3.79%]	40[12.28%]
<b>LT</b>	40[12.28%]	28[8.49%]

**Note: Figures in brackets are applicable loss**

The wheeling charges as determined above are applicable to all the open access/wheeling transactions for using the BESCO network, except for energy wheeled from NCE sources to the consumers in the State.

#### **6.6.2 WHEELING OF ENERGY USING TRANSMISSION NETWORK OR NETWORK OF MORE THAN ONE LICENSEE**

In case the wheeling of energy [other than NCE sources wheeling to consumers in the State] involves usage of Transmission network or network of more than one licensee, the charges shall be as indicated below:

- i. If only transmission network is used, transmission charges determined by the Commission shall be payable to the Transmission Licensee.
- ii. If the Transmission network and the ESCOMs' network are used, Transmission Charges shall be payable to the Transmission Licensee. Wheeling Charges of the ESCOM where the power is drawn shall be shared equally among the ESCOMs whose networks are used.

**Illustration:**

If a transaction involves transmission network & BESCO's network and 100 units is injected, then at the drawal point the consumer is entitled for 84.38 units, after accounting for Transmission loss of 3.80% & BESCO loss of 12.28%.

The Transmission charge in cash as determined in the Transmission Tariff order shall be payable to KPTCL & Wheeling charge of 40 paise per unit shall be payable to BESCO. In case more than one ESCOM is involved the above 40 paise shall be shared by all ESCOMs involved.

- iii. If ESCOMs' network only is used, the Wheeling Charges of the ESCOM where the power is drawn is payable and shall be shared equally among the ESCOMs whose networks are used.

**Illustration:**

If a transaction involves injection to MESCOM's network & drawal at BESCO's network, and 100 units is injected, then at the drawal point the consumer is entitled for 87.72 units, after accounting BESCO's loss of 12.28%.

The Wheeling charge of 40 paise per unit applicable to BESCO shall be equally shared between MESCOM & BESCO.

**6.6.3 CHARGES FOR WHEELING ENERGY BY RE SOURCES (NON REC ROUTE) TO CONSUMERS IN THE STATE**

The Commission vide order dated 04.07.2014 has determined the wheeling and banking charges which is applicable to wind, mini-Hydel, bagasse based co-generation and biomass projects wheeling energy consumers within the State of Karnataka and commissioned on or before 31.03.2018 and valid for a period of 10 years from the date of the commissioning of the Units. The Commission has issued a clarificatory Order in the matter on 12.09.2014. Thus, the wheeling as well as banking charges as per the said Orders is continued.

Regarding the Solar energy based projects, the Commission vide Order dated 18.08.2014 has exempted Solar projects in the State achieving Commercial Operation Date between 1<sup>st</sup> April, 2013 and 31<sup>st</sup> April, 2018 and selling power to consumers within the State on Open Access/Wheeling from payment of Wheeling and Banking charges and Cross Subsidy surcharge for a period of 10 years from the date of commissioning and is made applicable captive solar plants for self-consumption within the State. Thus, the wheeling as well as banking charges for solar power projects as per the said Order is continued.

**6.6.4 CHARGES FOR WHEELING ENERGY BY RE SOURCS WHEELING ENERGY FROM THE STATE TO A CONSUMER/OTHERS OUTSIDE THE STATE AND FOR THOSE OPTING FOR RENEWABLE ENERGY CERTIFICATE.**

In case the RE energy is wheeled from the State to a consumer/others outside the State, the normal wheeling charges as determined in para 6.6.1 and 6.6.2 of this order shall be applicable. For captive RE generators including Solar power projects opting for renewable energy certificates, the wheeling and banking charges as specified in the Order dated 09.10.2013 shall continue, to the extent of capacity earmarked for REC route.

**6.7 Other tariff related issues:**

**ii) Cross subsidy surcharge (CSS) for Open Access:**

BESCOM in its tariff petition has proposed the Cross Subsidy surcharge as indicated below:

Voltage Level	HT-2a	HT-2b	HT-2C	Paise/unit	
				HT-4	HT-5
66KV & above	113	219	145	100	812
HT level- 11KV/33KV	40	146	71	27	739

The Commission in its preliminary observation had noted that , even though BESCOM had stated that the surcharge is worked out at 80% of the actuals, the table indicated surcharge at 100%. BESCOM in their replies has requested the Commission to consider surcharge at 100% of the actuals.

The Commission in its earlier Orders has considered 80% of the actual surcharge as Cross Subsidy surcharge has to be gradually reduced. **The determination of cross subsidy surcharge by the commission is discussed in the following paragraphs:-**



The Commission in its MYT Regulations has specified the methodology for calculating the cross subsidy surcharge. Based on the above methodology, the category wise cross subsidy will be as indicated below:

Particulars	HT-1 Water Supply	HT-2a Industries	HT-2b Commercial	HT-2(c)	HT3 (a) Lift Irrigation	HT3 (b) Irrigation & Agricultural Farms	HT-4 Residential Apartments	HT5 Temporary
Average Realization rate- Paise/unit	455.13	674.13	794.60	712.43	176.94	372.78	641.08	1280.18
Cost of supply at 5% margin @ 66 kV and above level	551.74	551.74	551.74	551.74	551.74	551.74	551.74	551.74
Cross subsidy surcharge paise/unit @ 66 kV & above level	-96.61	122.39	242.86	160.69	-374.80	-178.96	89.34	728.44
Cost of supply at 5% margin @ HT level	595.42	595.42	595.42	595.42	595.42	595.42	595.42	595.42
Cross subsidy surcharge paise/unit @ HT level	-140.29	78.70	199.18	117.01	-418.48	-222.64	45.66	684.76

For the categories where the surcharge is negative, the surcharge is made zero at the respective voltage level. For the remaining categories, the Commission decides to determine the surcharge at 80% of the cross subsidy worked out above, as the cross subsidy surcharge has to be gradually reduced. Thus, the cross subsidy surcharge is determined as under:

Paise/unit

<b>Voltage level</b>	<b>HT-2a</b>	<b>HT-2b</b>	<b>HT-2c</b>	<b>HT-4</b>	<b>HT-5</b>
66 kV & above	97.91	194.29	128.56	71.47	582.76
HT level-11 kV/33kV	62.96	159.35	93.61	36.53	547.81

Regarding the Solar energy based projects, the Commission vide Order dated 18.08.2014 has exempted Solar projects in the State achieving Commercial Operation Date between 1<sup>st</sup> April, 2013 and 31<sup>st</sup> April, 2018 and selling power to consumers within the State on Open Access/Wheeling from payment of Wheeling and Banking charges and Cross Subsidy surcharge for a period of 10 years from the date of commissioning and is made applicable captive solar plants for self-consumption within the State. Thus, the cross subsidy surcharge for solar power projects as per the said Order are continued.

The wheeling charges and cross subsidy surcharge determined in this order are applicable to all open access/wheeling transactions in the area coming under BESCOM.

The Commission directs the Licensees to account the transactions under open access separately. Further, the Commission directs the Licensees to carry forward the amount realized under Open Access/wheeling to the next ERC, as it is an additional income to the Licensees.

### **iii) Rebate for use of Solar Water Heater**

The Commission has decided to retain the existing rebate of 50. paise per unit subject to a maximum of Rs.50 per installation per month for use of solar water heaters.

### **iv) Prompt payment incentive**

The Commission had approved a prompt payment incentive (i) in all cases of payment through ECS and (ii) in the case of monthly bill exceeding Rs.1,00,000/- (Rs. One lakh). The earlier rate of incentive was 0.25 % of the bill amount. The Commission decides to continue the same.

### **v) Relief to Sick Industries**

The Government of Karnataka has extended certain reliefs for revival/rehabilitation of sick industries under the New Industrial Policy 2001-06 vide G.O. No. CI 167 SPI 2001, dated 30.06.2001. Further, the Government of Karnataka has issued G.O No.CI2 BIF 2010, dated 21.10.2010. The Commission, in its Tariff Order 2002, had accorded approval for implementation of reliefs to the sick industries as per the Government policy and the same was continued in the subsequent Tariff Orders. However, in view of issue of the G.O No.CI2 BIF 2010, dated 21.10.2010, the Commission has accorded approval to ESCOMs for implementation of the reliefs extended to sick industrial units for their revival / rehabilitation on the basis of the orders issued by the Commissioner for Industrial Development and Director of Industries & Commerce, Government of Karnataka.

**vi) Power Factor**

The Commission had retained the PF threshold limit and surcharge, both for LT and HT installations at the levels existing as in the Tariff Order 2005. The Commission has decided to continue the same in the present order as indicated below:

LT Category (covered under LT-3, LT-4, LT-5 & LT-6 where motive power is involved): 0.85

HT Category: 0.90

**vii) Rounding off of KW / HP**

In the Tariff Order 2005, the Commission had approved rounding off of fractions of KW / HP to the nearest quarter KW / HP for the purpose of billing and the minimum billing being for 1 KW / 1HP in respect of all the categories of LT installations including IP sets. This shall continue to be followed. In the case of street light installations, fractions of KW shall be rounded off to the nearest quarter KW for the purpose of billing and the minimum billing shall be for a Quarter KW.

**viii) Interest on delayed payment of bills by consumers**

The Commission, in its previous Order had approved interest on delayed payment of bills at 12% per annum. The Commission decides to continue the same in this Order also.

**ix) Security Deposit (3 MMD/ 2 MMD)**

The Commission had issued K.E.R.C. (Security Deposit) Regulations, 2007 on 01.10.2007 and the same has been notified in the Official Gazette on 11.10.2007. The payment of security deposit shall be regulated accordingly, pending orders of the Hon'ble High Court in respect of WP No.18215/2007.

### **Cross Subsidy Levels for FY16:**

The Hon'ble Appellate Tribunal for Electricity (ATE), in its order dated 8<sup>th</sup> October, 2014, in Appeal No.42 of 2014, has directed the Commission to clearly indicate the variation of anticipated category wise average revenue realization with respect to overall average cost of supply in order to establish the requirement of the Tariff Policy that tariffs are within  $\pm 20\%$  of the average cost of supply, is met in the tariff orders being passed in the future. It has further directed the Commission to also indicate category-wise cross subsidy with reference to voltage wise cost of supply so as to show the cross subsidies transparently.

In the light of the above directions, the variations of the anticipated category-wise average realization with respect to the overall average cost of supply of BESCOM, is Indicated in ANNEXURE - III of this Order. It is the Commission's endeavour to reduce the cross subsidies gradually as per the Tariff policy.

As regards indicating the voltage wise Cross subsidy, the Commission notes that the accounting of sales in the State of Karnataka is currently based on Low Tension Supply and High Tension Supply. The sales are not being recorded voltage wise. Hence, the data for the sales and revenue at each of the voltage levels is not available for working out the voltage wise cross subsidy levels.

The Commission also notes that, a few of the ESCOMs have furnished the data in Format D-23, but the data is not backed up by any scientific study and the same cannot be relied upon without validating it.

The Commission would initiate a study to validate the sales at each of the voltage levels and should be able to complete the same within the next six months and thereafter the cross subsidy levels would be indicated in the tariff order.

## **6.9 Effect of Revised Tariff**

As per the KERC (Tariff) Regulations 2000, read with MYT Regulations 2006, the ESCOMs have to file their applications for ERC/Tariff before 120 days of the close of each financial

year in the control period. The Commission observes that the ESCOMs have filed their applications for revision of tariff on 8<sup>th</sup> December, 2014. As the tariff revision is effective from 1<sup>st</sup> April 2015 onwards, ESCOMs would be recovering revenue for eleven months out of the Financial Year.

A statement indicating the proposed revenue and approved revenue is enclosed vide **Annexure III** and detailed tariff schedule is enclosed vide **Annexure IV**.

#### **6.10 Summary of Tariff Order:**

- ❖ The Commission has approved an ARR of Rs.14418.74 Crores for FY16 as against BESCOM's proposed ARR of Rs.15613.41 Crores which includes the deficit for FY14 of Rs.839.88 Crores and 50% of the Regulatory Asset with interest of Rs.342.16 Crores with a total gap in revenue of Rs.2062.66 Crores.
- ❖ The revenue gap as worked out by the Commission is Rs.700.29 Crores inclusive of the deficit of Rs.377.89 Crores for FY14 and Regulatory Asset of Rs.305.50 Crores.
- ❖ The Commission has allowed additional revenue of Rs.455.86 Crores on Tariff Revision as against the additional revenue of Rs.2062.66 Crores proposed by BESCOM for FY16.
- ❖ BESCOM has proposed an increase of 80 paise per unit for all categories of consumers. The Commission has approved an average increase of 18 paise per unit in the tariff for all consumers.
- ❖ The Commission has not increased the tariff for Educational Institutions under LT(2) (b) category and installations covered under Temporary Power Supply under LT 7 and HT (5) categories.
- ❖ The Commission has not increased the tariff for the first two slabs of domestic consumers, using upto 100 units.
- ❖ Time of the day tariff which was made mandatory in the previous Tariff Order for installations under HT2 (a), HT2(b) and HT2(c) with contract demand of 500 KVA and above is continued in this Order.
- ❖ The consumers using power supply for exclusive ironing and tailoring hitherto classified under LT3 are now reclassified under LT5 Category.

- ❖ The water purification units maintained by Government and Local Bodies for supplying pure drinking water to residential areas are included under LT6(a) – water supply category.
- ❖ The surveillance cameras at traffic locations installed by Government are included in the LT6 (b) –Street light category.
- ❖ The existing restrictions on maximum demand usage during any month of the declared off season has been relaxed for availing seasonal industries benefit. However, the existing restriction of consumption is reduced from 50% to 25%.
- ❖ The existing tariff schedule LT7 has been bifurcated to LT7 (a) applicable to temporary power supply for all purpose and LT7 (b) applicable to Advertising hoardings availing power supply on permanent basis.
- ❖ Green tariff of additional 50 paise per unit over and above the normal tariff which was introduced in the previous tariff order for HT industries and HT commercial consumers at their option, to promote purchase of renewable energy from ESCOMs is continued in this Order.
- ❖ As in the previous Order, the Commission has continued to provide a separate fund for facilitating better Consumer Relations /Consumer Education Programs.
- ❖ The cap on short-term power is continued at Rs.4.50 per unit to meet shortfall in supply.

## **6.11 Commission's Order**

- 1. In exercise of the powers conferred on the Commission under Sections 62, 64 and other provisions of the Electricity Act, 2003, the Commission hereby determines and notifies the distribution and retail supply tariff of BESCO for FY16 as stated in Chapter-6 of this Order.**
- 2. The tariff determined in this order shall come into effect for the electricity consumed from the first meter reading date falling on or after 1<sup>st</sup> April 2015.**

3. This order is signed dated and issued by the Karnataka Electricity Regulatory Commission at Bangalore this day, the 2<sup>nd</sup> March, 2015.

Sd/-  
(M.R.Sreenivasa Murthy)  
Chairman

Sd/-  
(H.D. Arun Kumar)  
Member

Sd/-  
(D.B. Manival Raju)  
Member

## **APPENDIX**

### **REVIEW OF COMPLIANCE OF DIRECTIVES ISSUED BY THE COMMISSION**

**1. The following are the new directives issued by the Commission:**

**i) Directive on implementation of Standards of Performance (SoP):**

The Commission has noted that many consumers who participated in the Public Hearings conducted by the Commission have complained that the officers of the distribution licensees are not adhering to the Standards of Performance while replacing the failed transformers, attending to fuse off call / line breakdown complaints, arranging new services, change of faulty energy meters, reconnection of power supply, etc., causing inordinate delay in rendering services and thereby putting them into severe inconvenience. They have further stated that generally the quality of services rendered by the distribution licensees especially relating to supply of power at present is far from satisfactory despite continuous follow up by them with the concerned officers. Hence, they have requested the Commission to issue directions to ESCOMS to strictly comply with the Standards of Performance (SoP) Regulations while rendering services so that the consumers receive time bound services from ESCOMs. They have also urged that ESCOMs should impose penalty on the concerned officers as per the provisions of SoP, if time bound services are not rendered by them promptly.

The Commission has already specified the standards of performance of service for compliance by the distribution licensees in the State. Therefore, the Commission is of the view that the issue of timely and effective redressal of consumer complaints have been adequately addressed in the KERC (Licensee's Standards of Performance) Regulations and the ESCOMs just need to implement the Regulations. Further, provisions for payment of compensatory cost to the consumers in case of failure to provide services within the prescribed time frame are also provided for in the above Regulations and BESCO are



required to comply with the same more promptly. The Commission notes that, lack of adequate publicity to these regulations have made it difficult to the consumers to press for timely action on their complaints / applications and payment of compensation for any insufficiency in performance of service by BESCO authorities.

BESCO is therefore directed to strictly implement the specified Standards of Performance while rendering services related to supply of power as per KERC (Licensee's Standards of Performance) Regulations, 2004. Further, BESCO is directed to display prominently in Kannada the details of various critical services such as replacing the failed transformers, attending to fuse off call / line breakdown complaints, arranging new services, change of faulty energy meters, reconnection of power supply, etc., rendered by it as per Schedule-1 of KERC (Licensee's Standards of Performance) Regulations, 2004 and Annexure-1 of KERC (Consumer Complaints Handling Procedure) Regulations, 2004, on the notice boards in all the O & M sections and O & M sub-divisions in its jurisdiction for the information of consumers as per the following format.

Nature of Service	Standards of performance (indicative minimum time limit for rendering services)	Primary responsibility centers where to lodge complaint	Next higher Authority	Amount payable to affected consumer
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BESCO shall implement the above directives within one month from the date of this order and report compliance to the Commission regarding the implementation of the directives.

**ii) Directive on use of safety gear by linemen:**

The Commission has observed that, several consumers who participated in Public Hearings held by the Commission have complained that on many occasions they have witnessed the ESCOM's linemen not wearing uniforms and also not using proper safety gears while working on the distribution network which has resulted in fatal electrical accidents causing untold misery to the families of the victims. They have referred to the reports covering such accidents on TV and in news papers. They have expressed that such incidents could have been possibly avoided if ESCOMs had provided required safety equipment to the linemen

and monitored their proper usage by them. They have urged the Commission to issue directives to ESCOMs to bring discipline in strict use of safety gears by the linemen in carrying out their work.

The Commission is also of the opinion that many of the accidents occurring in distribution system could have been avoided, if proper safety precautions such as proper insulated tools and safety tackles had been used by the line men and other maintenance staff while working on live power lines, transformers and other related structures and electrical works.

The Commission directs BESCO to ensure that all the linemen in its jurisdiction are provided with proper and adequate safety gear and also ensure that the linemen use such safety gear provided while working on the network. BESCO should sensitise the linemen about the need for adoption of safety aspects in their work through suitably designed training and awareness programmes. BESCO is also directed to device suitable reporting system on the use of safety gear and mandate supervisory/higher officers to regularly cross check the compliance by linemen and take disciplinary action on the concerned if violations are noticed. Proper up-keep of the safety gear provided and stocking of reasonable spare sets of safety gear shall also be given the focus. BESCO shall implement this directive within one month from the date of this order and report compliance thereon. Further, BESCO is also directed to submit thereafter quarterly compliance report to the Commission.

**iii) Directive on providing Timer Switches to Street lights by ESCOMs**

The Commission has noted that several consumers participating in the Public Hearings conducted by the Commission have informed that it is a common sight that the Street light lamps are burning even during day time as no controls are provided to switch off such lamps and the local bodies have also not taken any action to provide timer switches resulting in avoidable wastage of electricity. They have requested the Commission to issue directions to the concerned to take suitable action to stop such wastage in public interest.

It is noted that, although the maintenance of the street lights is vested with the local bodies and ESCOMs have no control over it, the Commission is of the view that the Street light installations have to be provided with timer switches for ensuring prompt control and avoidance of wastage of electricity in the larger interest of general consumers.

The Commission therefore directs BESCO to install timer switches using own funds to all the street light installations in its jurisdiction wherever the local bodies have not provided the same and later recover the cost from them. The compliance regarding the progress of installation of timer switches to street light installations shall be reported to the Commission within three months of the issue of this order. BESCO shall also take up periodical inspection of timer switches installed and ensure that they are in working conditions. They shall undertake necessary repairs / replacement work, if required and later recover the cost from local bodies.

**2. Review of Compliance of Existing Directives:**

The Commission had in its earlier tariff orders and other communications issued several directives for compliance by BESCO. Compliance of the directives as reported by BESCO is outlined in this Section.

**i) Directive on load shedding:**

The Commission has directed that:

- 1) Load shedding required for planned maintenance of transmission / distribution networks should be notified in daily newspapers at least 24 hours in advance for the information of consumers.
- 2) ESCOMs shall on a daily basis estimate the hourly requirement of power for each sub-station in their jurisdiction based on the seasonal conditions and other factors affecting demand.
- 3) Any likelihood of shortfall in the availability during the course of the day should be anticipated and the quantum of load shedding should be estimated in advance. Specific sub-stations and feeders should be identified for load shedding for the minimum required period with due intimation to the concerned sub-divisions and sub-stations.
- 4) The likelihood of interruption in power supply with time and duration of such interruption may be intimated to consumers through SMS and other means.
- 5) Where load shedding has to be resorted to due to unforeseen reduction in the availability of power, or for other reasons, consumers may be informed of the likely time of restoration of supply through SMS and other means.
- 6) Load shedding should be carried out in different sub-stations / feeders to avoid frequent load shedding affecting the same sub-stations / feeders.
- 7) ESCOMs should review the availability of power with respect to the projected demand for every month in the last week of the previous month and forecast any unavoidable load shedding after consulting other ESCOMs in the State about the possibility of inter-ESCOM load adjustment during the month.
- 8) ESCOMs shall submit to KERC their projections of availability and demand for power and any unavoidable load shedding for every succeeding month in the last week of the preceding month for approval.
- 9) ESCOMs shall also propose specific measures for minimizing load shedding by spot purchase of power in the power exchanges or bridging the gap by other means.
- 10) ESCOMs shall submit to the Commission sub-station wise and feeder wise data on interruptions in power supply every month before the 5<sup>th</sup> day of the succeeding month.

The Commission has directed that ESCOMs shall make every effort to minimize inconvenience to consumers strictly complying with the above directions. The Commission had indicated that it would review the compliance of directions on a monthly basis for appropriate orders.

**Compliance by BESCO:**

1. Consumers are being informed well in advance by publishing in daily newspapers for planned maintenance of transmission/ distribution elements.
2. Hourly based day ahead projections/requirement of power, based on the historical and seasonal conditions are being estimated and informed to SLDC, KPTCL.
3. Depending on the information from the Generators regarding opening of generating units and load requirement an estimated shortfall in availability of power is being made. A software application is being developed incorporating logic in selection of feeders in a scientific way for load curtailment during un-scheduled outages of generation and transmission elements.
4. The interruptions in power supply with time and duration of such interruptions will be intimated to consumers through BESCO portal, FACE BOOK and further, the consumer will be intimated through SMS.
5. Where load shedding has to be resorted to due to unforeseen reduction in the availability of power or for other reasons, consumers are being informed of the likely time of restoration of supply through BESCO Portal and FACEBOOK, and SMS will be sent after developing an application for this purpose.
6. At present, BESCO is taking care to avoid frequent load shedding affecting the same sub-stations/feeders. BESCO is also developing an application incorporating logic in a scientific way for selection of feeders whenever shortage in availability of power occurs due to unscheduled outage of generating units/transmission elements to avoid frequent Load shedding affecting the same sub-station feeders.
7. At present BESCO is procuring available power from other ESCOMs depending on the grid condition and requirement of power on real time basis through Intra-State ABT mechanism.
8. BESCO is projecting month-wise availability and demand while filling MYT & ERC Applications before the Commission and the same is being reviewed every month.

9. BESCO is purchasing power through short term Open Access to bridge the gap.
10. As per the directions of the Commission, BESCO is submitting the information every month.

### **Commission's Views:**

The Commission has noted the various measures initiated by BESCO in respect of implementation of directives issued by the Commission on load shedding. It considers that while they are appreciable, they have not been able to make significant reduction in consumers' dissatisfaction on this issue.

The Commission during review meetings held with ESCOMs and KPTCL has been also impressing upon them to avoid load shedding involving the same sub-stations /feeders in order to avoid inconvenience to consumers/public. BESCO needs to expedite the 'application software' it is reportedly developing through Consultants by integrating it with the SCADA data in order to enable providing information to the consumers through SMS regarding the time and duration of interruptions.

The Commission reiterates that BESCO shall continue to comply with the above directive on load shedding but with a little more urgency and submit monthly compliance reports to the Commission in the matter.

### **ii) Directive on Establishing a 24x7 Fully Equipped Centralized Consumer Service Center for Redressal of Consumer Complaints:**

*The directive was as below:*

“BESCO is directed to put in place a 24x7 fully equipped Centralized Consumer Service Center at its Headquarters with a state of the art facility/system for receiving consumer complaints and monitoring their redressal so that electricity consumers in its area of supply are able to seek and obtain timely and efficient services in the matter of their grievances. Such a Service Center shall have adequate desk operators in each shift so that the consumers across the jurisdiction of BESCO are able to lodge their complaints to this Centre.

Every complaint shall be received on helpline telephone number by the desk operator and registered with a number which shall be intimated to the Consumer. In turn the complaints shall be transferred online to the concerned field staff for resolving the same. The concerned O&M/local service station staff shall visit the complainant's premises at the earliest to attend to the complaints and then inform the Centralized Service Centre that the complaint is attended. Then, the desk operator shall also call the complainant and confirm with him whether the complaint has been attended. The complaints shall be closed only after receiving consumer's confirmation. Such a system should also generate daily reports indicating the number/nature of complaints received, complaints attended, complaints pending and reasons for not attending to the complaints along with the names of the officers responsible with remarks be placed before the Managing Director on the following day for his attention who would review and take corrective action in case of any pendency/delay in attending to the complaints.

BESCOM shall publish the details of complaint handling procedure/Mechanism with contact numbers in the local media or in any other form periodically for the information of the consumers. The compliance of the action taken in the matter shall be submitted to the Commission within two months from the date of this Order.

Further, the Commission directs BESCOM to establish/strengthen 24x7 service stations, equipping them with separate vehicles & adequate line crew, safety kits and maintenance materials at all its sub-divisions including the rural areas for effective redressal of consumer complaints.

The Commission also directs BESCOM to hold Consumer Interaction Meetings in each O&M sub-division once in every two months according to a published schedule and invite consumers in advance to participate in such meetings to facilitate them sort out their grievances. Such meetings shall be chaired by officers of the level of Superintending Engineers and attended by the concerned divisional and sub-divisional Engineers. BESCOM shall submit compliance of the same to the Commission once in a quarter".

**Compliance by BESCOM:**

In order to create awareness on electrical safety, energy savings and also to publicize Helpline number 1912, BESCOM has conducted various activities to reach out to consumers as listed below:

**a) Distribution of Posters throughout BESCOM area.**



**b) Distribution of Pamphlets and Newspaper advertisements :**



**c) Radio Partners :**



To create safety awareness and popularize Helpline number 1912, advertisements have been aired on Vividhbharathi, FM Rainbow, Air Chitadurga, Radio City, Radio Mirchi and Big FM.

**d) TV Channels :**

Advertisements on safety and Helpline number 1912 have been broadcast in both popular News and entertainment Channels such as Doordarshan, TV9-Kannada, Suvarna News 24X7, Samaya News, Public TV, ETV, Suvarna and Zee TV.



**e) Digital Theatres and Multiplexes :**

Creating awareness by screening animated short film on Safety and Helpline number 1912, in digital Theatres and Multiplexes of BESCOM area:



**f) Branding of BMTC buses :**

Branding of BMTC buses to reach out to more consumers regarding electric safety, energy savings and Helpline number 1912 have been undertaken.



**Conducting Customer Interaction Meetings (CIM):**

As per the directions of the KERC, BESCOM has been conducting Customer Interaction Meetings (CIM) in all the sub-divisions every month regularly from November, 2011 onwards. To facilitate consumers to participate a schedule has been prepared for

conducting CIM in each sub-division on a particular date and time for the whole year. The schedule was communicated to all the sub-divisions to ensure that the CIM meetings were held on that day. The clippings of the CIM video have been uploaded in YouTube by the concerned AEEs. Various circulars and letters have been issued from time to time explaining the procedure and the steps to be taken for creating awareness locally and to make CIM more effective. Further, pamphlets explaining the procedure, scheduled dates, time and venue have been distributed in all the sub-divisions.

During the period from April, 2014 to November, 2014, a total number of 926 Consumer Interaction Meetings have been held in all the sub-divisions of BESCO and 5911 Consumers have attended such meetings. The zone wise details are as under:

	BMAZ		BRAZ		CTAZ	
	No. of CIM Conducted	Consumers Attended	No. of CIM Conducted	Consumers Attended	No. of CIM Conducted	Consumers Attended
April-14	48	230	34	261	33	212
May-14	48	275	35	335	33	188
June-14	48	300	34	335	33	285
July-14	48	253	35	266	33	254
Aug-14	48	215	35	248	33	225
Sep-14	48	238	35	216	33	204
Oct-14	48	215	35	232	33	209
Nov-14	48	281	35	328	33	172
<b>Total</b>	<b>384</b>	<b>2007</b>	<b>278</b>	<b>2221</b>	<b>264</b>	<b>1749</b>
<b>Total No. of CIMs Conducted</b>			<b>926</b>			
<b>Total No. of Consumers Attended</b>			<b>5977</b>			

### Commission's Views:

The Commission appreciates the various measures taken by BESCO for popularizing the *Centralized Consumer Service Centre* established at its headquarters for redressal of consumer complaints. BESCO is directed to focus on improving the consumer services by way of reducing the complaint down time to ensure that prompt services are extended to consumers speedily so as to mitigate the hardship caused due to disruptions, etc. The Commission has taken serious note of the dissatisfaction expressed by the farmers, who participated in the Public Hearing held on 6<sup>th</sup> February, 2015 about continued lack of prompt response from the concerned in attending to their complaints of disruptions in power supply, replacement of faulty transformers etc. The Commission therefore directs BESCO to sensitize its field officers about their responsibility to promptly and efficiently attend to the complaints and take exemplary disciplinary action where there is deliberate or unreasonable delay by them.

Further, it is noted that, the number of consumers participating in the Consumer Interaction Meetings held at the sub-divisions, is not very encouraging. This calls for a change in approach of inviting consumers to these meetings. BESCO shall direct all its sub-division officers to extend individually invitation in writing or through telephone to at

least a hundred select consumers and consumer groups to every such meeting so that interaction meetings become more participative and meaningful. It should also ensure that Superintending Engineer level officers are present in such meetings to ensure that any remedial action to redress the grievances of the consumers requiring approval / sanction from higher level is not delayed.

Further, the Commission also directs that the consumer interaction meetings held at the subdivisions shall be visually documented and the proceedings along with photos /videos of such interaction meetings shall be uploaded on its website for the information of the consumers.

The Commission reiterates its directive to BESCO to publish the complaint handling procedures / contact number of the Centralized Consumer Service Centre regularly for the information of public. BESCO shall ensure that all the complaints of consumers are registered through the centralized consumer service centre where they are properly logged till their closure after appropriate action to the satisfaction of the complainant. It shall be ensured that no service station or personnel of BESCO attends to a complaint (except those relating to accidents, etc., which require immediate action) without it being registered with the centralized complaint centre and referred to the jurisdictional service station for action and report.

Further, BESCO shall establish full fledged service stations at sub-division / section level wherever they are not functioning now and also strengthen the existing service stations with vehicles, equipments etc., to effectively deal with the consumer complaints relating to power supply. The compliance of the same shall be reported to the Commission once in a quarter.

### **iii) Directive on Energy Audit**

The Commission had directed BESCO to prepare a metering plan for energy audit to measure the energy received in each of the Interface Points and to account for the energy sales. The Commission had also directed BESCO to conduct energy audit and chalk out an Action Plan to reduce distribution losses to a maximum of 15 percent wherever it was above this level in 5 towns/ cities having a population of over 50,000.

The Commission had earlier directed ESCOMs to complete installation of meters at the DTCs by 31<sup>st</sup> December, 2010. In this regard ESCOMs were required to furnish to the Commission the following information on a monthly basis on the progress achieved in respect of

- a) Number of DTCs existing in the Company.
- b) Number of DTCs already metered.
- c) Number of DTCs yet to be metered.
- d) Time bound monthly programme for completion of work.

### **Compliance by BESCO:**

#### **Energy Audit:**

In RAPDRP areas comprising of 25 towns including Bangalore city, the project is being implemented by M/s Infosys. Due to gap between the date of survey and start of GIS live operations, there are additional assets and consumers added in the field during this duration data of which has to be collected and updated into the system as incremental updates. 100 per cent DTC-wise Consumer indexing can be achieved only after updating the incremental assets like distribution transformers, Poles etc., and correction of mapping of Consumers to respective distribution transformers.

Tender for the work of updating incremental assets in GIS application is being invited by BESCO for all five ESCOMs and it may take about six months to update the assets and

consumers in GIS with respect to actual on field. As such, it is requested to accord approval for a period of 6 months to complete consumer indexing in RAPDRP areas.

In non-RAPDRP areas M/s N-soft has taken up DTC energy audit, in co-ordination with field staff. The field staff has been directed to carry out consumer indexing DTC wise and to read the consumer installations DTC wise only.

The following installations have been mapped on to DTCs:

Name of the Circle	No. of Live installations (without IP)	No. of Live installations mapped on to DTC	% Mapping
Davangere	576640	576634	99.99%
Tumkur	517785	514803	99.42%
BRC	417710	403275	96.54%
Kolar	441673	370900	83.98%
Ramanagara	373860	348387	93.19%

However, the field staff has been directed to validate the same.

In view of huge task involved in this exercise extension of minimum of 3 months' time is sought for 100 per cent consumer indexing and validation as these activities have to be done by field staff manually (through field survey).

### **DTC Metering:**

#### **Metering of DTC in BESCO for the month October, 2014:**

- a) No. of DTCs Existing → 204992
- b) No. of DTCs Metered → 114927
- c) Balance No. of DTCs to be metered → 90065
- d) percentage of Metering → 56.06

DTC metering work in 24 towns of RAPDRP area has already been completed, whereas in Bangalore, the DTC metering work will be completed by January, 2015.

In Non-RAPDRP areas, the DTC metering work awarded to M/s Genus and M/s AFTL in Davangere, Bangalore Rural and Tumkur Circles has already been completed. The DTC metering work in Kolar and balance of Bangalore Rural Circle will be taken up only after successful completion and generation of realistic energy audit reports in other circles. However, Davangere division has been identified for completion of 100 per cent metering along with consumer indexing.

The metering of DTCs feeding to IP sets is not taken up consequent to bifurcation of feeders as NJY and Agricultural.

As some software integration problems are confronted in Non-RAPDRP areas, the energy audit reports are not generated. Once the integration is done, the energy audit reports will be submitted to the Commission from time to time.

### **Commission's Views:**

The Commission observes with concern that BESCOM has not submitted the analysis of energy audit conducted in cities / towns reportedly due to gaps in Metering, Billing & Collection (MBC) Module being rolled out by Information Technology Implements Agency, M/s Infosys under RAPDRP part A. The Commission notes with displeasure that this process has been delayed inordinately and feels that BESCOM has to address this issue with more seriousness for ensuring that energy audit is conducted so that remedial measures to reduce losses are initiated at the earliest. Since the metering of DTCs is completed in non RAPDRP areas as reported by BESCOM; BESCOM is directed to submit the energy audit of those cities / towns. The compliance of the same shall be submitted to the Commission within three months from the date of this order.

The Commission observes that the progress of DTC metering is just around 56 percent which is not satisfactory. Further, BESCOM has not taken up energy audit of even such DTCs for which metering has been completed negating the very purpose of metering them at a substantial cost. BESCOM is directed to take up energy audit of DTCs for which meters have already been installed and submit the DTC wise details of energy audit conducted with analysis within three months from the date of this order.

Further, BESCOM is directed to complete the energy audit of Davanagere Circle which is reportedly selected for 100 per cent completion of DTC metering along with consumer indexing and submit the results / analysis of the energy audit to the Commission within in one month from the date of this order.



BESCOM shall also expedite metering of balance DTCs and complete it early so as to take up DTC wise energy audit and initiate corrective measures for reducing distribution losses wherever they are above the standard level. The Commission directs that metering of all the DTCs in BESCOM shall be completed within three months from the date of this order.

The compliance of the above shall be reported regularly to the Commission once in a quarter.

#### iv) Directive on Implementation of HVDS:

In view of the obvious benefits in the introduction of HVDS in reducing distribution losses, the Commission had directed BESCOM to implement High Voltage Distribution System in at least one O & M division in a rural area in its jurisdiction by utilizing the capex provision allowed in the ARR for the year.

#### Compliance by BESCOM:

##### Physical & Financial Progress:

Sl. No	Name of the sub-division	No. of proposed feeders	No. of feeders completed	No. of feeders commissioned	RC cost (in Rs. crore)	Expenditure incurred (in Rs. crore)
1	Tumkur RSD 2	34	6	4	46.8	20.58
2	Chikkaballapura	6	3	0	34.8	12.23
3	Tumkur RSD 1	29	1	WUP*	99.45	30.02
4	Doddaballapura	9	1	WUP*	56.03	29.97
<b>Total</b>		<b>78</b>	<b>11</b>	<b>4</b>	<b>237.08</b>	<b>92.8</b>

\*WUP = Work under progress.

The post evaluation and concurrent evaluation of HVDS feeders have been awarded to M/s CPRI and the same is in progress. The tenure of award is for two years.

The rate contract issued for Doddaballapura is short closed for the ongoing works of 9 feeders and balance 22 feeders are redesignated to Tumkur taluk. Further, the rate

contract issued for Kengeri is terminated and redesignated to the balance feeders of Tumkur taluk.

All the existing 63 feeders in Tumkur taluk and additional 3 feeders which are catering IP loads in Kythasandra sub-division will be taken up under HVDS. In addition, 50 feeders have been identified in Kanakapura taluk for implementation of HVDS. A committee comprising of five members including an expert from Andhra Pradesh, a consultant from M/s CPRI, Two Assistant Executive Engineers from BESCOM and one Assistant Executive Engineer from Corporate Office, has been formed to prepare the DPR. The cost of the implementation of this scheme in Kanakapura taluk is Rs. 174 crore.

Further, BESCOM has taken the following key measures to reduce the cost of HVDS works:

- The existing LT line conductor to be retained/used if having suitable current carrying capacity and new conductor to be used only at locations wherever found extremely necessary.
- Only Star rated 25 kVA distribution transformers to be proposed with maximum connected load of 25 HP per transformer so that two or three IP sets are connected per transformer.
- There would be no unauthorized IP Sets in the completed HVDS feeders.
- For proper analysis, the data regarding the technical parameters such as change in voltage regulation, AT&C losses, failures of transforms, energy consumption before and after the completion of HVDS project, will be maintained.
- An undertaking would be obtained from the individual IP set consumers for safe keeping of the distribution transformers provided in their fields and to regularize all the unauthorized/additional loads by collecting additional deposit as per norms. Publication would be issued in leading daily news papers and also pamphlets would be distributed for educating IP Set consumers for proper use of scheme.
- The trunk line of HVDS feeders to be of Rabbit conductor and spur line conductor to be of Rabbit or Weasel (if it is existing) conductor.
- Squirrel conductor to be replaced by Rabbit conductor.
- Single pole mounting structures to be constructed in place of double pole structures for housing distribution transformers

## **Commission's Views:**

The Commission during its review meetings held with ESCOMs in the Commission has been emphasizing ESCOMs to identify sub-divisions with high LT/HT ratio and high distribution loss levels, so that substantial loss reduction could be achieved by implementing HVDS in such sub-divisions. BESCO needs to expedite implementation of HVDS in its jurisdiction by drawing up an action plan for timely completion and to derive the envisaged benefits on implementation of the scheme. BESCO is also directed to take action to commission 11 numbers of feeders it has reported as completed and furnish the loss analysis in respect of all commissioned feeders to the Commission.

The Commission having taken note of the HVDS cost estimates submitted to the Commission by ESCOMs was on a higher side and with a view to minimize the cost is considering issuing revised guidelines for implementation of HVDS in sub-divisions having highest distribution losses, so that a higher loss reduction could be achieved on implementation of HVDS at a reasonable cost.

As regards the implementation of HVDS in Kanakapura sub-division, BESCO is directed to get the cost estimates prepared keeping in view the objective of bringing down the overall costs and also get them thoroughly examined and thereafter seek separate approval from the Commission before taking up the proposed work.

The Commission directs BESCO to follow the guidelines issued by the Commission and implement HVDS programme in Tumkur rural sub-division-2 as reported by it and submit the progress/compliance thereon from time to time to the Commission.

## **v) Directive on Niranthara Jyothi – Feeder Separation:**

ESCOMs were directed to furnish to the Commission the programme of implementing 11 KV taluk wise feeders segregation with the following details:

- a) Number of 11 KV feeders considered for segregation.
- b) Month wise time schedule for completion of envisaged work.
- c) Improvement achieved in supply after segregation of feeders.

### Compliance by BESCO:

BESCO has taken up the work of segregating agricultural loads from the existing 11kV feeders in the form of Niranthara Jyothi Yojana, a scheme to provide 24x7 uninterrupted supply of power to non-agricultural loads in rural areas being executed in two phases. The updated progress is being regularly submitted to the Commission. The details of NJY progress are as follows:

#### Physical Progress of NJY phase-I

SI No	Name of the Taluk	No. of villages covered	No. of existing feeders	No. of proposed NJ feeders	Project cost (Rs. in Crore) As per DPR	Progress Achieved		Completion Date
						Feeders completed	Feeders commissioned	
1	2	3	4	5	6	7	8	9
1	Malur	272	20	10	0.2	10	10	
2	Kanakapura	483	31	19	31.8	19	19	March 2014
3	Magadi	26	1	1	1.4	1	1	
4	Hosadurga	208	19	13	16.1	13	13	
5	Channagiri	7	53	18	16.7	18	18	
6	Harapanahalli	113	18	10	16.2	10	10	
7	Bagepalli	272	17	12	15.9	12	12	
8	Kunigal	414	23	16	27.2	16	16	
9	Madhugiri	259	31	18	19.0	18	18	
10	Gubbi	185	68	11	18.2	11	11	
11	Sira	289	26	17	24.2	17	17	
12	Honnali	103	29	11	11.9	11	11	
13	Hiriyur	237	29	16	24.5	16	16	
14	Jagalur	106	13	9	12.2	9	9	
15	Siddlaghatta	268	26	13	19.7	13	13	
16	Hosakote	222	35	18	24.7	18	18	
17	Anekal	86	8	5	11.0	5	5	
18	Tumkur	569	60	25	31.8	25	25	
19	Tiptur	224	23	12	18.8	12	12	
20	Devanahalli	208	25	17	14.5	17	17	
<b>Total</b>		<b>4691</b>	<b>555</b>	<b>271</b>	<b>356.0</b>	<b>271</b>	<b>271</b>	

### Physical Progress of NJY phase-II

SI No	Name of the Taluk	No. of villages covered	No. of existing feeders	No. of proposed NJ feeders	Progress Achieved		Date of Completion
					Feeders completed	Feeders commissioned	
1	Doddaballapura	240	26	11	8	7	December 2014
2	Nelamangala	235	7	7	4	4	
3	Ramanagara	20	1	1	0	0	
4	Channapatna	168	21	13	10	10	
5	Koratagere	212	17	11	11	11	
6	Turuvekere	207	22	14	10	9	
7	Gubbi (part)**	190	23	14	14	13	
8	Chikkanayakanahalli(Lot-7)	157	15	7	7	7	
9	Mulbagal	233	21	12	11	11	
10	Kolar	258	40	20	20	19	
11	Chintamani	300	33	15	14	14	
12	Srinivaspura	328	33	13	7	5	
13	Chikkaballapura	156	16	11	10	10	
14	Gowribidanur	318	31	19	14	12	
15	Gudibande	77	5	3	3	3	
16	Chitradurga	183	24	16	8	5	
17	Holalkere	194	32	14	6	2	
18	Challakere	173	26	13	8	4	
19	Molakalmur	142	25	10	4	3	
20	Harihara**	58	20	10	5	5	
21	Davanagere	129	42	18	12	12	
22	Tumkur part 3(Addl NJY)	94	14	9	9	9	
23	Chikkanayakanahalli	179	15	8	-	-	
24	KGF	356	33	5	-	-	
25	Bangarpet-1			5	-	-	
26	Bangarpet-2			6	-	-	
<b>Total</b>		<b>542</b>	<b>285</b>	<b>195</b>	<b>195</b>	<b>175</b>	

All the 271 feeders under phase-1 have been commissioned.

M/s MECON Limited, a Government of India undertaking has been entrusted with pre and post analysis of feeders commissioned under phase-1 as indicated below and concurrent analysis of feeders under phase-2.

Sl. No.	Circle	No. of feeders
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1	Bangalore Rural	24 feeders
2	Kolar	08 feeders
3	Tumkur	40 feeders
4	Davanagere	28 feeders
	<b>Total</b>	<b>100 feeders</b>

The firm has already provided an initial draft analysis report for the phase-1 feeders identified in Davanagere Circle which is being validated.

M/s PRDCL also evaluated the pre and post status of Niranthara Jyothi phase-1 feeders in Harpanahalli Taluk and the same is enclosed.

Of 285 feeders proposed in phase-2, 175 feeders have been commissioned. The project is scheduled for a total completion by March, 2015. For Niranthara Jyothi feeders, at present 20-22 hours of 3 phase power supply is being arranged as envisaged under the DPR. The limiting number of hours of power supply to IP sets, i.e. for Agriculture feeders is 7 hours 3 phases and 10 hours single phase power is being arranged as per the direction of Government of Karnataka, by open delta.

The Managing Director, BESCOM has instructed all the Superintending Engineers (Ele.), C O&M circles to initiate action to disconnect power supply if 6 hours of single phase is being provided in addition to 7 hours of 3 phase supply on segregated agricultural feeders.

Further, a total of 371 feeders are proposed under phase-3 of Niranthara Jyothi to extend the scheme to the other villages which are left out and the areas earlier covered under RLMs. A total cost of the scheme is Rs. 724.00 crore and is proposed under Deendayal Upadhy Scheme sponsored by the Government of India.

## **Commission's Views:**

The Commission has noted that BESCO has commissioned all the feeders taken up under NJY phase-1. However, the progress achieved in implementing the works under NJY phase-2 is far from satisfactory as around 20 feeders are yet to be commissioned. There is inordinate delay in implementation of NJY phase-2 works and the poor progress has resulted in non-realization of envisaged benefits.

The Commission while taking note of the progress of NJY works during the review meetings held with ESCOMs had directed BESCO to complete NJY works in a time bound period and to carry out the analysis of the feeders which have been commissioned to ensure that the objectives set as per DPR are accomplished.

The Commission, therefore, directs that BESCO shall carry out the analysis in respect of feeders commissioned, indicating benefits accrued to the system in terms of reduction in failures of distribution transformers, improvement in tail-end voltage and improvement in supply/reduction in interruptions need to be evaluated vis-à-vis the benefits envisaged in the DPR. BESCO is directed to submit the pre and post analysis reports to the Commission in respect of the commissioned feeders it has entrusted to the Consultants within three months from the date of this order.

BESCO is directed to hasten the pace of NJY works under phase-2 and submit the compliance to the Commission and also report the benefits accrued to the system post implementation of NJY. BESCO shall ensure that NJY feeders are not tapped illegally for operating IP sets which would defeat the very purpose of feeder separation scheme undertaken at substantial cost.

Further, it is noted that BESCO has already segregated totally 462 numbers of 11 kV agriculture feeders from rural loads and the energy consumed by the IP Sets could be

more accurately measured at the 11 KV feeder level at the sub-stations after duly allowing for 11 KV and LT distribution system losses. BESCO is directed to report monthly, the total IP Set consumption on the basis of data from agriculture feeder energy meters only instead of assessing the IP set consumption based on the readings taken from energy meters fixed to DTCs feeding predominantly IP set loads. BESCO is also directed to furnish feeder- wise IP Set consumption based on feeder energy meter data to the Commission every month in respect of agriculture feeders segregated under NJY beginning from the month of April, 2015.

**vi) Directive on Demand Side Management in Agriculture:**

In view of the urgent need for conserving energy for the benefit of the consumers in the State, the Commission had directed BESCO to take up replacement of inefficient Irrigation Pumps with energy efficient Pumps approved by the Bureau of Energy Efficiency, at least in one sub-division in its jurisdiction and report compliance thereon.

**Compliance by BESCO:**

1. KERC in its proceedings of the meeting vide No. KERC/D/21/2014/98 dated 16.04.2014 held with M/s EESL and ESCOMs on 07.04.2014 on Energy Efficiency and DSM initiatives, opined that a proper model duly considering all relevant issues and the views of the stakeholders shall be selected for successful implementation of the scheme.
2. In reply to the KERC proceedings, M/s. EESL in its letter No. EESL/01/Ag.DSM/Karnataka/14/280 dated 23.04.2014, stated that it has adopted Commission Determined Tariff (CDT) in the case of BESCO. While CDT in the BESCO provides investment return at reasonable rate for EESL or any other investor, the CDT for CESC and BESCO is very low and would not attract investments. This is because of the fact that the project period is more than 10 years which will not attract investments. There is a need, therefore, to balance the genuine concerns of ESCOMs and providing a reasonable return to investors.

Further, on 30.07.2014, M/s EESL had submitted a DPR for Pavagada taluk comprising of 10,673 numbers of Agriculture Pump Sets. During the review of DPR, BESCO did not



agree on the operating hours and methodology adopted for measurement of the baseline power consumption and hence, decided that BESCO would propose a new methodology for measurement of baseline power consumption depending upon the actual pump operating hours and power consumption through energy meters.

3. During the meeting held on 08.04.2014, BESCO had not agreed to the methodology to establish baseline consumption of electricity used in IP sets proposed by EESL which is based on fixed number of hours of power supply. It was suggested to EESL to verify the metered data for one year (which is available in the existing DTCs which are metered) and evolve a methodology based on the meter readings of DTCs which are on real time basis. It was also informed to EESL that BESCO would fix all the DTCs with thread through meters, the advantage of which is CTs and PTs will not burn out and would use Reliance Modem for automatic meter reading /communication. These meters have load survey capability also. The officers of EESL were not ready to accept the proposal and decided to discuss the issue with the Additional Chief Secretary, Energy Department.
4. On 14.05.2014, a meeting was held in presence of ACS, Energy Department along with all MDs of ESCOMs and the following decision was taken:  
“Agriculture DSM projects will be implemented in segregated feeders (Ag Feeders only) where DTC metering is completed. Base line will be prepared for complete one year and data will be recorded in DTC meters. After one year this data will be provided to EESL for their review and consideration and further mutual decision will be taken by EESL and BESCO for implementation of Agricultural DSM projects. Appropriate measures to mitigate investment risks, including payback of capital cost in fixed duration, will also be considered”. However, after this, M/s. EESL declined to prepare DPR for other five taluks.

The progress so far in Kanakapura taluk is that, one 11kV Harobele predominantly IP set feeder comprising of about 250 number of IP sets is proposed to provide energy efficient pump sets on solar power for conservation of energy. It is also proposed to feed power generated from solar system into the BESCO grid on net metering tariff, whenever farmer does not use power supply for running the pump set. In this regard, field survey is completed and preparation of DPR is in progress. In the meantime, M/s

Sun Edison-Energy India Pvt. Ltd, on visiting the spot during November, 2014, had observed that there were additional 150 numbers of bore wells drilled and many more in the process. M/s Sun Edison-Energy India Pvt. Ltd opined that a pilot project can succeed only if the IP sets are limited to 250 numbers. Therefore, it was decided to limit the IP sets to 250 numbers duly transferring the other loads to another sub-station at Doddalahalli and the work of segregation of IP sets has to be taken up.

### **Commission's Views:**

The Commission has noted that the action taken by the BESCO so far has not yielded any quantifiable results as the implementation of demand side management in agriculture is hampered by many issues resulting in its non- implementation. BESCO should give emphasis on implementation of DSM measures in its jurisdiction in order to conserve energy as well as precious water for the benefit of farmers. BESCO is directed to focus its attention on implementation of DSM measures by necessary coordination with all the stake holders especially agreeing on crucial measurement and verification methodology to be in place so that it can move forward and implement this scheme.

The Commission during its review meetings with ESCOMs held in the Commission has been directing them to initiate DSM measures in one sub-division/taluk in order to assess the results of such measures. BESCO is directed to expedite the implementation of DSM measures in 11kV Harobebe feeder in Kanakapura taluk as reported and submit compliance regarding the progress achieved to the Commission within three months from the date of this order.

### **vii) Directive on Lifeline Supply to Un-Electrified households:**

The Commission has directed ESCOMs to prepare a detailed and time bound action plan to provide electricity to all the un-electrified Villages, Hamlets and Habitations in every taluk and to every household therein. The action plan was

required to spell out the details of additional requirement of power, infrastructure and manpower along with the shortest possible time frame (not exceeding three years) for achieving the target in every taluk and district. The Commission has directed that the data of un-electrified households could be obtained from the concerned Gram Panchayaths and the action plan be prepared based on the data of un-electrified households.

**Compliance by BESCO:**

BESCO had not taken up electrification of un-electrified households under XI Plan. The electrification of rural BPL households has been taken up under RGGVY XII plan, in eight districts of BESCO, where only those habitations having population of 100 and above are eligible to be covered. BESCO is conducting field survey to identify the un-electrified villages, hamlets and habitations and the details are as follows:

SI No	Name of the District	No of BPL households identified for electrification under RGGVY XII Plan.	No of Rural households identified for electrification under RGGVY XII Plan. (Including BPL)
1	Bangalore Rural	6167	8175
2	Davanagere	21294	26869
3	Kolar	13041	17026
4	Chikkaballapura	15460	20228
5	Ramanagara	4569	9193
6	Tumkur	42247	46646
7	Chitradurga	30190	36546
8	Anekal taluk of Bangalore Urban	3872	4418
<b>Total</b>		<b>1,36,840</b>	<b>1,69,101</b>

The progress so far is that in five districts namely, Bangalore Rural, Ramanagara, Kolar, Davanagere and Chikkaballapura, tendering is completed and work award has to be issued to the qualified firm. In three districts namely Tumkur, Chitradurga and Anekal taluk of Bangalore Urban district, DPRs have been prepared and submitted to M/s REC, New Delhi, for acceptance.

### **Commission's Views:**

The Commission observes that there is inordinate delay in identifying the correct number of un-electrified households and proper formulation of a scheme for their electrification by BESCOM. This in fact has resulted in non-implementation of the scheme, while vast numbers of households in the remote areas remain without electricity. Electrification of un-electrified households is an important programme which should be implemented in a time bound manner in order to reach out to the people who are deprived of basic needs such as electricity. The Commission, while reviewing, the status of compliance of its directives during the ESCOMs' Review meetings, has been stressing upon ESCOMs to initiate necessary action to provide electricity to the un-electrified households with funding arrangement by RGGVY or any other source.

As per the latest Census report, there were 12,34,444 un-electrified households in the State and ESCOMs need to initiate action to provide electricity to these households. Further, the Commission, in its letter dated October 25, 2013, had directed BESCOM to get the

accurate data of un-electrified households from the concerned Gram Panchayaths and to prepare an action plan for electrification of such identified households which are not electrified. BESCO shall promptly act on this and come out with an action plan to implement the directive of the Commission for providing electricity to the un-electrified households in its jurisdiction and submit compliance/progress achieved monthly to the Commission.

Further, the Commission concerned with the slow pace of progress of this programme, directs BESCO to cover electrification of 5 per cent of the total identified un-electrified households every month beginning from April 2015 so as to complete this programme fully in about twenty months. BESCO is directed to report compliance to the Commission regarding the monthly progress achieved from May, 2015 onwards. In the event of non-compliance, the Commission may be constrained to initiate penalty proceedings under section 142 of the Electricity Act, 2003.

**viii) Directive on sub-division as Strategic Business Units (SBU):**

The present organizational set up of ESCOMs at the field level appears to be mainly oriented to maintenance of power supply without a corresponding emphasis on realization of revenue. This has resulted in a serious mismatch between the power supplied, expenditure incurred and the revenue realized in many cases. The continued viability of the ESCOMs urgently calls for a change of approach in this regard, so that the field level functionaries are made accountable for ensuring realization of revenues corresponding to the energy supplied in their jurisdiction.

The Commission has therefore directed the BESCO to introduce the system of Cost-Revenue Centre Oriented sub-divisions at least in two divisions in its operational area and report results of the experiment to the Commission.

**Compliance by BESCO:**

BESCO has appointed a Consultant for conceptualization of SBU in Indiranagara and Chandapura divisions on pilot basis. Presentations were made by the Consultant to the

senior management and divisional representatives of BESCOM on implementation process. The Consultant has come out with a concept paper on SBU process which involves:

- a. Key Performance Indicators (“KPI”) should be introduced for the divisions involved.
- b. Divisions possess critical strategic features that are required for implementing SBU.

They have given the outline, approach and methodology.

The key areas that should be considered in introducing this concept:

1. Review the prerequisites for introducing SBU (the following are the activities that are expected out of a typical SBU. However, these evolve over a period of time given the capability of the organization to embed change in the culture and activities. Hence, some of these activities need not be taken up immediately by BESCOM in implementing the SBU concept)
  - 1.1. Autonomy of operations
  - 1.2. Develop and manage network
  - 1.3. Customer Relationship Management
  - 1.4. Supporting systems
  - 1.5. Sustainability
2. Developing baseline data for measuring the improvements required or measuring the benefits post implementation.
  - 2.1. Data for dashboard at sub-division level (covering input, sales, revenue, collections, ASAI – feeder wise)
  - 2.2. PP data – time block data from SLDC for understanding the load pattern, duration of load etc., across feeders.
  - 2.3. Network status – identifying congestion, bottlenecks, areas of growth in demand, deterioration of older assets in the network (emergency, short term and long term interventions required), input and DTC metering, consumer metering, requirement of capex and the benefit-to-cost analysis for such interventions.

- 2.4. Full consumer database including indexing
  - 2.5. Customer Charters in place and means of implementing the same
  - 2.6. Support systems – employees, IT etc.
  - 2.7. Cash flow monitoring methodology
  - 2.8. Overheads
3. Brainstorming session between the identified SBU EEs, BESCO senior management to negotiate final activities and target implementation dates for introduction of the SBU concept.
  4. Strategic Business Unit Executive Engineers (EE) to present the concept, implementation outline to the Managing Director, Director (Tech) and Director (Finance).
  5. Resources to be identified and approved for such implementation along with monitoring and evaluation methodology.
  6. Periodical progress monitoring and reporting to the senior management in BESCO by the SBU EEs.

BESCO will draw up a plan of action in accordance with the above concept and approach for putting SBU process implementation in identified Indiranagar and Chandapura O&M divisions in phased manner.

The details of Ring fencing of sub-divisions with boundary meters are as indicated below:

Sl. No.	Zones	No. of sub-divisions	Sub-divisions provided with boundary meters	Balance to be provided with boundary meters
1	BMAZ	48	19	29
2	BRAZ	35	8	27
3	CTAZ	35	7	28
	<b>TOTAL</b>	<b>118</b>	<b>34</b>	<b>84</b>

1.	No. of sub-divisions Ring fenced with boundary meters	34 Nos.
2.	Balance no. of sub-divisions to be ring fenced	84 Nos.
3.	Timeline by which the balance sub-divisions will be ring fenced	31 <sup>st</sup> March,15

4.	Details of energy audit being carried out in respect of sub-divisions which are ring fenced, if any,	energy audit not being carried out in respect of sub-divisions which are ring fenced
5.	Whether energy audit is being done in respect of sub-divisions with boundary meters	No

All the field officers have been instructed to fix the inter sub-division boundary meters and carry out sub-division wise energy audit.

### **Commission's Views:**

During the Review meetings held with ESCOMs, the Commission had directed ESCOMs to submit the action plan for implementation of Cost-Revenue Centre Oriented sub-divisions in at least two divisions in each ESCOM. However, there is not much progress in the implementation of SBU in Indiranagar and Chandapura divisions which BESCO has identified during last year itself to implement SBU in its jurisdiction. It is high time that the ESCOMs give due attention to the financial aspect of their business by introducing SBU in their divisions, which would be a useful tool for monitoring and evaluating the division's performance. By implementing SBU, the field staff could be made accountable to not only in respect of the revenue realized corresponding to the energy input but also for efficient maintenance of continuous and quality power supply, which is the most critical factor in sustenance of the distribution business.

In view of the obvious benefits, BESCO is directed to take immediate action to implement SBU concept as per the study it has entrusted to the Consultants in Chandapura and Indiranagara sub-divisions and report compliance/progress to the Commission within three months from the date of this order. A time bound action plan to roll out this to other sub-divisions shall also be prepared and communicated to the Commission.

### **ix) Directive on Prevention of Electrical Accidents:**

#### **The directive was as follows:**

"The Commission has reviewed the electrical accidents that have taken place in the State during the year 2013-14 and with regret noted that as many as 460 people and 524 animals have died due to these accidents.



From the analysis, it is seen that the major causes of these accidents are due to snapping of LT/HT lines, accidental contact with live LT/HT/EHT lines, hanging live wires around the electric poles /transformers etc., in the streets posing great danger to human lives.

Having considered the above matter, the Commission hereby directs BESCO to prepare an action plan to effect improvements in the transmission and distribution networks and implement safety measures to prevent electrical accidents. A detailed division wise action plan shall be submitted by BESCO to the Commission".

**Compliance by BESCO:**

The action plan for ensuring safety and to reduce electrical accidents in BESCO is indicated below:

- i. A suo-motu case 1/2011 was registered by the KERC against BESCO in the year 2011, on account of death of a girl due to electrocution. 4,355 numbers of identified hazardous installations were rectified in BESCO's jurisdiction and the progress of the rectified hazardous locations has been submitted to the Commission with photographs of such locations before and after rectification. Considering the submissions, KERC was pleased to close the suo-motu case for the time being. As per the instructions of KERC, the process of identifying, rectifying and progress of the hazardous locations are being continued and being submitted to the KERC.
- ii. The safety advertisements containing electrical safety aspects have been exhibited in prime locations during the public programs to educate the general public in electrical safety aspects.
- iii. Safety awareness advertisements are being displayed on screens of reservation counters in the Railway Stations in BESCO's jurisdiction.
- iv. Safety equipment has been provided to all the BESCO field staff.

- v. For verification of complaints in respect of the works carried out, surprise checks/inspections are being under taken by the senior officers of BESCO.
- vi. Third party inspections on all the works executed in BESCO has been awarded to M/s CPRI.
- vii. Safety meetings are being conducted on every Monday in the section offices to educate the field staff about safety.
- viii. BESCO is setting up stalls in the public exhibitions to educate the general public regarding the electrical safety precautions to be adopted in the use of electricity to avoid accidents.
- ix. An Official Memorandum has been issued on 09.05.2013 for enhancing the compensation payable in case of accidents.
- x. General Manager (Q, S&S) is nominated as Electrical Safety Officer for BESCO as per CEA Regulations, 2010.
- xi. Stringent action is being taken on the staff for not using safety tools provided to them and on 28.08.2013, one Assistant Engineer, one Junior Engineer and one Lineman were suspended for not following the safety procedure while at work.

### **Commission's Views:**

The Commission notes with serious concern that the number of fatal electrical accidents involving humans and livestock has continued to increase despite BESCO reporting that it has initiated several measures including creating awareness about safety among public to prevent them. BESCO needs to make more concerted efforts for identification and rectification of all the hazardous installations in the distribution system in the shortest possible time. BESCO shall give priority for rectification of hazardous installations in densely populated areas and public places. Local bodies should also be sensitized about rectification of hazardous streetlight installations and other electrical works under their control.

The Commission, during the Review meetings held with the ESCOMs has been pointing out to the ESCOMs the works that they need to do like taking up periodical preventive maintenance works, installing LT protection to distribution transformers, conducting regular

awareness program for public on electrical safety aspects in use of electricity and also about ensuring use of safety tools and tackles by their field staff besides imparting them necessary training at regular intervals.

The Commission has also been emphasizing on the ESCOMs about adherence to the best construction practices as per the applicable construction standards so that the construction/expansion of the distribution network is in accordance with the standards which would ensure that no maintenance is required for such network for a reasonably a long period of time.

The Commission has constituted a sub-Committee comprising of experts in the field and members of the State Advisory Committee of the KERC to draft a Safety/Technical manual to serve as a useful guide for the field engineers to record all the technical deficiencies prevalent in the network and to enable them to take follow up action to rectify them. Further, another sub-Committee constituted by the Commission is identifying the various modern tools and tackles required to be maintained compulsorily in each O& M section for ensuring safety in operations. After finalization of the Sub-Committee's reports, the same will be forwarded to all the ESCOMs for effective implementation of safety measures. ESCOMs are required to circulate the Sub-Committee's reports among their field staff for necessary guidance and also to continuously monitor the implementation of the suggestions / recommendations contained in the reports.

BESCOM is once again directed to continue to take necessary measures to rectify the hazardous locations/installations and providing LT protection to distribution transformers to prevent and reduce the number of fatal electrical accidents. BESCOM is directed to comply with the above directive and report compliance/ progress of the same every month to the Commission.

## Annexure-1

SL No.	Sources	Power Purchase for FY-16 (TOTAL OF ALL ESCOMs)					
		Energy Share in %	Allowed Energy in MU	Fixed charges (Crs)	Energy charges (Crs)	Total Cost (Crs)	Cost per Kwh (Rs/Kwh)
1	2	3	5	6	7	8	9
<b>A</b>	<b>KPCL Hydro Stations</b>						
<b>1</b>	<b>Sharavathi Hydro Electric Project</b>		<b>6333.59</b>	<b>28.43</b>	<b>180.19</b>	<b>208.61</b>	
a	Sharavathi Generating Station (10x103.5)	100.00	5287.98	11.44	110.59	122.02	0.23
b	Linganamakki (2x27.5)	100.00	255.87	0.61	5.78	6.38	0.25
c	Gerusoppa (4x60)	100.00	574.35	14.24	49.14	63.38	1.10
d	MGHE-Jog {(4x21.6)+(4x13.2)}	100.00	215.39	2.14	14.69	16.83	0.78
<b>2</b>	<b>Kalinadi Hydro Electric Project</b>		<b>4002.50</b>	<b>30.19</b>	<b>209.19</b>	<b>239.38</b>	
a	Supa Dam Power House (2x50)	100.00	518.31	1.23	13.88	15.12	0.29
b	Nagajari Power House {(5x150)+(1x135)}	100.00	2757.82	10.91	115.57	126.47	0.46
c	Kadra Dam (3x50)	100.00	375.02	11.13	45.60	56.73	1.51
d	Kodasalli Dam (3x40)	100.00	351.35	6.92	34.14	41.06	1.17
<b>3</b>	<b>Varahi Hydro Projects</b>		<b>1096.26</b>	<b>42.61</b>	<b>72.49</b>	<b>115.10</b>	
a	Varahi 1 & 2 (2x115)	100.00	1070.60	7.75	69.91	77.65	0.73
b	Varahi 3 & 4 (2x115)		0.00	34.56	0.00	34.56	
c	Mani Dam Power House (2x4.5)	100.00	25.66	0.30	2.58	2.89	1.13
<b>4</b>	<b>Ghataprabha River Basin Project (GDPH) (2x16)</b>	<b>100.00</b>	<b>95.08</b>	<b>1.47</b>	<b>7.77</b>	<b>9.24</b>	<b>0.97</b>
<b>5</b>	<b>Krishna River Basin Project</b>		<b>489.97</b>	<b>46.48</b>	<b>39.91</b>	<b>86.39</b>	
a	Almatti Dam Power House {(1x15)+(5x55)}	<b>100.00</b>	489.97	46.48	39.91	86.39	1.76
<b>6</b>	<b>Bhadra River Basin Project</b>		63.96	0.84	14.88	15.72	2.46
a	Bhadra Right Bank (7.2+6)	100.00	21.54	0.28	5.06	5.34	2.48
b	Bhadra Left Bank {(2x12)+(1x2)}	100.00	42.42	0.56	9.83	10.38	2.45
<b>7</b>	<b>Thungabhadra River Basin Project</b>		<b>93.99</b>	<b>0.24</b>	<b>5.82</b>	<b>6.06</b>	
a	Munirabad {(2x9)+10}	100.00	93.99	0.24	5.82	6.06	0.64
<b>8</b>	<b>Cauvery River Basin Project</b>		<b>275.00</b>	<b>4.54</b>	<b>23.03</b>	<b>27.57</b>	
a	Shiva	100.00	195.10	3.22	16.32	19.54	1.00
b	Shimsa	100.00	79.90	1.32	6.71	8.03	1.01
<b>9</b>	<b>KPCL-Mini Hydel Stations</b>						
a	Mallapura-1&2 (2x4.5)		0.00	0.00	0.00	0.00	
b	Sirvara		0.00	0.00	0.00	0.00	

c	Kalmala		0.00	0.00	0.00	0.00	
d	Ganekal		0.00	0.00	0.00	0.00	
	<b>Total KPCL Hydel Stations (A)</b>	<b>100.00</b>	<b>12450.35</b>	<b>154.80</b>	<b>553.28</b>	<b>708.08</b>	0.57
<b>B</b>	<b>Thermal</b>						
<b>1</b>	<b>Raichur Thermal Power Station Units (RTPS)</b>		<b>9950.00</b>	<b>927.44</b>	<b>2924.54</b>	<b>3851.99</b>	3.87
a	RTPS -1 to 7 (7x210)	100.00	8438.00	678.87	2506.93	3185.80	3.78
b	RTPS-VIII (1x250)	100.00	1512.00	248.57	417.61	666.18	4.41
<b>2</b>	<b>Bellary Thermal Power Station (BTPS) &amp; Yeramurs</b>		<b>10334.84</b>	<b>917.18</b>	<b>3144.72</b>	<b>4061.90</b>	
a	BTPS Unit I (1x500)	100.00	2664.00	373.46	770.96	1144.42	4.30
b	BTPS Unit 2 (1x500)	100.00	3497.00	543.72	913.07	1456.79	4.17
c	BTPS Unit 3 (1x700)	100.00	2898.84	0.00	1014.60	1014.60	3.50
<b>3</b>	<b>Yeramurus TPS (2x800)</b>	100.00	1275.00	0.00	446.10	446.10	3.50
	<b>Total KPCL-Thermal Stations (B)</b>	<b>100.00</b>	<b>20284.85</b>	<b>1844.62</b>	<b>6069.27</b>	<b>7913.89</b>	<b>3.90</b>
	<b>Total KPCL Stations (A+B)</b>	<b>100.00</b>	<b>32735.19</b>	<b>1999.42</b>	<b>6622.55</b>	<b>8621.97</b>	<b>2.63</b>
<b>C</b>	<b>Central Projects</b>						
1	N.T.P.C-Ramagundam Stage I & II (Andhrapradesh) (3x200+3x500)(2100)	100.00	2936.00	172.68	715.50	888.18	3.03
2	N.T.P.C-Ramagundam Stage III (Andhrapradesh) (1x500)(500)	100.00	753.00	69.14	195.93	265.07	3.52
3	NTPC-Talcher(Orissa) (4x500)(2000)	100.00	2626.00	199.91	362.39	562.30	2.14
4	NTPC-Simhadri Stage-I (Andhrapradesh) (2x500) (1000)	100.00	1397.00	241.01	363.50	604.50	4.33
5	NLC TPS2-Stage 1 (Tamilnadu) (3x210)(630)	100.00	656.00	45.40	145.96	191.36	2.92
6	NLC TPS2-Stage 2(Tamilnadu) (4x210)(840)	100.00	929.00	70.41	206.70	277.11	2.98
7	NLC TPS1-Expn (Tamilnadu) (2x210)(420)	100.00	687.00	68.00	145.30	213.30	3.10
8	NLC TPS11-Expn 1	100.00	390.00	0.00	86.78	86.78	2.23
10	MAPS(Tamilnadu) (2x220) (440)	99.98	177.77	0.00	36.58	36.62	2.06
11	Kaiga 1&2, (Karnataka) (2x220)(440)	100.00	655.00	0.00	197.78	197.78	3.02
12	Kaiga Unit 3 & 4 (2x220)(440)	100.00	754.00	0.00	227.68	227.68	3.02
15	NTECL-Vallur STPS stage 1 Unit 1 & 2 (Tamilnadu) (2x500)(1000)	100.00	513.00	111.33	113.37	224.71	4.38
18	Tuticorn (TPPU-1) Tamil Nadu NLC/TNEBJV (2x500)(1000)	100.00	362.20	0.00	174.22	174.22	4.81
19	Kudankulam(Tamilnadu) (NPC) (4x1000)(4000)	100.00	1526.00	0.00	460.79	460.79	3.02

	<b>Total CGS (C)</b>	<b>100.00</b>	<b>14361.97</b>	<b>977.88</b>	<b>3432.43</b>	<b>4410.36</b>	3.07
<b>D</b>	<b>IPPs-Major</b>						
1	UPCL Unit 1 & 2 (2x600)	100.00	7463.00	1296.32	1787.69	3084.01	4.13
	<b>Total Major IPPs (D)</b>	<b>100.00</b>	<b>7463.00</b>	<b>1296.32</b>	<b>1787.69</b>	<b>3084.01</b>	
<b>E</b>	<b>Minor- IPPs (NCE Projects)</b>						
1	Co-generation		204.25	0.00	81.13	81.13	3.97
2	Biomass		129.62	0.00	63.66	63.66	4.91
3	Mini Hydel		1512.05	0.00	493.75	493.75	3.27
4 (i)	Wind Mill Power (Minor IPPs)		4185.96	0.00	1499.62	1499.62	3.58
4 (ii)	KPCL wind mill at Kappadagudda {(9x0.225)+(11x0.23)}		13.51	0.00	4.34	4.34	3.21
5	Captive Power/Waste to Heat Energy		60.60	0.00	26.93	26.93	4.44
6	NTPC Bundle Power share		297.84	0.00	127.61	127.61	4.28
7	Solar Power		34.25	0.00	28.21	28.21	8.24
i	KPCL Solar {(3x3)+1x5}		50.00	0.00	30.00	30.00	6.00
iii	Solar Power Purchase Through bids under case-2 bidding proces (KREDL Tenders)		46.34	0.00	38.93	38.93	8.40
	<b>Total Minor-IPPs (NCE Projects) (E)</b>		<b>6534.42</b>	<b>0.00</b>	<b>2394.18</b>	<b>2394.18</b>	
<b>F</b>	<b>Other States Projects</b>						
1	TB Dam Share (AP) (20%),{TBDPS- 1 (4x9),TBDPS-2 (4x9)}		41.06	0.00	7.39	7.39	1.80
2	Jurala Hydro Power Station (AP) (50%) (6x39.10)		135.01	0.00	24.30	24.30	1.80
	<b>Total of Other States Projects (F)</b>		<b>176.07</b>	<b>0.00</b>	<b>31.69</b>	<b>31.69</b>	
<b>G</b>	<b>Contingent Power purchases (Short term/Medium term/Exchange Purchases</b>						
	Short term/Medium term (1503 MW up to June 2015)	100.00	1352.38	0.00	710.00	710.00	5.25
	<b>Total of Contingent Power purchases (Short term/Medium term/Exchange Purchases (G)</b>	<b>100.00</b>	<b>1352.38</b>	<b>0.00</b>	<b>710.00</b>	<b>710.00</b>	<b>5.25</b>
<b>H</b>	<b>Transmission Charges</b>						
1	KPTCL			2606.52	0.00	2606.52	
2	PGCIL			622.70	0.00	622.70	
	<b>Total Transmission Charges (H)</b>			<b>3229.22</b>	<b>0.00</b>	<b>3229.22</b>	
<b>I</b>	<b>System Operating Charges</b>						
1	SLDC			29.69	0.00	29.69	
2	SRPC/POSOC/TANGEDCO etc.			3.01	0.00	3.01	
	<b>Total System Operating Charges (I)</b>			<b>32.70</b>	<b>0.00</b>	<b>32.70</b>	

	<b>TOTAL (A To I)</b>		<b>62623.03</b>	<b>7535.54</b>	<b>14978.54</b>	<b>22514.13</b>	<b>3.60</b>
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## Annexure-2

SL. No.	Sources	Power Purchase for FY-16 (BESCOM)					
		Energy Share in %	Allowed Energy in MU	Fixed charges (Cr\$)	Energy charges (Cr\$)	Total Cost (Cr\$)	Cost per Kwh (Rs/Kwh)
1	2	3	4	5	6	7	8
<b>A</b>	<b>KPCL Hydro Stations</b>						
<b>1</b>	<b>Sharavathi Hydro Electric Project</b>		<b>1511.50</b>	<b>7.97</b>	<b>46.69</b>	<b>54.67</b>	<b>2.36</b>
a	Sharavathi Generating Station (10x103.5)	22.50	1189.68	2.56	24.85	27.41	0.23
b	Linganamakki (2x27.5)	28.68	73.38	0.17	1.66	1.83	0.25
c	Gerusoppa (4x60)	32.50	186.66	4.63	15.97	20.60	1.10
d	MGHE-Jog {(4x21.6)+(4x13.2)}	28.68	61.77	0.61	4.21	4.83	0.78
<b>2</b>	<b>Kalinadi Hydro Electric Project</b>		<b>1175.66</b>	<b>9.35</b>	<b>63.04</b>	<b>72.39</b>	<b>0.62</b>
a	Supa Dam Power House (2x50)	28.68	148.65	0.35	3.98	4.34	0.29
b	Nagajari Power House {(5x150)+(1x135)}	28.68	790.94	3.13	33.14	36.27	0.46
c	Kadra Dam (3x50)	32.50	121.88	3.62	14.82	18.44	1.51
d	Kodasalli Dam (3x40)	32.50	114.19	2.25	11.09	13.34	1.17
<b>3</b>	<b>Varahi Hydro Projects</b>		<b>314.41</b>	<b>12.22</b>	<b>20.79</b>	<b>33.01</b>	<b>1.05</b>
a	Varahi 1 & 2 (2x115)	28.68	307.05	2.22	20.05	22.27	0.73
b	Varahi 3 & 4 (2x115)		0.00	9.91	0.00	9.91	
c	Mani Dam Power House (2x4.5)	28.68	7.36	0.09	0.74	0.83	1.13
<b>4</b>	<b>Ghataprabha River Basin Project (GDPH) (2x16)</b>	28.68	<b>27.27</b>	<b>0.42</b>	<b>2.23</b>	<b>2.65</b>	<b>0.97</b>
<b>5</b>	<b>Krishna River Basin Project</b>		<b>159.24</b>	<b>15.11</b>	<b>12.97</b>	<b>28.08</b>	<b>1.76</b>
a	Almatti Dam Power House {(1x15)+(5x55)}	32.50	159.24	15.11	12.97	28.08	1.76
<b>6</b>	<b>Bhadra River Basin Project</b>		<b>20.79</b>	<b>0.27</b>	<b>4.84</b>	<b>5.11</b>	<b>2.46</b>
a	Bhadra Right Bank (7.2+6)	32.50	7.00	0.09	1.64	1.74	2.48
b	Bhadra Left Bank {(2x12)+(1x2)}	32.50	13.79	0.18	3.19	3.37	2.45
<b>7</b>	<b>Thungabhadra River Basin Project</b>		<b>26.96</b>	<b>0.07</b>	<b>1.67</b>	<b>1.74</b>	<b>0.64</b>
a	Munirabad {(2x9)+10}	28.68	26.96	0.07	1.67	1.74	0.64
<b>8</b>	<b>Cauvery River Basin Project</b>		<b>78.87</b>	<b>1.30</b>	<b>6.61</b>	<b>7.91</b>	<b>1.00</b>
a	Shiva	28.68	55.96	0.92	4.68	5.60	1.00
b	Shimsa	28.68	22.91	0.38	1.93	2.30	1.01
<b>9</b>	<b>KPCL-Mini Hydel Stations</b>						
a	Mallapura-1&2 (2x4.5)		0.00	0.00	0.00	0.00	

b	Sirvara		0.00	0.00	0.00	0.00	
c	Kalmala		0.00	0.00	0.00	0.00	
d	Ganekal		0.00	0.00	0.00	0.00	
	<b>Total KPCL Hydel Stations (A)</b>	26.62	<b>3314.70</b>	<b>46.71</b>	<b>158.83</b>	<b>205.55</b>	<b>0.62</b>
<b>B</b>	<b>Thermal</b>						
<b>1</b>	<b>Raichur Thermal Power Station Units RTPS)</b>		<b>5528.04</b>	<b>524.09</b>	<b>1622.76</b>	<b>2146.85</b>	<b>3.88</b>
a	RTPS -1 to 7 (7x210)	54.31	4583.04	368.74	1361.75	1730.49	3.78
b	RTPS-VIII (1x250)	62.50	945.00	155.36	261.01	416.37	4.41
<b>2</b>	<b>Bellary Thermal Power Station (BTPS) &amp; Yeramurs</b>		<b>5265.58</b>	<b>462.63</b>	<b>1604.64</b>	<b>2067.27</b>	<b>3.93</b>
a	BTPS Unit I (1x500)	50.44	1343.72	188.37	388.87	577.25	4.30
b	BTPS Unit 2 (1x500)	50.44	1763.89	274.25	460.55	734.80	4.17
c	BTPS Unit 3 (1x700)	52.26	1514.87	0.00	530.20	530.20	3.50
<b>3</b>	Yeramurus TPS (2x800)	50.44	643.11	0.00	225.01	225.01	3.50
	<b>Total KPCL-Thermal Stations (B)</b>	53.21	<b>10793.62</b>	<b>986.72</b>	<b>3227.40</b>	<b>4214.12</b>	<b>3.90</b>
	<b>Total KPCL Stations (A+B)</b>	43.10	<b>14108.32</b>	<b>1033.44</b>	<b>3386.23</b>	<b>4419.67</b>	<b>3.13</b>
<b>C</b>	<b>Central Projects</b>						
1	N.T.P.C-Ramagundam Stage I & II (Andhrapradesh) (3x200+3x500)(2100)	50.44	1480.92	87.10	360.90	448.00	3.03
2	N.T.P.C-Ramagundam Stage III (Andhrapradesh) (1x500)(500)	50.44	379.81	34.88	98.83	133.70	3.52
3	NTPC-Talcher(Orissa) (4x500)(2000)	51.27	1346.46	102.50	185.81	288.31	2.14
4	NTPC-Simhadri Stage-I (Andhrapradesh) (2x500) (1000)	50.44	704.65	121.56	183.35	304.91	4.33
5	NLC TPS2-Stage 1(Tamilnadu) (3x210)(630)	50.44	330.89	22.90	73.62	96.52	2.92
6	NLC TPS2-Stage 2(Tamilnadu) (4x210)(840)	50.44	468.59	35.51	104.26	139.77	2.98
7	NLC TPS1-Expn (Tamilnadu) (2x210)(420)	50.44	346.52	34.30	73.29	107.59	3.10
8	NLC TPS1I-Expn 1	50.44	196.72	0.00	43.77	43.77	2.23
10	MAPS(Tamilnadu) (2x220) (440)	50.37	89.55	0.00	18.45	18.50	2.06
11	Kaiga 1&2, (Karnataka) (2x220)(440)	50.44	330.38	0.00	99.76	99.76	3.02
12	Kaiga Unit 3 & 4 (2x220)(440)	50.44	380.32	0.00	114.84	114.84	3.02
15	NTECL-Vallur STPS stage 1 Unit 1 & 2 (Tamilnadu) (2x500)(1000)	50.44	258.76	56.16	57.19	113.34	4.38
18	Tuticorn (TPPU-1) Tamil Nadu NLC/TNEBJV (2x500)(1000)	50.44	182.69	0.00	87.88	87.88	4.81
19	Kudankulam(Tamilnadu) (NPC) (4x1000)(4000)	50.44	769.71	0.00	232.42	232.42	3.02



	<b>Total CGS (C)</b>	50.59	<b>7265.97</b>	<b>494.91</b>	<b>1734.32</b>	<b>2229.28</b>	<b>3.07</b>
<b>D</b>	<b>IPPs-Major</b>						
1	UPCL Unit 1 & 2 (2x600)	66.90	4992.747	867.2402	1195.963	2063.2028	4.1324
	<b>Total Major IPPs (D)</b>	66.90	<b>4992.75</b>	<b>867.24</b>	<b>1195.96</b>	<b>2063.20</b>	<b>4.13</b>
<b>E</b>	<b>Minor- IPPs (NCE Projects)</b>						
1	Co-generation	0.00	0.00				
2	Biomass	40.83	52.92	0.00	27.17	27.17	5.13
3	Mini Hydel	32.58	492.63	0.00	158.95	158.95	3.23
4 (i)	Wind Mill Power (Minor IPPs)	60.19	2519.34	0.00	907.12	907.12	3.60
4 (ii)	KPCL wind mill at Kappadagudda {(9x0.225)+(11x0.23)}	100.00	13.51	0.00	4.34	4.34	3.21
5	Captive Power/Waste to Heat Energy	49.93	30.26	0.00	18.16	18.16	6.00
6	NTPC Bundle Power share	48.41	144.18	0	71.96	71.96	4.990908
7	Solar Power		0	0	0	0	
i	KPCL Solar {(3x3)+1x5}	48.51	24.255	0	14.553	14.553	6
iii	Solar Power Purchase Through bids under case-2 bidding proces (KREDL Tenders)		0.00	0.00	0.00	0.00	
	<b>Total Minor-IPPs (NCE Projects) (E)</b>	50.15	<b>3277.10</b>	<b>0.00</b>	<b>1202.25</b>	<b>1202.25</b>	3.67
<b>F</b>	<b>Other States Projects</b>						
1	TB Dam Share (AP) (20%),{TBDPS- 1(4x9),TBDPS-2(4x9)}	27.89	11.45		2.06	2.06	1.80
2	Jurala Hydro Power Station (AP) (50%) (6x39.10)	51.44	69.45		12.50	12.50	1.80
	<b>Total of Other States Projects (F)</b>	45.95	<b>80.90</b>	<b>0.00</b>	<b>14.56</b>	<b>14.56</b>	<b>1.80</b>
<b>G</b>	<b>Contingent Power purchases (Short term/Medium term/Exchange Purchases</b>						
	Short term/Medium term (1503 MW up to June 2015)	51.32	694.06	0.00	364.38	364.38	5.25
	<b>Total of Contingent Power purchases (Short term/Medium term/Exchange Purchases (G)</b>	51.32	<b>694.0598</b>	<b>0</b>	<b>364.3814</b>	<b>364.38137</b>	<b>5.25</b>
<b>H</b>	<b>Transmission Charges</b>						
1	KPTCL			1216.91		1216.91	
2	PGCIL			314.09		314.09	
	<b>Total Transmission Charges (H)</b>			<b>1531.00</b>		<b>1531.00</b>	
<b>I</b>	<b>System Operating Charges</b>						
1	SLDC			14.29		14.29	
2	SRPC/POSOC/TANGEDCO etc.			1.52		1.52	
	<b>Total System Operating Charges (I)</b>			<b>15.81</b>		<b>15.81</b>	

	<b>TOTAL (A To I)</b>	<b>48.57</b>	<b>30419.09</b>	<b>3942.40</b>	<b>7897.71</b>	<b>11840.15</b>	<b>3.89</b>
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**Annexure-**

**PROPOSED AND APPROVED REVENUE AND REALISATION AND LEVEL OF CROSS SUBSIDY FOR FY-16 OF BESCOM**

SI No	Category	Description	Proposed by BESCOM		Approved as per RST		Average Realisation in Rs. Per Kwh	Level of Cross Subsidy in %
			Sales-MU	Revenue Rs. crores	Sales-MU	Revenue Rs. crores		
1	LT-1[fully subsidised by GoK]*	Bhagya Jyothi/Kutir Jyothi	135.18	83.34	58.64	32.78	5.59	-
2	LT-2(a)(i)	Dom. / AEH - Applicable to Bruhat Bangalore Mahanagara Palike(BBMP), Municipal Corporations & all areas under Urban Local Bodies .	5303.64	3019.92	5235.91	2600.55	4.97	-
3	LT-2(a)(ii)	Dom. / AEH - Applicable to areas coming under Village Panchayats	579.96	274.56	588.88	232.05	3.94	-
4	LT-2(b)(i)	Pvt. Educational Institutions Bruhat Bangalore Mahanagara Palike(BBMP), Municipal Corporations & all areas under Urban Local Bodies .	36.37	29.21	37.85	27.97	7.39	-
5	LT-2(b)(ii)	Pvt. Educational Institutions Applicable to areas coming under Village Panchayats	5.02	3.88	5.22	3.57	6.84	-
6	LT-3(i)	Commercial - Application to Bruhat Bangalore Mahanagara Palike(BBMP), Municipal Corporations & all areas under Urban Local Bodies .	1570.32	1426.27	1576.35	1339.32	8.50	-
7	LT-3(ii)	Commercial - Applicable to areas coming under Village Panchayats	135.30	104.47	136.14	96.99	7.12	-
8	LT-4(a)(i)*	IP<=10HP	6040.28	1712.42	5625.26	1338.81	2.38	-
10	LT-4(b)	IP>10HP	3.07	2.20	3.71	1.16	3.13	-
11	LT-4 (c) (i)	Pvt Nurseries, Coffee&Tea Plantations of sanctioned load of 10 HP& below	5.40	2.33	6.11	1.85	3.03	-
12	LT-4 (c) (ii)	Pvt Nurseries, Coffee&Tea Plantations of sanctioned load above 10 HP.	0.00	0.00	0.00	0.00	0.00	-
13	LT-5(a)	Industrial - Applicable to Bruhat Bangalore Mahanagara Palike(BBMP), Municipal Corporations	774.00	566.91	798.01	531.53	6.66	-
14	LT-5(b)	Industrial - Applicable to all areas other than those covered under LT5(a)	358.12	255.49	369.19	238.50	6.46	-
15	LT-6	Water supply	473.21	234.95	474.54	203.30	4.28	-
16	LT-6	Public lighting	394.45	247.52	449.53	249.76	5.56	-
17	LT-7	Temporary supply	167.43	195.91	167.43	230.76	13.78	1
		<b>LT - TOTAL</b>	<b>15981.75</b>	<b>8159.38</b>	<b>15532.77</b>	<b>7128.91</b>	<b>4.59</b>	<b>-</b>
1	HT-1	Water supply & sewerage	814.59	427.35	743.65	341.98	4.60	-
2	HT-2(a)(i)	Industrial - Applicable to Bangalore Mahanagara Palike(BBMP) and Municipall	3796.49	2674.51	3832.39	2451.28	6.40	-

		Corporation.						
3	HT-2(a)(ii)	Industrial - Applicable to areas other than those under HT2(a) (i)	1953.96	1595.21	1972.51	1487.11	7.54	
4	HT-2(b)(i)	Commercial - Applicable to areas under Bangalore Mahanagara Palike Municipal Corporation.	2798.30	2366.59	2837.21	2229.87	7.86	
5	HT-2(b)(ii)	Commercial - Applicable to areas other than those covered under HT2(b) (i)	130.52	117.44	132.35	111.43	8.42	
6	HT-2( c) (i)	Govt./ Aided Hospitals & Educational Institutions	36.45	28.87	36.45	26.66	7.31	
7	HT-2( c) (ii)	Hospitals and Educational Institutions other than covered under HT-2( c) (i)	53.23	40.53	53.23	37.30	7.01	
8	HT-3(a)(i)	Lift Irrigation - Applicable to Lift Irrigation Schemes under Govt. Depts/ Govt. owned Corporations.	43.68	10.07	17.69	3.01	1.70	-
9	HT-3(a)(ii)	Lift Irrigation - Applicable to Lift Irrigation schemes Lift Irrigation Societies connected to Urban/Express feeders.	0.94	0.40	0.51	0.18	3.53	-
10	HT-3(a)(iii)	Lift Irrigation - Applicable to Private lift irrigation schemes & L I societies other than those covered under HT-3(a) (ii)	0.00	0.00	0.00	0.00	0.00	
11	HT - 3b	Irrigation & Agriculture Farms, Govt. Horticultural Farms, Pvt. Horticulture Nurseries, Coffee, Tea, Cocanut & Arecanut Plantations	1.23	0.70	0.78	0.29	3.72	-
12	HT-4(a)	Residential Apartments - Colonies	109.75	80.00	116.07	76.57	6.60	
13	HT-5	Temporary supply	66.30	95.56	66.30	101.56	15.32	1
		<b>HT - TOTAL</b>	<b>9805.44</b>	<b>7437.23</b>	<b>9809.14</b>	<b>6867.25</b>	<b>7.00</b>	
		<b>TOTAL</b>	<b>25787.22</b>	<b>15596.60</b>	<b>25341.91</b>	<b>13996.16</b>	<b>5.52</b>	
		Misc. Revenue		<b>16.55</b>		<b>178.15</b>		
		<b>Grand Total</b>	<b>25787.22</b>	<b>15613.15</b>	<b>25341.91</b>	<b>14174.31</b>	<b>5.59</b>	

\* These categories are subsidised by GoK. In case subsidy is not released by the Gok in advance, BESCO shall raise demand & collect CDT of Rs. 5.59/unit by BJ/KJ & Rs.2.38 /unit from IP set Consumers.

## **ANNEX - IV**

# **ELECTRICITY TARIFF - 2016**

**K.E.R.C. ORDER DATED: 02.03.2015**

**Effective for the Electricity consumed from the first meter reading date falling  
on or after 01.04.2015**

**Bangalore  
Electricity Supply Company Ltd.,**

## **ELECTRICITY TARIFF-2016**

### **GENERAL TERMS AND CONDITIONS OF TARIFF:**

#### **(APPLICABLE TO BOTH HT AND LT)**

1. Supply of power is subject to execution of agreement by the Consumer in the prescribed form, payment of prescribed deposits and compliance of terms and conditions as stipulated in the Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka and Regulations issued under Electricity Act 2003 at the time of supply and continuation of power supply is subject to compliance of the said Conditions of Supply / Regulations as amended from time to time.
2. The tariffs are applicable to only single point of supply unless otherwise approved by the Licensee.
3. The Licensee does not bind himself to energize any installation, unless the Consumer guarantees the minimum charges. The minimum charge is the power supply charges in accordance with the tariff in force from time to time. This shall be payable by the Consumer until power supply agreement is terminated, irrespective of the installation being in service or under disconnection.
4. The tariffs in the schedule are applicable to power supply within the Karnataka State.
5. The tariffs are subject to levy of Tax and Surcharges thereon as may be decided by the State Government from time to time.
6. For the purpose of these tariffs, the following conversion table would be used:  
1 HP=0.746 KW. 1HP=0.878 KVA.

7. The bill amount will be rounded off to the nearest Rupee, i.e., the bill amount of 50 Paise and above will be rounded off to the next higher Rupee and the amount less than 50 Paise will be ignored.
8. Use of power for temporary illumination in the premises already having permanent power supply for marriages, exhibitions in hotels, sales promotions etc., is limited to sanctioned load at the applicable permanent power supply tariff rates. Temporary tariff rates will be applicable in case the load exceeds sanctioned load as per the Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka.
9. No LT power supply will be given where the requisitioned load is 50 KW/67 HP and above. This condition does not apply for installations serviced under clause 3.1.1 of K.E.R.C. (Recovery of Expenditure for supply of Electricity) Regulations, 2004 and its amendments from time to time. The applicant is however at liberty to avail HT supply for lesser loads. The minimum contract demand for HT supply shall be 25 KVA or as amended from time to time by the Licensee with the approval of KERC.
10. The Consumer shall not resell electricity purchased from the Licensee to a third party except –
  - (a) Where the Consumer holds a sanction or a tariff provision for distribution and sale of energy,
  - (b) Under special contract permitting the Consumer for resale of energy in accordance with the provisions of the contract.
11. Non-receipt of the bill by the Consumer is not a valid reason for non-payment. The Consumer shall notify the office of issue of the bill if the same is not received within 7 days from the meter reading date. Otherwise, it will be deemed that the bills have reached the Consumer in due time.
12. The Licensee will levy the following charges for non-realization of each Cheque.

1	Cheque amount upto Rs. 10,000/-	5% of the amount subject to a minimum of Rs100/-
2	Cheque amount of Rs. 10,001/- and upto Rs. 1,00,000/-	3% of the amount subject to a minimum of Rs500/-
3	Cheque amount above Rs. 1 Lakh:	2% of the amount subject to a minimum of Rs3000/-

13. In respect of power supply charges paid by the Consumer through money order, Cheque /DD sent by post, receipt will be drawn and the Consumer has to collect the same.
14. In case of any belated payment, simple interest at the rate of 1 % per month will be levied on the actual No. of days of delay subject to a minimum of Re.1/- for LT installation and Rs.100/- for HT installation. No interest is however levied for arrears of Rs.10/- and less.
15. All LT Consumers, except BhagyaJyothi and KutirJyothi Consumers, shall provide current limiter/Circuit Breakers of capacity prescribed by the Licensee depending upon the sanctioned load.
16. All payments made by the Consumer will be adjusted in the following order of priority: -
- Interest on arrears of Electricity Tax
  - Arrears of Electricity Tax
  - Arrears of Interest on Electricity charges
  - Arrears of Electricity charges
  - Current month's dues
17. For the purpose of billing,
- the higher of the rated load or sanctioned load in respect of LT installations which are not provided with Electronic Tri-Vector meter,
  - sanctioned load or MD recorded, whichever is higher, in respect of installations provided with Electronic Tri-Vector meter, will be considered.

Penalty and other clauses shall apply if sanctioned load is exceeded.

18. The bill amount shall be paid within 15 days from the date of presentation of the bill failing which the interest becomes payable.
19. For individual installations, more than one meter shall not be provided under the same tariff. Wherever two or more meters are existing for individual installation, the sum of the consumption recorded by the meters shall be taken for billing, till they are merged.
20. In case of multiple connections in a building, all the meters shall be provided at one easily accessible place in the ground floor.
21. **Reconnection charges:** The following reconnection charges shall be levied incase of disconnection and included in the monthly bill.

For reconnection of:

a	Single Phase Domestic installations under Tariff schedule LT 1 & LT2 (a)	Rs20/-per Installation.
b	Three Phase Domestic installations under Tariff schedule LT2 (a) and Single Phase Commercial & Power installations.	Rs50/-per Installation.
c	All LT installations with 3 Phase supply other than LT2 (a)	Rs100/- per Installation.
d	All HT& EHT installations	Rs. 500/-per Installation.

22. Revenue payments up to and inclusive of Rs.10, 000/- shall be made by cash or cheque or D.D and payments above Rs.10, 000/- shall be made by cheque or D.D only. Payments under other heads of account shall be made by cash or D.D up to and inclusive of Rs.10, 000/- and payment above Rs.10, 000/-shall be by D.D only.

Note: The Consumers can avail the facility of payment of monthly power supply bill through Electronic clearing system (ECS)/ Credit cards / on line E-Payment @ [www.billjunction.com](http://www.billjunction.com) at counters wherever such facility is provided by the Licensee in respect of revenue payments up to the limit prescribed by the RBI.

23. For the types of installations not covered under any Tariff schedules, the Licensee is permitted to classify such installations under appropriate Tariff schedule under intimation to the K.E.R.C.



24. **Seasonal Industries**

**Applicable to all Seasonal Industries.**

- i) The industries that intend to avail this benefit shall have Electronic Tri- Vector Meter installed to their installations.
- ii) 'Working season' months and 'off-season' months shall be determined by an order issued by the Executive Engineer of the concerned O&M Division of the Licensee as per the request of the Consumer and will continue from year to year unless otherwise altered. The Consumer shall give a clear one month's notice in case he intends to change his 'working season'.
- iii) **The consumption during any month of the declared off-season shall not be more than 25% of the average consumption of the previous working season.**
- iv) The 'Working season' months and 'off-season' months shall be full-calendar months. If the power availed during a month exceeds the allotment for the 'off-season' month, it shall be taken for calculating the billing demand as if the month is the 'working season' month.
- v) The Consumer can avail the facility of 'off-season' up to six months in a calendar year not exceeding in two spells in that year. During the 'off-season' period, the Consumer may use power for administrative offices etc., and for overhauling and repairing plant and machinery.

25. Whether an institution availing Power supply can be considered as charitable or not will be decided by the Licensee on the production of certificate Form-12 A from the Income Tax department.

26 **Time of the Tariff (ToD)**

The Commission as decides in the earlier tariff order decide to continue compulsory Time of Day Tariff for HT2 (a) and HT2 (b) and HT2(c) consumers with a contract demand of 500 KVA and above. Further, the optional ToD would continue as existing earlier for HT2 (a), HT2

(b) and HT 2(C) consumers with contract demand of less than 500 KVA. Also the ToD for HT1 consumers on optional basis would continue as existing earlier. Details of ToD tariff are indicated under the respective tariff category.

27. **SICK INDUSTRIES:**

The Government of Karnataka has extended certain reliefs for revival/rehabilitation of sick industries under the New Industrial Policy 2001-06 vide G.O. No. CI 167 SPI 2001, dated 30.06.2001. Further, the Government of Karnataka has issued G.O No.CI2 BIF 2010, dated 21.10.2010. The Commission, in its Tariff Order 2002, has accorded approval for implementation of reliefs to the sick industries as per the Government policy and the same was continued in the subsequent Tariff Orders. In view of issue of the G.O No.CI2 BIF 2010, dated 21.10.2010, the Commission has accorded approval to ESCOMs for implementation of the reliefs extended to sick industrial units for their revival / rehabilitation on the basis of the orders issued by the Commissioner for Industrial Development and Director of Industries & Commerce, Government of Karnataka.

28. **Incentive for Prompt Payment / Advance Payment:** An incentive at the rate of 0.25% of such bill shall be given to the following Consumers by way of adjustment in the subsequent month's bill:

(i) In all cases of payment through ECS.

(ii) And in the case of monthly bills exceeding Rs.1, 00,000/- (Rs. one lakh), if the payment is made 10 days in advance of the due date.

(iii) Advance Payment exceeding Rs 1000/-made by the Consumers towards monthly bills.

29. Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka and amendments issued thereon from time to time and Regulations issued under Electricity Act 2003 will prevail over the extract given in this tariff book in the event of any discrepancy.

30. **Self-Reading of Meters:**

The Commission has approved Self-Reading of Meters by Consumers and issue of bills by the Licensee based on such readings and the Licensee shall take the reading at least once in six months and reconcile the difference, if any and raise the bills accordingly. This procedure may be implemented by the Licensee as stipulated under Section 26.01 of Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka.

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# **ELECTRICITY TARIFF - 2016**

## **PART-1**

### **HIGH TENSION SUPPLY**

**Applicable to Bulk Power Supply of Voltages at 11KV (including 2.3/4.6 KV) and above at Standard High Voltage or Extra High Voltages when the Contract Demand is 50 KW / 67 HP and above.**

# ELECTRICITY TARIFF –2016

## PART-1

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#### CONDITIONS APPLICABLE TO BILLING OF HT INSTALLATIONS:

1. **Billing Demand**

- A) The billing demand during unrestricted period shall be the maximum demand recorded during the month or 75% of the CD, whichever is higher.
- B) When the Licensee has imposed demand cut of 25% or less, the conditions stipulated in (A) shall apply.
- C) When the demand cut is in excess of 25%, the billing demand shall be the maximum demand recorded or 75% of the restricted demand, whichever is higher.
- D) If at any time the maximum demand recorded exceeds the CD or the demand entitlement, or opted demand entitlement during the period of restrictions, if any, the Consumer shall pay for the quantum of excess demand at two times the normal rate per KVA per month as deterrent charges as per Section No. 126(6) of Electricity Act 2003. If time of day Meter is fixed and is operational, there will be no penalty for over drawal upto 1. 2 times the Contract Demand during off peak hours, provided, the Licensee has declared the peak and off peak periods. For over drawal during peak periods and over

drawal above 1.2 times the Contract Demand during off peak hours, the penalty shall be two times the normal rate.

- E) During the periods of disconnection, the billing demand shall be 75% of CD, or 75% of the demand entitlement that would have been applicable, had the installation been in service, whichever is less. This provision is applicable only, if the installation is under disconnection for the entire billing month.
- F) During the period of energy cut, the Consumer may get his demand entitlement lowered, but not below the percentage of energy entitlement, (For example, In case the energy entitlement is 40% and the demand entitlement is 80%, the re-fixation of demand entitlement cannot be lower than 40% of the CD). The benefit of lower demand entitlement will be given effect to from the meter reading date of the same month, if the option is exercised on or before 15<sup>th</sup> of the month. If the option is exercised on or after 16<sup>th</sup> of the month, the benefit will be given effect to from the next meter reading date. The Consumer shall register such option by paying processing fee of Rs.100/- at the Jurisdictional sub-division office.
- (i) The billing demand in such cases, shall be the "Revised (Opted) Demand Entitlement" or, the recorded demand, whichever is higher. Such option for reduction of demand entitlement, is allowed only once during the entire span of that particular "Energy Cut Period". The Consumer, can however, opt for a higher demand entitlement up to the level permissible under the demand cut notification, and the benefit will be given effect to from the next meter reading date. Once the Consumer opts for enhancement of demand, which has been reduced under Clause (F), no further revision is permitted during that particular energy cut period.
- (ii) The opted reduced demand entitlement will automatically cease to be effective, when the energy cut is revised. The facility for reduction and enhancement can however be exercised afresh by the Consumer as indicated in the previous paras.
- G) For the purpose of billing, the billing demand of 0.5 KVA and above will be rounded off to the next higher KVA, and billing demand of less than 0.5 KVA shall be ignored.

## 2. **Power factor (PF)**

It shall be the responsibility of the HT Consumer to determine the capacity of PF correction apparatus and maintain an average PF of not less than 0.90.

- (i) The specified P.F. is 0.90. If the power factor goes below 0.90 Lag, a surcharge of 3 Paise per unit consumed will be levied for every reduction of P.F. by 0.01 below 0.90 Lag.
- (ii) The power factor when computed as the ratio of KWh / KVAh will be determined up to 3 decimals (ignoring figures in the other decimal places), and then rounded off to the nearest second decimal as illustrated below:
  - (a) 0.8949 to be rounded off to 0.89
  - (b) 0.8951 to be rounded off to 0.90

In respect of Electronic Tri-Vector meters, the recorded average PF over the billing period shall be considered for billing purposes. If the same is not available, the ratio of KWh to KVAh consumed in the billing month shall be considered.

**3. Rebate for supply at high voltage:**

If the Consumer is availing power at voltage higher than 13.2 KV, he will be entitled to a rebate as indicated below:

**Supply Voltage: Rebate**

- A) 33/66 KV      2 Paise/unit of energy consumed
- B) 110 KV        3 Paise/unit of energy consumed
- C) 220 KV        5 Paise/unit of energy consumed

The above rebate will be allowed in respect of all the installations of the above voltage class, including the existing installations, and also for installations converted from 13.2 KV and below to 33 KV and above and also for installations converted from 33/66 KV to 110/220 KV, from the next meter reading date after conversion / service / date of notification of this Tariff order, as the case may be. The above rebate is applicable only on the normal energy consumed by the Consumer including the consumption under TOD Tariff, and is not applicable on any other energy allotted and consumed, if any, viz.,

- i) Wheeled Energy.
- ii) Any energy, including the special energy allotted over and above normal entitlement.
- iii) Energy drawal under special incentive scheme, if any.

**The above rebate is not applicable for Railway Traction.**

4. In respect of Residential Quarters / Colonies availing Bulk power supply by tapping the main HT supply, the energy consumed by such Colony loads, metered at single point, shall be billed under HT-4 tariff schedule. No reduction in demand recorded in the main HT meter will be allowed.
5. Energy supplied may be utilized for all purposes associated with the working of the installations, such as, Office, Stores, Canteens, Yard Lighting, Water Supply and Advertisements within the premises.
6. Energy can also be used for construction, modification and expansion purposes within the premises.
7. Power supply under HT-4 tariff schedule may be used for Commercial and other purposes inside the colony for installations such as Canteen, Club, Shop, Auditorium etc., provided, this load is less than 10% of the CD.
8. In respect of Residential Apartments, availing HT Power supply under HT-4 tariff schedule, the supply availed for Commercial and other purposes like Shops, Hotels, etc., will be billed under appropriate tariff schedule (Only Energy charges) duly deducting such consumption in the main HT supply bill. No reduction in the recorded demand of the main HT meter is allowed. Common areas shall be billed at Tariff applicable to that of the predominant Consumer category.

## 9. Seasonal Industries

- a. The industries, which intend to utilize seasonal industry benefit, shall conform to the conditionalities under Para no. 24 of the General terms and conditions of tariff (applicable to both HT & LT).
- b. The industries that intend to avail this benefit shall have Electronic Tri-Vector Meter fitted to the installation.
- c. Monthly charges during the working season, shall be the demand charges on 75% of the contract demand, or the recorded maximum demand during the month, whichever is higher, plus the energy charges
- d. **Monthly charges during the off season shall be demand charges on the maximum demand recorded during the month or 50% of the CD whichever is higher plus the energy charges.**



### **TARIFF SCHEDULE HT-1**

Applicable to Water Supply, Drainage / Sewerage water treatment plant and Sewerage Pumping installations, belonging to Bangalore Water Supply and Sewerage Board, Karnataka Urban Water Supply and Sewerage Board, other local bodies, State and Central Government.

#### **RATE SCHEDULE**

Demand charges	Rs 180 /kVA of billing demand/month
Energy charges	410 paise/unit

#### **TOD Tariff at the option of the Consumer**

<b>Time of Day</b>	<b>Increase (+) / reduction (-) in energy charges over the normal tariff applicable</b>
22.00 Hrs to 06.00 Hrs	(-) 125 paise per unit
06.00 Hrs to 18.00 Hrs	0
18.00 Hrs to 22.00 Hrs	+ 100 paise per unit

**Note:** Energy supplied to residential quarters availing bulk supply by the above category of Consumer, shall be metered separately at a single point, and the energy consumed shall be billed at HT-4 Tariff. No reduction in the demand recorded in the main HT meter will be allowed.

### **TARIFF SCHEDULE HT-2(a)**

Applicable to Industries, Factories, Workshops, Research & Development Centres, Industrial Estates, Milk dairies, Rice Mills, Phova Mills, Roller Flour Mills, News Papers, Printing Press, Railway Workshops/KSRTC Workshops/ Depots, Crematoriums, Cold Storage, Ice & Ice-cream mfg. Units, Swimming Pools of local bodies, Water Supply Installations of KIADB and other industries, all Defence Establishments. Hatcheries, Poultry Farm, Museum, Floriculture, Green House, Bio Technical Laboratory, Hybrid Seeds processing Units, Stone Crushers, Stone cutting, Bakery Product Manufacturing Units, Mysore Palace illumination, Film Studios, Dubbing Theatres, Processing, Printing, Developing and Recording Theaters, Tissue Culture, Aqua Culture, Prawn Culture, Information Technology Industries engaged in development of Hardware & Software, Information Technology (IT) enabled Services / Start-ups/ Animation / Gaming / Computer Graphics as certified by the IT & BT Department of GOK/GOI, Drug Mfg. Units, Garment Mfg. Units, Tyre retreading units, Nuclear Power Projects, Stadiums maintained by Government and local bodies, also Railway Traction, Effluent treatment plants and Drainage water treatment plants owned other than

by the local bodies, LPG bottling plants, petroleum pipeline projects, Piggery farms, Analytical Lab for analysis of ore metals, Saw Mills, Toy/wood industries, Satellite communication centers, and Mineral water processing plants / drinking water bottling plants.

### **RATE SCHEDULE**

#### **HT-2(a)(i): Applicable to Areas under Bruhat Bangalore Mahangara Palike (BBMP) and Municipal Corporation**

<b>Demand charges</b>	Rs180 /kVA of billing demand/month
<b>Energy charges</b>	
For the first one lakh units	590 paise per unit
For the balance units	630 paise per unit
<b>Railway Traction and Effluent Treatment Plants</b>	
<b>Demand charges</b>	Rs180/kVA of billing demand/month
Energy Charges	555 paise per unit for all the units

#### **Tariff applicable to Bangalore Metropolitan Railway Corporation Ltd., (BMRC)**

<b>Demand charges</b>	Rs180/kVA of billing demand/month
Energy Charges	535 paise per unit for all the units

#### **HT-2(a)(ii): Applicable to Areas other than those covered under HT-2(a)(i)**

<b>Demand charges</b>	Rs170/kVA of billing demand/month
<b>Energy charges</b>	
For the first one lakh units	585 paise per unit
For the balance units	615 paise per unit
Railway Traction and Effluent Treatment Plants	
<b>Demand charges</b>	Rs180/kVA of billing demand/month
Energy Charges	555 paise per unit for all the units

### **TARIFF SCHEDULE HT-2(b)**

Applicable to Commercial Complexes, Cinemas, Hotels, Boarding & Lodging, Amusement Parks, Telephone Exchanges, Race Course, All Clubs, T.V. Station, All India Radio, Railway

Stations, Air Port, KSRTC bus stations, All offices, Banks, Commercial Multi-storied buildings, APMC Yards, Stadiums other than those maintained by Government and Local Bodies, Construction power for irrigation, Power Projects and Konkan Railway Project, Petrol / Diesel and Oil storage plants, I.T. based medical transcription centers, telecom, call centers / BPO / KPO.

**RATE SCHEDULE**

**HT-2 (b)(i): Applicable to Areas under Bruhat Bangalore Mahangara Palike (BBMP) and Municipal Corporation.**

<b>Demand charges</b>	Rs200/kVA of billing demand/month
<b>Energy charges</b>	
For the first two lakh units	755 paise per unit
For the balance units	785 paise per unit

**HT-2(b)(ii): Applicable to Areas other than those covered under HT-2(b)(i)**

<b>Demand charges</b>	Rs190/kVA of billing demand/month
<b>Energy charges</b>	
For the first two lakh units	735 paise per unit
For the balance units	765 paise per unit

**TARIFF SCHEDULE HT-2(c)**

**RATE SCHEDULE**

**HT-2 (c) (i) - Applicable to Government Hospitals and Hospitals run by Charitable Institutions and ESI hospitals and Universities, Educational Institutions belonging to Government, Local bodies, Aided Institutions and Hostels of all Educational Institutions.**

<b>Demand charges</b>	Rs170/kVA of billing demand/month
<b>Energy charges</b>	
For the first one lakh units	560 paise per unit
For the balance units	610 paise per unit

**RATE SCHEDULE**

**HT-2 (c) (ii) -Applicable to Hospitals and Educational Institutions other than those covered under HT-2 (c) (i).**

<b>Demand charges</b>	Rs170/kVA of billing demand/month
<b>Energy charges</b>	
For the first one lakh units	660 paise per unit.
For the balance units	710 paise per unit.

**Note: Applicable to HT-2 (a), HT-2 (b)& HT-2(c) Tariff Schedule.**

1. Energy supplied may be utilized for all purposes associated with the working of the installation such as offices, stores, canteens, yard lighting, water pumping and advertisement within the premises.
2. Energy can be used for construction, modification and expansion purposes within the premises.

**TOD Tariff applicable to HT 2(a), HT2 (b) and HT2(c) category.**

<b>Time of Day</b>	<b>Increase + / reduction (-) in energy charges over the normal tariff applicable</b>
22.00 Hrs to 06.00 Hrs	(-) 125 paise per unit.
06.00 Hrs to 18.00 Hrs	0
18.00 Hrs to 22.00 Hrs	+ 100 paise per unit.

### **TARIFF SCHEDULE HT-3 (a)**

**Applicable to Lift irrigation Schemes/ Lift irrigation societies,**

#### **RATE SCHEDULE**

**HT-3 (a)(i): Applicable to LI schemes under Govt. Departments/ Govt. owned Corporations.**

<b>Energy charges/ Minimum Charges</b>	<b>170 paise</b> per unit subject to an annual minimum of <b>Rs1000</b> per HP/Annum.
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**HT-3(a)(ii): Applicable to Private LI schemes and Lift Irrigation societies: Connected to Urban/Express feeders**

Fixed Charges	Rs30 /HP/PM of sanctioned load
Energy charges	170 paise/unit

**HT-3(a)(iii): Applicable to Private LI schemes and Lift Irrigation societies other than those covered under HT-3 (a)(ii).**

Fixed Charges	Rs10 /HP/PM of sanctioned load
Energy charges	170 paise/unit

**TARIFF SCHEDULE HT-3 (b)**

**HT-3 (b): Applicable to Irrigation and Agricultural Farms, Government Horticultural Farms, Private Horticulture nurseries, Coffee, Tea, Rubber, Coconut & Arecanut Plantations.**

**RATE SCHEDULE**

<b>Energy charges / Minimum Charges</b>	<b>370 paise Per unit</b> subject to an annual minimum of <b>Rs1000/- per HP</b> of sanctioned load.
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**Note:** These installations are to be billed on quarter yearly basis.

**TARIFF SCHEDULE HT-4**

Applicable to Residential apartments and colonies (whether situated outside or inside the premises of the main HT Installation) availing power supply independently or by tapping the main H.T. line. Power supply can be used for residences, theatres, shopping facility, club, hospital, guest house, yard/street lighting, canteen located within the colony.

**RATE SCHEDULE**

**Applicable to all areas.**

<b>Demand charges</b>	Rs100/- per kVA of billing demand
<b>Energy charges</b>	550 paise/unit

**NOTE:** (1) In respect of residential colonies availing power supply by tapping the main H.T. supply, the energy consumed by such colony loads metered at a single point, is to be billed at the above energy rate. No reduction in the recorded demand of the main H.T. supply is allowed.

(2) Energy under this tariff may be used for commercial and other purposes inside the colonies, for installations such as, Canteens, Clubs, Shops, Auditorium etc., provided, this commercial load is less than 10% of the Contract demand.

(3) In respect of Residential Apartments, availing HT Power supply under HT-4 tariff schedule, the supply availed for Commercial and other purposes like Shops, Hotels, etc., will be billed under appropriate tariff schedule (Only Energy charges), duly deducting such consumption in the main HT supply bill. No reduction in the recorded demand of the main HT meter is allowed. Common areas shall be billed at Tariff applicable to the predominant Consumer category.

### TARIFF SCHEDULE HT-5

Tariff applicable to sanctioned load of 67 HP and above for hoardings and advertisement boards and construction power for industries excluding those category of consumers covered under HT2(b) Tariff schedule availing power supply for construction power for irrigation and power projects and also applicable to power supply availed on temporary basis with the contract demand of 67 HP and above of all categories.

#### HT – 5 – Temporary supply

#### RATE SCHEDULE

<b>67 HP and above:</b>	
Fixed charges / Demand Charges	Rs 210/HP/month for the entire sanction load / contract demand
Energy Charge	900 paise / unit

**Note:**

1. Temporary power supply with or without extension of distribution main shall be **arranged through a pre-paid energy meter** duly observing the provisions of Clause 12 of the Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka.
2. This Tariff is also applicable to touring cinemas having licence for duration less than one year.
3. All the conditions regarding temporary power supply as stipulated in Clause 12 of the Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka shall be complied with before service.

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# **ELECTRICITY TARIFF-2016**

## **PART-II**

### **LOW TENSION SUPPLY**

**(400 Volts Three Phase and  
230Volts Single Phase Supply)**

# ELECTRICITY TARIFF-2016

## PART-II

### LOW TENSION SUPPLY

(400 Volts Three Phase and  
230Volts Single Phase Supply)

#### CONDITIONS APPLICABLE TO BILLING OF LT INSTALLATIONS:

1. In case of LT Industrial / Commercial Consumers, **Demand based Tariff** at the option of the Consumer, can be adopted. The Consumer is permitted to have more connected load than the sanctioned load. The billing demand will be the sanctioned load, or Maximum Demand recorded in the Tri-Vector Meter during the month, whichever is higher. If the Maximum Demand recorded is more than the sanctioned load, penal charges at two times the normal rate shall apply.
2. Use of power within the Consumer premises for bona fide temporary purpose is permitted, subject to the conditions that, total load of the installation on the system does not exceed the sanctioned load.
3. Where it is intended to use power supply temporarily, for floor polishing and such other portable equipments, in a premises having permanent power supply, such equipments shall be provided with earth leakage circuit breakers of adequate capacity.
4. The laboratory installations in educational institutions are allowed to install connected machineries up to 4 times the sanctioned load. The fixed charges shall however be on the basis of sanctioned load.
5. Besides combined lighting and heating, electricity supply under tariff schedules LT2 (a) & LT2 (b), can be used for Fans, Televisions, Radios, Refrigerators and other household appliances, including domestic water pumps and air conditioners, provided, they are under single meter connection. If a separate meter is provided for Air-conditioner load,



the Consumer shall be served with a notice to merge this load, and to have a single meter for the entire load. Till such time, the air conditioner load will be billed under Commercial Tariff.

6. **Bulk LT supply**

If power supply for lighting / combined lighting & heating {LT 2(a)}, is availed through a bulk Meter for group of houses belonging to one Consumer, (ie, Where bulk LT supply is availed), the billing for energy shall be done at the slab rate for energy charges matching the consumption obtained, by dividing the bulk consumption by number of houses. In addition, fixed charges for the entire sanctioned load shall be charged as per Tariff schedule.

7. A rebate of 25 Paise per unit will be given for the House/ School/Hostels meant for Handicapped, Aged, Destitute and Orphans, Rehabilitation Centres under Tariff schedule LT 2(a).

8. **SOLAR REBATE:** A rebate of 50 Paise per unit of electricity consumed subject to a maximum of Rs. 50/- per installation per month will be allowed to Tariff schedule LT 2(a), if solar water heaters are installed and used. Where Bulk Solar Water Heater System is installed, Solar Water Heater rebate shall be allowed to each of the individual installations, provided that, the capacity of Solar Water Heater in such apartment / group housing shall be a minimum capacity of 100 Ltr. per household.

9. A rebate of 20% on fixed charges and energy charges will be allowed in the monthly bill in respect of public Telephone booths having STD/ISD/ FAX facility run by handicapped people, under Tariff schedule LT 3.

10. A rebate of 2 paise per unit will be allowed if capacitors are installed as per Clause 23 of Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka in respect of all metered IP Set Installations.

11. **Power Factor (PF):**

Capacitors of appropriate capacity shall be installed in accordance with Clause 23 of Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka, in case of installations covered under Tariff category LT 3, LT4, LT 5, & LT 6, where motive power is involved.

- (i) The specified P.F. is 0.85. If the PF is found to be less than 0.85 Lag, a surcharge of 2 Paise per unit consumed will be levied for every reduction of P.F. by 0.01 below 0.85 Lag. In respect of LT installations, however, this is subject to a maximum surcharge of 30 Paise per unit.
  - (ii) The power factor when computed as the ratio of KWh/KVA will be determined up to 3 decimals (ignoring figures in the other decimal places) and then rounded off to the nearest second decimal as illustrated below:
    - (a) 0.8449 to be rounded off to 0.84
    - (b) 0.8451 to be rounded off to 0.85
  - (iii) In respect of Electronic Tri-Vector meters, the recorded average PF over the billing period shall be considered for billing purposes.
  - (iv) During inspection, if the capacity of capacitors provided is found to be less than what is stipulated in Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka, a surcharge of 30 Paise/unit will be levied in the case of installations covered under Tariff categories LT 3, LT 5, & LT 6 where motive power is involved.
  - (v) In the case of installations without electronic Tri-vector meters even after providing capacitors as recommended in Clause 23.01 and 23.03 of Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka, if during any periodical or other testing / rating of the installation by the Licensee, the PF of the installation is found to be lesser than 0.85, a surcharge determined as above shall be levied from the billing month following the expiry of Three months' notice given by the Licensee, till such time, the additional capacitors are installed and informed to the Licensee in writing by the Consumer. This is also applicable for LT installations provided with electronic Tri-vector meters.
12. All new IP set applicants shall fix capacitors of adequate capacity in accordance with Clause 23 of Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka before taking service.
13. All the existing IP set Consumers shall also fix capacitors of adequate capacity in accordance with Clause 23 of Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka, failing which, PF **surcharge at the rate of Rs.60/-per**

**HP/ year** shall be levied. If the capacitors are found to be removed / not installed, a penalty at the same rate as above (Rs. 60/-per HP / Year) shall be levied.

14. The Semi-permanent cinemas having Semi-permanent structure, with permanent wiring and licence of not less than one year, will be billed under commercial tariff schedule i.e., LT 3.
15. Touring cinemas having an outfit comprising cinema apparatus and accessories, taken from place to place for exhibition of cinematography films and also outdoor shooting units, will be billed under Temporary Tariff schedule i.e., LT 7.
16. The Consumers under IP set tariff schedule, shall use the energy only for pumping water to irrigate their own land as stated in the IP set application / water right certificate and for bona fide agriculture use. Otherwise, such installations shall be billed under appropriate Industrial / Commercial tariff, based on the recorded consumption if available, or on the consumption computed as per the Table given under Clause 42.06 of the Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka.
17. The water pumped for agricultural purposes may also be used by the Consumer for his bona fide drinking purposes and for supplying water to animals, birds, Poultry farms, Diary farms and fish farms maintained by the Consumer in addition to agriculture.
18. The motor of IP set installations can be used with an alternative drive for other agricultural operations like sugar cane crusher, coffee pulping, etc., with the approval of the Licensee. The energy used for such operation shall be metered separately by providing alternate switch and charged at LT Industrial Tariff (Only Energy charges) during the period of alternative use. However, if the energy used both for IP Set and alternate operation, is measured together by one energy meter, the energy used for alternate drive shall be estimated by deducting the average IP Set consumption for that month, as per the IP sample meter readings for the sub division, as certified by the sub divisional Officer.
19. The IP Consumer is permitted to use energy for lighting the pump house and well limited to two lighting points of 40 Watts each.

20. Billing shall be made at least once in a quarter year for all IP sets.
21. In case of welding transformers, the connected load shall be taken as:
- a) Half the maximum capacity in KVA as per the nameplate specified under IS: 1851

OR

- b) Half the maximum capacity in KVA as recorded during the rating by the Licensee, whichever is higher.
22. Electricity under Tariff LT 3 / LT 5 can also be used for Lighting, Heating and Air-conditioning, Yard-Lighting, water supply in the premises of Commercial / Industrial Units respectively.
23. Fluorescent fittings shall be provided by the Licensee for the Streetlights in the case of villages covered under the Licensee's electrification programme for initial installation.

**In all other cases, the entire cost of fittings including Brackets, Clamps, etc., and labour for replacement, additions and modifications shall be met by the organizations making such a request. Labour charges shall be paid at the standard rates fixed by the Licensee for each type of fitting.**

24. Lamps, fittings and replacements for defective components of fittings shall be supplied by the concerned Village Panchayaths, Town Panchayaths or Municipalities for replacement.
25. Fraction of KW / HP shall be rounded off to the nearest quarter KW / HP for purpose of billing and the minimum billing being for 1 KW / 1HP in respect of all categories of LT installations including I.P. sets. **In the case of street lighting installations, fraction of KW shall be rounded off to nearest quarter KW for the purpose of billing and the minimum billing shall be quarter KW.**

## **26. Seasonal Industries.**

- a) The industries who intend to utilize seasonal industry benefit, shall comply with the conditionalities under Para no. 24 of the General terms and conditions of tariff (applicable to both HT & LT).

b) The industries that intend to avail this benefit shall have Electronic Tri-Vector Meter fitted to their installation.

c) Monthly charges during the seasonal months shall be fixed charges and energy charges. The monthly charges during the off seasonal months shall be the energy charges plus 50% of the fixed charges.

### **TARIFF SCHEDULE LT-1**

**LT-1: Applicable to installations serviced under Bhagya jyothi and Kutira jyothi (BJ/KJ) schemes.**

#### **Rate schedule**

<b>Energy charges</b> (including recovery towards service main charges)	Nil* Fully subsidized by the GOK
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Commission Determined Tariff (CDT) for the above category i.e., LT-1 is **Rs. 5.59 per unit**.

\*Since GOK is meeting the full cost of supply to BJ / KJ, the Tariff payable by these Consumers is shown as Nil. However, if the GOK does not release the subsidy in advance, CDT of **Rs.5.59 per unit** subject to monthly minimum of Rs.30/- per installation per month shall be demanded and collected from these consumers.

**Note:** If the consumption exceeds 18 units per month or any BJ/KJ installation is found to have more than one out let, it shall be billed as per Tariff Schedule LT 2(a).

### **TARIFF SCHEDULE LT-2(a)**

Applicable to **lighting/combined lighting, heating and motive Power** installations of residential houses and also to such houses where a portion is used by the occupant for (a) Handloom weaving (b) Silk rearing and reeling and artisans using motors up to 200 watts (c) Consultancy in (i) Engineering (ii) Architecture (iii) Medicine (iv) Astrology (v) Legal matters (vi) Income tax (vii) Chartered Accountants (d) Job typing (e) Tailoring (f) Post Office (g) Gold smithy (h) Chawki rearing (i) Paying guests/Home stay guests (j) personal Computers (k) Dhobis (l) Hand operated printing press (m) Beauty Parlours (n) Water Supply installations, Lift which is independently serviced for bonafide use of

residential complexes/residence, (o) Farm Houses and yard lighting limiting to 120 Watts, (p) Fodder Choppers & Milking Machines with a connected load up to 1 HP.

Also applicable to the installations of (i) Hospitals, Dispensaries, Health Centers run by State/Central Govt. and local bodies. (ii) Houses, schools and Hostels meant for handicapped, aged destitute and orphans (iii) Rehabilitation Centres run by charitable institutions, AIDS and drug addicts Rehabilitation Centres (iv) Railway staff Quarters with single meter(v) fire service stations.

It is also applicable to the installations of (a) Temples, Mosques, Churches, Gurudwaras, Ashrams, Mutts and religious/Charitable institutions (b) Hospitals, Dispensaries and Health Centres run by Charitable institutions including X-ray units (c) Jails and Prisons (d) Schools, Colleges, Educational institutions run by State/Central Govt./Local Bodies (e) Seminaries (f) Hostels run by the Government, Educational Institutions, Cultural, Scientific and Charitable Institutions(g) Guest Houses/Travelers Bungalows run in Government buildings or by State/Central Govt./Religious/Charitable institutions (h) Public libraries (i) Silk rearing (j) Museums (k) Installations of Historical Monuments of Archaeology Departments(l) Public Telephone Booths without STD/ISD/FAX facility run by handicapped people (m) Sulabh / NirmalSouchalayas (n) Viswa Sheds having Lighting Loads only.

### RATE SCHEDULE

**LT-2(a)(i) : Applicable to areas coming under Bruhat Bangalore Mahanagara Palike (BBMP), Municipal Corporation and all Urban Local Bodies.**

Fixed charges per month	For the first KW	Rs 25/- per KW
	For every additional KW	Rs 35/- per KW
Energy charges	For 0 - 30 units <b>(Lifeline consumption)</b>	270 Ps/unit
	31 to 100 units	400 Ps /unit
	101 to 200 units	540 Ps/unit
	Above 200 units	640 Ps/unit

**LT-2(a)(ii): Applicable to Areas under Village Panchayats**

Fixed charges per	For the first KW	Rs15/- per KW
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month	For every additional KW	Rs 25/- per KW
Energy charges	For 0 - 30 units <b>(Lifeline consumption)</b>	260 Ps/unit
	31 to 100 units	370 Ps/unit
	101 to 200 units	510 Ps/unit
	Above 200 units	590 Ps/unit

### **TARIFF SCHEDULE LT-2(b)**

Applicable to the installations of Private Professional and other Private Educational Institutions including aided, unaided institutions, Nursing Homes and Private Hospitals having only lighting or combined lighting & heating, and motive power.

### **RATE SCHEDULE**

**LT-2(b)(i): Applicable to Areas under Bruhat Bangalore MahangaraPalike (BBMP) and Municipal Corporation and all areas coming under Urban Local Bodies.**

Fixed charges	Rs 35 Per KW subject to a minimum of Rs 65 PM	
Energy charges	0 to 200 units	600 Ps/unit
	Above 200 units	720 Ps/unit

**LT-2(b)(ii): Applicable in Areas under Village Panchayats**

Fixed charges	Rs 25 Per KW subject to a minimum of Rs 50 PM	
Energy charges	0 to 200 units	550 Ps/unit
	Above 200 units	670 Ps/unit

**Note:** Applicable to LT-2 (a), LT-2 (b) Tariff Schedules.

- 1 A rebate of 25 Ps. Per unit shall be given for installation of a house/ School/ Hostels meant for Handicapped, Aged, Destitute and Orphans, Rehabilitation Centres run by Charitable Institutions.
- 2 (a) Use of power within the Consumer's premises for temporary purposes for bonafide use is permitted subject to the condition that, the total load of the installation on the system does not exceed the sanctioned load.  
(b) Where it is intended to use floor polishing and such other portable equipment temporarily, in the premises having permanent supply, such equipment shall be provided with an earth leakage circuit breaker of adequate capacity.

3. The laboratory installations in educational institutions are allowed to install connected machinery up to 4 times the sanctioned load. The fixed charges shall however be on the basis of sanctioned load.
4. Besides lighting and heating, Electricity supply under this schedule can be used for fans, Televisions, Radios, Refrigerators and other house-hold appliances including domestic water pump and air conditioners, provided, they are under single meter connection. If a separate meter is provided for Air conditioner Load, the consumption shall be under commercial tariff till it is merged with the main meter.
5. **SOLAR REBATE:** A rebate of 50 Paise per unit of electricity consumed to a maximum of Rs.50/- per installation per month will be allowed to Tariff schedule LT 2(a), if solar water heaters are installed and used. Where Bulk Solar Water Heater System is installed, Solar Water Heater rebate shall be allowed to each of the individual installations, provided that, the capacity of Solar Water Heater in such apartment / group housing shall be a minimum capacity of 100 Ltr, per household.

### **TARIFF SCHEDULE LT-3**

Applicable to **Commercial Lighting, Heating and Motive Power** installations of Clinics, Diagnostic Centers, X-Ray units, Shops, Stores, Hotels/Restaurants/Boarding and Lodging Homes, Bars, Private guest Houses, Mess, Clubs, Kalyan Mantaps / Choultry, permanent Cinemas/ Semi Permanent Cinemas, Theatres, Petrol Bunks, Petrol, Diesel and oil Storage Plants, Service Stations/ Garages, Banks, Telephone Exchanges. T.V. Stations, Microwave Stations, All India Radio, Dish Antenna, Public Telephone Booths/ STD, ISD, FAX Communication Centers, Stud Farms, Race Course, Ice Cream Parlours, Computer Centres, Photo Studio / colour Laboratory, Xerox Copiers, Railway Installation excepting Railway workshop, KSRTC Bus Stations excepting Workshop, All offices, Police Stations, Commercial Complexes, Lifts of Commercial Complexes, Battery Charging units, Tyre Vulcanizing Centres, Post Offices, Bakery shops, Beauty Parlours, Stadiums other than those maintained by Govt. and Local Bodies. It is also applicable to water supply pumps and street lights not covered under LT 6, Cyber cafés, Internet surfing cafés, Call centers, I.T.



based medical transcription centers, Private Hostels not covered under LT -2 (a), Paying guests accommodation provided in an independent / exclusive premises.

**RATE SCHEDULE**

**LT-3 (i): Applicable in areas coming under Bruhat Bangalore Mahanagara Palike(BBMP), Municipal Corporation and all areas under urban local bodies**

Fixed charges	Rs. 40 per KW	
Energy charges	For 0 - 50 units	695 Ps /unit
	Above 50 units	795 Ps /unit

Demand based tariff (optional) where sanctioned load is above 5 KW but below 50 KW		
Fixed charges	Rs. 55 per KW	
Energy charges	As above	

**RATE SCHEDULE**

**LT-3 (ii):Applicable in Areas under Village Panchayats**

Fixed charges	Rs. 30 per KW	
Energy charges	For 0 - 50 units	645 Ps /unit
	Above 50 units	745 Ps /unit

Demand based tariff (optional) where sanctioned load is above 5 KW but below 50 KW		
Fixed charges	Rs. 45 per KW	
Energy charges	As above	

- Note:**
- Besides Lighting, Heating and Motive power, Electricity supply under this Tariff can also be used for Yard lighting/ air Conditioning/water supply in the premises.
  - The semi-permanent Cinemas should have semi-Permanent Structure with permanent wiring and licence for duration of not less than one year.
  - Touring Cinemas having an outfit comprising Cinema apparatus and accessories taken from place to place for exhibition of cinematography film and also outdoor shooting units shall be billed under LT- 7 Tariff.

4. A rebate of 20% on fixed charges and energy charges shall be allowed in the monthly bill in respect of telephone Booths having STD / ISD/FAX facility run **by handicapped people**.
5. **Demand based Tariff** at the option of the consumer can be adopted as per Para 1 of the conditions applicable to LT installations.

**TARIFF SCHEDULE LT-4 (a), LT-4 (b) & LT-4(c)**

Applicable to (a) Agricultural Pump Sets including Sprinklers (b) Pump sets used in (i) Nurseries of forest and Horticultural Departments (ii) Grass Farms and Gardens (iii) Plantations other than Coffee, Tea, Rubber and Private Horticulture Nurseries.

**TARIFF SCHEDULE LT-4 (a)  
Applicable to I.P. Sets Up to and inclusive of 10 HP**

**RATE SCHEDULE**

Fixed charges	Free
Energy charges	

**Commission Determined Tariff (CDT) for LT4 (a) category is 238 paise per unit**

In case the GOK does not release the subsidy in advance in the manner specified by the Commission in K.E.R.C. (Manner of Payment of subsidy) Regulations, 2008, CDT of **238 paise per unit** shall be demanded and collected from these consumers.

**Note:** This Tariff is applicable for Coconut and Arecanut plantations also.

**TARIFF SCHEDULE LT-4 (b):**

**Applicable to IP sets above 10 HP**

**RATE SCHEDULE**

Fixed charges	Rs 30 per HP per month.
Energy charges	240 paise per unit

**TARIFF SCHEDULE LT-4 (c) (i):**

**Applicable to Private Horticultural Nurseries, Coffee, Tea and Rubber plantations of sanctioned load up to and inclusive of 10 HP.**

**RATE SCHEDULE**

Fixed charges	Rs 20 per HP per month.
Energy charges	240 paise per unit

**TARIFF SCHEDULE LT-4 (c) (ii):**

**Applicable to Private Horticultural Nurseries, Coffee, Tea and Rubber plantations of sanctioned load above 10 HP.**

**RATE SCHEDULE**

Fixed charges	Rs. 30 per HP per month.
Energy charges	240 paise per unit

**Note:**

- 1) The energy supplied under this tariff shall be used by the Consumers only for Pumping water to irrigate their own land as stated in the I.P. Set application / water right certificate and for bonafide agriculture use. Otherwise, such installations shall be billed under the appropriate Tariff (LT-3/ LT-5) based on the recorded consumption if available, or on the consumption computed as per the Table given under Clause 42.06 of the Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka.
- 2) The motor of IP set installations **can be used with an alternative drive for other agricultural operations like sugar cane crusher, coffee pulping, etc.,** with the approval of the Licensee. The energy used for such operation shall be metered separately by providing alternate switch and charged at LT Industrial Tariff (Only Energy charges) during the period of alternative use. If the energy used both for IP Set and alternate operation, is however measured together by one energy meter, the energy used for alternate drive shall be estimated by deducting the average IP Set consumption for that month as per the IP sample meter readings for the sub division as certified by the sub divisional Officer.
- 3) The Consumer is permitted to use the energy for lighting the pump house and well limited to 2 lighting points of 40 W each.
- 4) The water pumped for agricultural purposes may also be used by the Consumer for his bonafide drinking purposes and for supplying water to animals, birds, Poultry farms, Dairy farms and fish farms maintained by the Consumer in addition to agriculture.
- 5) Billing shall be made at least once in a quarter year for all IP sets.
- 6) A rebate of 2 paise per unit will be allowed if capacitors are installed as per Clause 23 of Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka in respect of all metered IP Set Installations.

- 7) Only fixed charges as in Tariff Schedule for Metered IP Set Installations shall be collected during the disconnection period of IP Sets under LT 4(a), LT 4(b) and LT 4(c) categories irrespective of whether the IP Sets are provided with Meters or not.

### **TARIFF SCHEDULE LT-5**

Applicable to **Heating & Motive power (including lighting)** installations of industrial Units, Workshops, Poultry Farms, Sugarcane Crushers, Coffee Pulping, Cardamom drying, Mushroom raising installations, Flour, Huller & Rice Mills, Wet Grinders, Milk dairies, Ironing, Dry Cleaners and Laundries having washing, Drying, Ironing etc., Tailoring shop, Bulk Ice Cream and Ice manufacturing Units, Coffee Roasting and Grinding Works, Cold Storage Plants, Bakery Product Mfg. Units, KSRTC workshops/Depots, Railway workshops, Drug manufacturing units and Testing laboratories, Printing Presses, Garment manufacturing units, Bulk Milk vending Booths, Swimming Pools of local Bodies, Tyre retreading units, Stone crushers, Stone cutting, Chilly Grinders, Phova Mills, pulverizing Mills, Decorticators, Iron & Red-Oxide crushing units, crematoriums, hatcheries, Tissue culture, Saw Mills, Toy/wood industries, Viswa Sheds with mixed load sanctioned under Viswa Scheme, Cinematic activities such as Processing, Printing, Developing, Recording theatres, Dubbing Theatres and film studios, Agarbathi manufacturing unit., Water supply installations of KIADB & industrial units, Gem & Diamond cutting Units, Floriculture, Green House, Biotech Labs., Hybrid seed processing units. Information Technology industries engaged in development of hardware & Software, Information Technology (IT) enabled Services / Start-ups/ Animation / Gaming / Computer Graphics as certified by the IT & BT Department of GOK/GOI, Silk filature units, Aqua Culture, Prawn Culture, Brick manufacturing units, Silk / Cotton colour dying, Stadiums maintained by Govt. and local bodies, Fire service stations, Gold / Silver ornament manufacturing units, Effluent treatment plants, Drainage water treatment plants, LPG bottling plants and petroleum pipeline projects, Piggery farms, Analytical Lab. for analysis of ore metals, Satellite communication centers, Mineral water processing plants / drinking water bottling plants and soda fountain units.

### **RATE SCHEDULE**

**LT-5 (a): Applicable to Bruhat Bangalore Mahanagara Palike and Municipal Corporation.**

**i. Fixed charges**

Fixed charges per month	i) Rs. 30 per HP for 5 HP & below ii) Rs. 30 per HP for above 5 HP & below 40 HP iii) Rs. 40 per HP for 40 HP & above but below 67 HP iv) Rs. 110 per HP for 67 HP & above
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**ii. Demand based Tariff (optional)**

Fixed charges per month	Above 5 HP and less than 40 HP	Rs. 50 per KW of billing demand
	40 HP and above but less than 67 HP	Rs. 70 per KW of billing demand
	67 HP and above	Rs. 160 per KW of billing demand

iii. **Energy Charges**

0 to 500 units	490 Ps/unit
Above 500 units	600 Ps/unit

**RATE SCHEDULE**

**LT-5 (b): Applicable to all Areas other than those covered under LT-5(a).**

i. **Fixed charges**

Fixed Charges per Month	i) Rs.25 per HP for 5 HP & below. ii) Rs.30 per HP for above 5 HP & below 40 HP. iii) Rs35 per HP for 40 HP & above but below 67 HP. iv)Rs. 100 per HP for 67 HP & above.
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ii. **Demand based Tariff (optional)**

Fixed Charges per Month	Above 5 HP and less than 40 HP	Rs. 45 per KW of billing demand
	40 HP and above but less than 67 HP	Rs. 60 per KW of billing demand
	67 HP and above	Rs. 150 per KW of billing demand

iii. **Energy Charges**

0 to 500 units	470 Ps/unit
501 to 1000 units	550 Ps/unit
Above 1000 units	580 Ps/unit

**TOD Tariff applicable to LT5 (a) & (b):At the option of the Consumer**

Time of Day	Increase+ / reduction (-) in energy charges over the normal tariff applicable
22.00 Hrs to 06.00 Hrs	(-) 125 paise per unit
06.00 Hrs to 18.00 Hrs	0
18.00 Hrs to 22.00 Hrs	+ 100 paise per unit

**NOTE:**

**1. DEMAND BASED TARIFF**

In the case of LT Industrial Consumers, **Demand based Tariff** at the option of the Consumer can be adopted. The Consumer is permitted to have more connected load than the sanctioned load. The billing demand will be the sanctioned load or Maximum Demand recorded in the Tri-Vector Meter during the month whichever is higher. If the Maximum Demand recorded is more than the sanctioned load, penal charges at two times the normal rate shall apply.

- 2. Seasonal Industries:** The industries which intend to utilize seasonal industry benefit shall comply with the conditionalities under para no. 24 of general terms and conditions applicable to LT.
- 3.** Electricity can also be used for lighting, heating, and air-conditioning in the premises.
- 4.** In the case of welding transformers, the connected load shall be taken as (a) Half the maximum capacity in KVA as per the name plate specified under-IS1851 or (b) Half the maximum capacity in KVA as recorded during rating by the Licensee, whichever is higher.

**TARIFF SCHEDULE LT-6**

Applicable to water supply and sewerage pumping installations and also applicable to **water purifying plants maintained by Government and Urban Local Bodies/ Grama Panchayats for supplying pure drinking water to residential areas** Public Street lights/Park lights of village Panchayat, Town Panchayat, Town Municipalities, City Municipalities / Corporations / State and Central Govt. / APMC, Traffic signals, **Surveillance Cameras at traffic locations belonging to Government Department**, subways, water fountains of local bodies. Also applicable to Streetlights of residential Campus of universities, other educational institutions, housing colonies approved by local bodies/development authority, religious institutions, organizations run on charitable basis, industrial area / estate and notified areas, also applicable to water supply installations in residential Layouts, Street lights along with signal lights including the gateman's shed with associated equipment provided at the Railway level crossing.

**RATE SCHEDULE**

<b>Water Supply- <u>LT-6 (a)</u></b>	
Fixed charges	Rs. 35/HP/month
Energy charges	340Paise/unit
<b>Public lighting- <u>LT-6 (b)</u></b>	
Fixed charges	Rs. 50/KW/month
Energy charges	500 Paise/unit
LED Lighting	400 paise/unit

### **TARIFF SCHEDULE LT-7**

#### **Temporary Supply and Permanent Supply to Advertising Hoardings**

#### **RATE SCHEDULE**

**Applicable to Temporary Power Supply for all purposes.**

<b>LT 7(a)</b>	<b>Details</b>	<b>Approved Tariff</b>
<b>Temporary Power Supply for all purposes.</b>	<b>Less than 67 HP:</b>	Energy charge at 900 paise / unit subject to a weekly minimum of Rs.160 per KW of the sanctioned load.

### **TARIFF SCHEDULE LT-7(b)**

**Applicable to Hoardings & Advertisement boards, Bus Shelters with Advertising Boards, Private Advertising Posts / Sign boards in the interest of Public such as Police Canopy Direction boards, and other sign boards sponsored by Private Advertising Agencies / firms on permanent connection basis.**

<b>LT 7(b)</b>	<b>Details</b>	<b>Approved Tariff</b>
<b>Power supply on permanent connection basis</b>	<b>Less than 67 HP:</b>	Fixed Charges at Rs 40 per KW / month Energy charges at 900 paise / unit

**Note:**

1. Temporary power supply with or without extension of distribution main shall be **arranged through a pre-paid energy meter** duly observing the provisions of Clause 12 of the Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka.
2. This Tariff is also applicable to touring cinemas having licence for duration less than one year.
3. All the conditions regarding temporary power supply as stipulated in Clause 12 of the Conditions of Supply of Electricity of the Distribution Licensees in the State of Karnataka shall be complied with before service.