



## **TARIFF ORDER**

**Review of ARR of FY 2012-13  
&  
Determination of Aggregate Revenue Requirement  
for FY 2013-14  
For  
Electricity Department, Goa**

### **JOINT ELECTRICITY REGULATORY COMMISSION**

#### **For the State of Goa and Union Territories**

2nd Floor, HSIIDC Office, Vanijya Nikunj Complex

Udyog Vihar, Phase-V, Gurgaon-122 016 (Haryana)

Phone: 0124-2342852 Fax: 0124-2342853

Website: [www.jercuts.gov.in](http://www.jercuts.gov.in)

**31<sup>st</sup> March 2013**

## Contents

1. INTRODUCTION .....	10
1.1 JERC Formation .....	10
1.2 Electricity Department of Goa .....	10
1.3 JERC Tariff Regulations.....	11
1.4 Filing of Petition .....	11
1.5 Admission of Petition.....	11
1.6 Interaction with the Petitioner .....	11
1.7 Public hearing process .....	13
1.8 Notice for public hearing .....	14
2. Summary of the Review of FY 2012-13 and ARR Petition for FY 2013-14 .....	15
2.1 Introduction .....	15
2.2 Summary of the Review for FY 2012-13 & ARR for FY 2013-14 .....	15
2.3 Prayer to the Commission.....	16
3. Approach of the Order for Determination of Review for FY 2012-13 & ARR for FY 2013-14.....	18
3.1 Introduction .....	18
4. Summary of Objections received, ED-Goa’s Responses and Commission’s views .....	20
5. REVIEW of ARR FOR FY 2012-13 .....	22
5.1 Background .....	22
5.2 Analysis of Review for FY 2012-13 .....	22
5.3 Consumers, Connected Load and Energy Sales.....	24
5.4 Intra-state Transmission & Distribution Loss.....	29
5.5 Inter-State Transmission Loss .....	30
5.6 Power Purchase Quantum and Cost .....	31
5.7 Energy Balance.....	47
5.8 Operation and Maintenance Expenses.....	50
5.9 Capital Expenditure and Capitalization.....	55
5.10 GFA and Depreciation .....	57
5.11 Interest and Finance Charges .....	59
5.12 Interest on Working Capital.....	61
5.13 Interest on Security Deposit .....	63
5.14 Return on capital base/Net fixed assets.....	64
5.15 Provision for Bad & Doubtful debts.....	65
5.16 Other expenses .....	66
5.17 Non-Tariff Income .....	66
5.18 Revenue from Sale of Surplus Power .....	66
5.19 Aggregate Revenue Requirement (ARR) for FY 2012-13.....	68
5.20 Revenue at existing tariff for FY 2012-13 .....	68
5.21 Revenue Gap at existing tariff for FY 2012-13.....	71
6. Aggregate Revenue Requirement (ARR) for FY 2013-14.....	72
6.1 Background .....	72
6.2 Analysis of Aggregate Revenue Requirement of FY 2013-14 .....	72

6.3	Consumers, Connected Load and Energy Sales .....	74
6.4	Intra-Transmission & Distribution Loss.....	78
6.5	Inter-State Transmission Loss .....	80
6.6	Power Purchase Quantum and Cost .....	81
6.7	Energy Balance.....	92
6.8	Operation and Maintenance Expenses.....	95
6.9	Capital Expenditure and Capitalisation.....	98
6.10	GFA and Depreciation .....	99
6.11	Interest and Finance Charges .....	101
6.12	Interest on Working Capital .....	102
6.13	Interest on Security Deposit .....	104
6.14	Return on Capital base/ Net Fixed Assets.....	105
6.15	Provision of Bad & Doubtful debts .....	106
6.16	Other expenses .....	107
6.17	Non Tariff Income .....	107
6.18	Revenue from Sale of Surplus Power .....	108
6.19	Aggregate Revenue Requirement (ARR) for FY 2013-14 .....	108
6.20	Revenue at existing tariff for FY 2013-14 .....	109
6.21	Revenue Gap at existing tariff for FY 2013-14.....	112
6.22	Average Cost of Supply for FY 2013-14.....	112
7.	Compliance of Directives .....	113
8.	Tariff Philosophy and category-wise tariffs for FY 2013-14 .....	123
8.1	Preamble .....	123
8.2	Revenue Gap for FY 2012-13 and Recovery .....	123
8.3	Average Cost of Supply .....	124
8.4	Applicability of Tariffs .....	125
9.	Determination of open access charges .....	127
10.	Rationalization and Reform of Tariff Schedule and Terms & Conditions of Supply .....	136
11.	Conclusion of Commission's Order .....	162
12.	General Conditions and Tariff Schedule .....	166

List of Tables

Table 1: Details of public notice published by the Petitioner.....	13
Table 2: Details of public notice published by the Commission.....	14
Table 3: Summary of the petition for Review of FY 2012-13 & ARR for FY 2013-14.....	15
Table 4: Energy Sales projected by the Petitioner for FY 2012-13 (MU).....	25
Table 5: Energy Sales approved by the Commission for FY 2012-13 (MU) .....	26
Table 6: Number of Consumer (in No.s) approved by the Commission for Review of ARR for FY 2012-13 .....	27
Table 7: Connected Load (in KW) approved by the Commission for review of ARR for FY 2012-13.....	28
Table 8: Power Purchase Cost Revised Estimates Comparison for FY 2012-13 .....	33
Table 9: Power purchase cost submitted for FY 2012-13.....	33
Table 10: Energy availability situation without IPP purchases .....	35
Table 11: Bifurcation of Power Purchase cost from the IPP as verified from the bills submitted by the petitioner (from April 2012 to September 2012) .....	36
Table 12: Approved Power Purchase for FY 2012-13 (April to September).....	37
Table 13: Approved Power purchase quantum from NTPC stations under merit order dispatch for H2 of FY 2012-13 .....	40
Table 14: Approved Power purchase Cost for H2 FY 2012-13 from NTPC stations .....	41
Table 15: Approved Power purchase quantum from NPCIL stations under merit order dispatch .....	42
Table 16: Approved Power purchase Cost for NPCIL Stations.....	42
Table 17: Approved Power purchase quantum and Cost for Co-Gen for H2 of FY 2012-13 .....	44
Table 18: Approved Power purchase quantum and Cost from IPP for H2 of FY 2012-13.....	45
Table 19: Power Purchase cost approved for October 12 to March 2013 .....	46
Table 20: Power Purchase cost approved for FY 2012-13 .....	46
Table 21: Energy Balance submitted by the petitioner for FY 2012-13 (H1).....	47
Table 22: Energy Balance submitted by the petitioner based on the revised estimates for FY 2012-13 .....	48
Table 23 Energy Balance approved by the Commission for FY 2012-13.....	48
Table 24: O&M expenses approved by the Commission for FY 2012-13 (Rs Cr).....	55
Table 25: Depreciation approved by the Commission for FY 2012-13 (Rs Cr) .....	58
Table 26: Interest on normative loan approved by the Commission for FY 2012-13 (Rs Cr).....	60
Table 27: Interest on working capital approved by the Commission for FY 2012-13 (Rs Cr).....	62
Table 28: Interest on Security Deposit approved by the Commission for FY 2012-13 (Rs Cr) .....	63
Table 29: Return on Capital base approved by the Commission for FY 2012-13 (Rs Cr) .....	64
Table 30: Provision for bad debts approved by the Commission for FY 2012-13 .....	65
Table 31: Revenue from sale of surplus power for FY 2012-13 (Rs Cr) .....	67
Table 32: Aggregate Revenue Requirement (ARR) approved by the Commission for the Review of FY 2012-13 (Rs Cr).....	68
Table 33: Revenue at existing tariff approved by the Commission for FY 2012-13 (Rs Cr).....	69
Table 34: Revenue Gap at existing tariff approved by the Commission for FY 2012-13 (Rs Cr) .....	71
Table 35: Number of consumers approved by the Commission for FY 2013-14.....	75
Table 36: Connected Load approved by the Commission for FY 2013-14*.....	76
Table 37: Energy Sales approved by the Commission for FY 2013-14.....	78

Table 38: Intra-transmission losses & distribution losses approved by the Commission for FY 2013-14 .....	80
Table 39: Summary of Power purchase cost submitted by the petitioner (FY 2013-14) .....	83
Table 40: Approved Power purchase quantum from NTPC stations under merit order dispatch.....	86
Table 41: Approved Power purchase Cost from NTPC stations .....	87
Table 42: Approved Power purchase quantum from NPCIL stations under merit order dispatch .....	88
Table 43: Approved Power Purchase Cost for NPCIL Stations.....	88
Table 44: Approved Power purchase quantum and Cost for Co-Gen .....	89
Table 45: Approved Power purchase quantum and Cost from Renewable Energy Sources .....	91
Table 46: Power Purchase cost approved for FY 2013-14.....	92
Table 47: Energy balance approved by the Commission for FY 2013-14 .....	94
Table 48: Employee expenses approved by the Commission for FY 2013-14 (Rs Cr) .....	96
Table 49: O&M expenses approved by the Commission for FY 2013-14 .....	98
Table 50: Gross Fixed Assets approved by the Commission for FY 2013-14 .....	100
Table 51: Depreciation approved by the Commission for FY 2013-14.....	101
Table 52: Interest on normative loan approved by the Commission for FY 2013-14 .....	102
Table 53: Interest on working capital approved by the Commission for FY 2013-14 .....	103
Table 54: Interest on security deposit approved by the Commission for FY 2013-14 .....	105
Table 55: Return on capital base approved by the Commission for FY 2013-14 .....	106
Table 56: Provision for bad debts approved by the Commission for FY 2013-14 (Rs Cr).....	106
Table 57: Aggregate Revenue Requirement approved by the Commission for FY 2013-14 (Rs Cr) ...	109
Table 58: Revenue at existing tariff submitted by the petitioner for FY 2013-14.....	108
Table 59: Revenue at existing tariff approved by the Commission for FY 2013-14 (Rs Cr).....	111
Table 60: Revenue Gap at existing tariff approved by the Commission for FY 2013-14 (Rs Cr) .....	112
Table 61: Average cost of supply approved by the Commission for FY 2013-14 (Rs/kWh) .....	112
Table 62: Tariff as a percentage of ACOS for FY 2013-14.....	124
Table 63: Comparison of Retail Tariffs approved for FY 2012-13 and FY 2013-14 .....	125
Table 64:: Allocation of ARR between Wheeling and Retail Supply .....	132
Table 65: Determination of input energy for network usage percentage .....	133
Table 66: Wheeling charges approved for FY 2013-14 .....	133
Table 67: Calculation of "T" .....	134
Table 68: Calculation of "C" .....	134
Table 69: Approved Cross subsidy surcharge for FY 2013-14 .....	134

### List of Annexures

S.No.	Annexure
1.	Admission Order dated February 5 <sup>th</sup> , 2013 issued by Joint Electricity Regulatory Commission for the State of Goa and Union Territories
2.	Public Notices published by the Petitioner for inviting objections/suggestions on the ARR for FY 2013-14 (Petition no 99/2013)
3.	Public Notices published by the Commission for intimation of public hearing on the ARR for FY 2013-14 (petition no 99/2013)
4.	List of objectors
5	Schedule of Miscellaneous charges

## List of Abbreviations

Abbreviation	Full Form
A&G	: Administration & General Expenses
Act	: The Electricity Act, 2003
ARR	: Aggregate Revenue Requirement
ABR	: Average Billing Rate
CAGR	: Compound Annualized Growth Rate
Capex	: Capital Expenditure
CEA	: Central Electricity Authority
CERC	: Central Electricity Regulatory Commission
CGS	: Central Generating Station
COD	: Commercial Operation Date
Commission/JERC	: Joint Electricity Regulatory Commission for the state of Goa and Union Territories
CKt. Km	: Circuit Kilometer
Cr	: Crore/Crores
DISCOM/ED-Goa	: Electricity Department of Goa
CPSU	: Central Public Sector Undertaking
D/C	: Double Circuit
EA 2003	: The Electricity Act, 2003
FC	: Fixed Charges
FPPCA	: Fuel & Power Purchase Cost Adjustment
FY	: Financial Year
GFA	: Gross Fixed Assets
HP	: Horse Power
HT	: High Tension
KVA	: Kilo Volt Ampere
KWh	: Kilo Watt Hour
LPS	: Late Payment Surcharge
LT	: Low Tension
MU	: Million Unit
MW	: Mega Watt
MYT	: Multi Year Tariff
NDS	: Non-Domestic Supply

Abbreviation	:	Full Form
NFA	:	Net Fixed Assets
NTP/Tariff Policy	:	National Tariff Policy
O/H	:	Over head
O&M	:	Operation & Maintenance
PGCIL	:	Power Grid Corporation of India Ltd.
PLF	:	Plant Load Factor
PX	:	Power Exchange
RoE	:	Return on Equity
RPO	:	Renewable Purchase Obligation
R&M	:	Repair & Maintenance
RE	:	Revised Estimates
REA	:	Regional Energy Accounting
RLDC	:	Regional Load Dispatch Centre
SCL	:	Sanctioned Connected Load
S/C	:	Single Circuit
SLDC	:	State Load Dispatch Centre
SBI CAPS	:	SBI Capital Market Limited
SBI PLR/SBAR	:	SBI Prime Lending Rate/State Bank Advance Rate
T&D	:	Transmission & Distribution
UI	:	Unscheduled Interchange
VAR	:	Volt Ampere Reactive
VC	:	Variable Charges



**Before the**

**Joint Electricity Regulatory Commission**  
**for the State of Goa and Union Territories**  
**Gurgaon**

**CORAM**

Dr. V. K. Garg (Chairperson)

S. K. Chaturvedi (Member)

**Petition No. 99 / 2013**

**In the matter of**

**Petition filed by Electricity Department, Goa for Review of FY 2012-13 and approval of Aggregate Revenue Requirement for FY 2013-14**

.....**Petition No. 99 / 2013**

**And in the matter of**

**Electricity Department,**

**Goa.....Petitioner**

## **ORDER**

**Date: 31<sup>st</sup> March 2013**

### **1. INTRODUCTION**

#### **1.1 JERC Formation**

In exercise of the powers conferred by Section 83 of the Electricity Act, 2003 the Central Government constituted a two member (including Chairperson) Joint Electricity Regulatory Commission for all Union Territories except Delhi to be known as “Joint Electricity Regulatory Commission for Union Territories” with headquarters at Delhi as notified vide notification no. 23/52/2003 – R&R dated May 2’ 2005. Later with the joining of the state of Goa, the Commission came to be known as “Joint Electricity Regulatory Commission for the State of Goa and Union Territories” as notified on May 30’ 2008. The Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Andaman & Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman & Diu, Lakshadweep and Puducherry) started functioning with effect from August 2008. Office of the Commission is presently located in a rented building in the district town of Gurgaon, Haryana.

#### **1.2 Electricity Department of Goa**

The Electricity Department of Goa herein called ED-Goa, a deemed licensee under Section 14 of the Electricity Act 2003, is carrying on the business of transmission, distribution and retail supply of electricity in the State of Goa. The Goa Electricity Department (ED-Goa) is functioning as an integrated distribution licensee for the State of Goa.

Goa, a tiny emerald land on the west coast of India, the 25th State in the Union of States of India, was liberated from Portuguese rule in 1961. It was part of Union territory of Goa, Daman & Diu till 30 May 1987 when it was carved out to form a separate State. Goa covers an area of 3702 square kilometres and comprises of two Revenue district viz North Goa and South Goa. Boundaries of Goa State are defined in the North Terekhol River which separates it from Maharashtra, in the East and South by Karnataka State and West by Arabian Sea.

Goa, for the purpose of revenue administration is divided into two-district viz. North and South Goa with headquarters at Panaji and Margao respectively. The entire State comprises 11 talukas. For the purpose of implementation of development programs, the State is further divided into 12 community development blocks.

### 1.3 JERC Tariff Regulations

The Commission, in exercise of the powers conferred upon it by the Electricity Act, 2003, has notified JERC (Terms and Conditions for determination of Tariff) Regulations, 2009 for determination of tariff (hereinafter referred to as JERC Tariff Regulations). For generation & transmission projects the JERC regulations provide for following CERC Regulations, principle methodologies as amended from time to time.

### 1.4 Filing of Petition

The Electricity Department- Goa filed its petition for the Determination of Aggregate Revenue Requirement (ARR) for FY 2013-14 on January 31, 2013 according to the Regulation 10 of JERC (Conduct of Business) Regulations, 2009 and as per the procedures outlined in Section 61, 62 & 64 of the Electricity Act, 2003.

### 1.5 Admission of Petition

ED-Goa submitted its ARR Petition for FY 2013-14 (Petition No.99 / 2013) based on the principles outlined in the JERC Tariff Regulations before the Commission.

After initial scrutiny and analysis of petition dated January 31, 2013 for FY 2013-14, the petition was admitted on February 5, 2013 subject to removal of infirmities to the extent possible. The Commission has taken up petition on record on with Petition numbered as 99/2013 on February 5, 2012. A copy of the Admission Order dated February 7, 2013 is annexed herewith as **Annexure 1** to this Order.

### 1.6 Interaction with the Petitioner

The staff of the Commission interacted regularly with the Petitioner to seek clarifications, additional information and justification on the various issues essential for the analysis of the tariff petitions. The staff of the Commission and the Petitioner also discussed key issues related to the petitions, which included power purchase cost, estimated sales and revenue, etc. A validation session was conducted with the Petitioner during which discrepancies in the petitions and additional information required by the Commission were sought.

Accordingly, the following additional information /clarification from the petitioner were sought by the Commission vide its e-mail dated February 18, 2013 . The extract of the communication is presented below:

”

**Power Purchase**

1. *The Petitioner has provided the input of power for H1 FY 2012-13 at table 4-5 of the petition. The basis and documentary proofs of the input energy considered may be produced.*
2. *Provide the basis of consideration of open market purchases at Rs 5 per unit and sale of surplus power of Rs 4 per unit for FY 2013-14.*
3. *The petitioner has indicated the reduced scheduling from stations at Table 5-5, whereas a purchase of Rs 5 per unit is envisaged for purchase from open market. The petitioner to provide the rationale considering power from open market and curtailing power from existing stations.*

**Sales and Revenue**

4. *Provide the details of Sales and Revenue for April 2011 to September 2011 and October 2011 to March 2012*
5. *Provide the category wise break up of revenue from sale of power into Fixed charges, variable charges and FPPCA charge for FY 2012-13 (H1 and H2) and FY 2013-14*

**O&M expenses**

6. *The petitioner has indicated an amount of Rs 7.70 Crores of R&M expenditure for the FY 2012-13 (April to September 2012). However the total estimated expenditure for the year has been considered at Rs 21.19 Crores. The petitioner is directed to submit the basis of consideration of such an increase in the second half of FY 2012-13*
7. *The petitioner needs to provide the detailed break up of CGRF expenses.*
8. *The petitioner to specify the treatment of expenses pertaining to CGRF during FY 2011-12*
9. *The petitioner has shown a reduction of number of employees from 6214 at the beginning of FY 2012-13 to 5879 at the end of FY 2013-14. The petitioner is directed to provide the impact of such reduction in the Employee cost for the FY 2012-13 and FY 2013-14.*

**Capital Expenditure**

10. *The petitioner has envisaged a capitalization of 81.30 Crores only in the FY 2012-13 out of total CWIP of Rs 569.36 Crores which is only 14%. The petitioner needs to explain the reason for such lower capitalization.*
11. *The petitioner needs to provide the basis of calculation of weighted average interest rates considered for the calculations of the long term loans.*
12. *Basis of calculation of depreciation and detailed calculation to be provided for FY 2012-13 and FY 2013-14.*

**Open Access Charges**

13. Provide the calculations for Wheeling charge and cross subsidy surcharge

“

The reply to the same have been provided by the petitioner vide email dated 21<sup>st</sup> February 2012.

The various submissions made by the petitioner have been discussed by the Commission at appropriate places in the tariff order along with the Commission’s analysis on the same.

### 1.7 Public hearing process

The Commission directed the Petitioner to publish the summary of the ARR and Tariff proposals in the abridged form and manner, as approved by the Commission in accordance with section 64 of the Electricity Act 2003. Accordingly, the notices were published by the Petitioner for inviting objections/ suggestions on its petition from different stakeholders. Details of public notice issued are tabulated below:

**Table 1: Details of public notice published by the Petitioner**

S.No.	Date	Language	Name of Newspaper
1.	13-02-2013	English	The Times of India
2.	13-02-2013	Marathi	Gomantak
3.	13-02-2013	Konkani	Sunaprant

The Petitioner also uploaded the petition on its website ([www.electricity.goa.gov.in](http://www.electricity.goa.gov.in)) for inviting objections and suggestions on their petition. The Commission also uploaded the petition on its website ([www.jercuts.gov.in](http://www.jercuts.gov.in)).

Interested parties / stakeholders were requested to file their objections / suggestions on the petition on or before 26<sup>th</sup> February 2013. The copies of paper cutting of public notice are annexed as **Annexure 2** to this order.

**Commission received NIL written objections / suggestions on the petition, by the last date for filing objections/suggestion i.e. February 26’2013. Stakeholders who raised their concerns on the spot were also replied to by the officers of the utility orally on the spot.**

The Commission scheduled the public hearing on March 4, 2013.

## 1.8 Notice for public hearing

The Commission published public notices in the leading newspapers giving due intimation to the stakeholders, consumers, objectors and the public at large about the public hearing to be conducted by the Commission on March 4, 2013 at Nalanda Hall, EDC House, Atmaram Borkar Road, Panaji, Goa for all consumers on ARR petition for FY 2013-14. The details of the newspapers are as given below:

**Table 2: Details of public notice published by the Commission**

S.No.	Date	Language	Name of Newspaper
1.	13-02-2013	Marathi	Gomantak
2.	13-02-2013	English	Herald
3.	13-02-2013		Sunparant
Repeated on			
4.	01-03-2013	Marathi	Gomantak
5.	01-03-2013	English	Herald
6.	01-03-2013	Konkani	Sunparant

The Commission published public notice for the public hearing in the above newspapers on February 13, 2013 and again on March 1, 2013 to remind the public for better participation in the public hearing.

Copies of public notice published by the Commission for intimation of public hearing are annexed as **Annexure 3** to this order.

The Commission did not receive any written comments / objection on the ARR filed by the ED-GOA. However, each stakeholder present during the public hearing was provided an opportunity to present his views on the petition filed by the Petitioner. The officers of the utility replied orally on the spot to stakeholders who raised their concerns. The list of the objectors is attached at **Annexure 4** to this order.

The Commission examined the issues and concerns expressed by stakeholders. The major issues discussed during the public hearing, the comments/replies of the utility and the views of the Commission thereon have been summarized in Chapter 4 of this order.

## 2. Summary of the Review of FY 2012-13 and ARR Petition for FY 2013-14

### 2.1 Introduction

The Petitioner has not filed true up petition for the FY 2011-12 owing to the non-finalization of accounts for the period. The Petition includes the Review for the FY 2012-13 and the Aggregate Revenue Requirement for FY 2013-14.

As specified in the Tariff Regulations, the Hon'ble Commission shall undertake the Review by considering variations between the approved and revised estimates/pre-actuals of sale of electricity, income and expenditure for the relevant year. Accordingly, ED – Goa has filed its this Review for the year FY 2012-13 based on the actual performance during the 1st half of the year and the revised estimates for the second half of the year.

ED-Goa has filed the petition for the determination of Aggregate Revenue Requirement for the year FY 2013-14 based on the past performance and expected changes in each element of cost and revenue for the ensuing year. ED-Goa based on the past trends and taken cognizance of other internal and external developments has estimated the likely performance for FY 2013-14.

The revenue gap upto the FY 2013-14 has been proposed to be bridged by the Government support and therefore the Petitioner has not proposed any Tariff changes for the FY 2013-14.

### 2.2 Summary of the Review for FY 2012-13 & ARR for FY 2013-14

The Petitioner had submitted the revised formats vide its submission dated February 28, 2013. The Summary of the revised estimates for FY 2012-13 and ARR for FY 2013-14 is shown in the table below:

**Table 3: Summary of the petition for Review of FY 2012-13 & ARR for FY 2013-14**

Sr. No.	Particulars (In Rs Cr)	FY 2012-13	FY 2013-14
		Revised Estimates	Estimated
1	Cost of power purchase	1,022.80	867.95
2	Employee costs	137.14	149.40
3	R&M expenses	21.19	25.07
4	Administration and general expenses	8.59	9.36
5	Depreciation	8.80	16.03
6	Int and Finance Charges	8.99	7.60
7	Interest on Working Capital	4.59	1.60
8	Interest on Security Deposit	5.73	6.52

Sr. No.	Particulars (In Rs Cr)	FY 2012-13	FY 2013-14
		Revised Estimates	Estimated
9	Return on NFA	3.68	5.86
10	Provision for Bad Debts	-	-
11	Other Expenses	0.60	1.02
<b>12</b>	<b>Total Revenue Requirement</b>	<b>1,222.11</b>	<b>1,090.40</b>
13	Less: Non Tariff Income	23.06	22.53
14	Less: Revenue from Sale of Power - UI Pool	11.94	
15	Less: Revenue from Sale of Power-Exchanges	23.66	6.85
16	Less: Revenue from Sale / Banking of Power		
<b>17</b>	<b>Aggregate Revenue Requirement</b>	<b>1,163.44</b>	<b>1,061.03</b>
18	Revenue from Retail Sales at Existing Tariff	917.42	944.93
19	FPPCA Charge	33.02	
20	<b>Revenue Gap/ (Surplus) at existing tariff</b>	<b>213.00</b>	<b>116.10</b>
21	Budgetary Support from Government	213.00	116.10
22	<b>Net Final Revenue Gap/ (Surplus) at existing tariff</b>	<b>-</b>	<b>-</b>
23	<b>Energy sales (MU)</b>	<b>2879.27</b>	<b>2919.00</b>
24	<b>ACOS</b>	<b>4.04</b>	<b>3.63</b>

### 2.3 Prayer to the Commission

ED Goa as per the submission dated January 31, 2013, has requested the Commission to:

- Accept the Aggregate Revenue Requirement petition for the FY 2013-14 for ED-Goa formulated in accordance with the guidelines outlined as per the regulation of Joint Electricity Regulatory Commission relating to Distribution Licensee and the principles contained in Tariff Regulations;
- Approve the total projected ARR of FY 2013-14
- Examine the proposal submitted by the petitioner as detailed in the enclosed proposal for a favourable dispensation.
- The delay in filing this ARR Petition may please be condoned and the Hon'ble Commission is requested to accept this Petition and process the same.



- Pass suitable orders with respect to the ARR for FY 2013-14 for the expenses to be incurred by ED - Goa for serving its consumers;
- ED – Goa may also be permitted to propose suitable changes to the ARR and Tariff Petition and the mechanism of meeting the revenue on further analysis, prior to the final approval by the Hon’ble Commission;
- Condone any inadvertent omissions/errors/shortcomings and permit ED – Goa to add/change/modify/alter this filing and make further submissions as may be required at a future date.
- Pass such further orders, as the Hon’ble Commission may deem fit and appropriate keeping in view the facts and circumstances of the case.

### **3. Approach of the Order for Determination of Review for FY 2012-13 & ARR for FY 2013-14**

#### **3.1 Introduction**

The Commission has considered the petition (petition no 99/2013) as per the JERC (Terms and Conditions of Tariff) Regulations, 2009. The Commission has considered the above regulations pertaining to business of the integrated utility and the Commission was guided by the principles contained in Section 61 of the Act amongst other things to examine the sales forecast, power purchase quantum, self-generation and other income & expenditure.

The Commission has received the Petition for the Review for FY 2012-13 and ARR for FY 2013-14. The Commission has dealt with the petitions in accordance with JERC Tariff Regulations. As per Regulation 13 of the JERC Tariff Regulation, the data for ARR shall comprise of the audited figures for previous year, estimates for current year and forecast for the ensuing year. In this case, the petitioner was required to file the audited figures for FY 2011-12 for truing up. However, the Petitioner has not filed the truing up Petition for FY 2011-12. The Commission had set out certain directions in the Tariff Order dated 27<sup>th</sup> June 2012 for FY 2011-12 (**hereinafter referred to as "Tariff Order FY 2012-13"**) to get the accounts prepared on commercial principles and get those audited. The Commission has taken note of the Petitioner's submission that the audited accounts for FY 2006-07 are audited and the FY 2007-08 accounts are in process of an audit. The Petitioner had submitted the actuals for the FY 2011-12 during ARR process of FY 2012-13 vide its submission dated 5<sup>th</sup> June 2012. The Commission had accordingly considered the submission for determination of the ARR for FY 2011-12.

The Commission does not appreciate the approach of the petitioner towards the directives issued. The Petitioner should understand the essence and requirement of the audited accounts. The audited accounts, more than required for regulatory perspective are the true and fair reflection of any business and are considered essentials. **The Commission directs the Petitioner to conclude the audit of the accounts and file the true up for FY 2011-12 before the filing of the next ARR. Non-compliance of the directives would be considered seriously in terms of the Electricity Act 2003.**

However, the Commission feels that the tariff determination process should not be stalled in the absence of the audited accounts for the FY 2011-12. In the larger interest of the consumer and the licensee, the Commission has considered the review of the FY 2012-13 and ARR for FY 2013-14.

In the determination of ARR & tariff for FY 2013-14, various provisions of the JERC's Tariff Regulations 2009 pertaining to business of the integrated utility are relevant and the Commission has been guided by the principles contained in Section 61 of the Act among other things to examine the sales forecast, power purchase quantum and other income & expenditure.

The Commission, while determining the tariff is guided by the principles contained in Section 61 of the Act, namely

- a) The principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;
- b) The generation, transmission, distribution and supply of electricity are conducted on commercial principles;
- c) The factors which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments;
- d) Safeguarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner;
- e) The principles rewarding efficiency in performance;
- f) Multi-year tariff principles;
- g) 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 Appropriate Commission;
- h) The promotion of co-generation and generation of electricity from renewable sources of energy;
- i) The National Electricity Policy and tariff policy;

The Commission has considered the figures of income & expenditure as approved for FY 2011-12 in its order dated June 27, 2012 and revised estimates submitted by the petitioner for FY 2012-13 to form the basis of projection for income and expenditure for FY 2013-14. Further, the Commission has relied on the actual data of FY 2011-12, actual available figures for FY 2012-13 (first half) provided by the Petitioner and validated by the Commission during the technical validation session held after the submission of the petition. The detailed analysis & treatment of each component is provided in Chapter 5 and 6 of this order.

#### 4. Summary of Objections received, ED-Goa's Responses and Commission's views

The Commission did not receive any written objection on the ARR filed by the petitioner. However, the stakeholders who had represented during the public hearing process have been considered and the objections are summarized below

##### **A. Stakeholders Objections/Comments:**

Brief issues raised by Sh. Biyani representing M/s Alloysv and Steel Manufacturers Association of Goa

1. The R&M expenses proposed in the second half of FY 2012-13 are double than the first half of the FY 2012-13
2. The licensee is resorting to power cuts between 6 pm to 10 pm which is affecting the productivity and the economics of the industries
3. Industries are ready to pay higher charges for scheduling power during peak hours

##### **Petitioner's submission:**

The representatives of the petitioner had responded to the issues raised by Sh. Biyani. The petitioner had referred to its submission before the Commission with regard to the R&M expenses which are reproduced below:

##### **Quote**

*"It is submitted that actual expenses of H1 for R & M was Rs.7.70 crores, though works much more than the said amount were executed. This was mainly due to changeover of payment mode by the Government from cash/ cheque basis to ECS mode and also due to delayed monsoons when no work could be carried out. In accordance with the new financial guidelines issued by the Government, sanctions accorded in the previous year would lapse if works were not commenced in that year, and fresh sanctions had to be obtained. However the works are presently gaining momentum and budget estimates submitted to the Government are likely to be utilized fully by the Department. Hence the proposed expenditure of Rs. 21.19 crores is in order."* **Unquote**

As regard to the load shedding the petitioner cited the various PPA's signed to ensure supply.

##### **Commission's views:**

The Commission has taken note of the Petitioners submission and has dealt with it accordingly at the relevant Para 5.8 of this order. The Commission also directs the

Petitioner to ensure supply in its area and refrain from load shedding. The Commission also directs the petitioner that in case load shedding becomes imperative the Petitioner should publish the roster for load shedding well in advance

**B. Stakeholders Objections/Comments:**

Brief issues raised by Sh. Shri. Kundan Shetye representing M/S. Goa Steel Ltd. Bicholim-Goa is as follows:

The petitioner had alleged that the order of the Ombudsman dated 30.05.2012 has not been given affect by the Petitioner.

**Petitioner's submission:**

The representative of the petitioner has apprised the Commission that aggrieved of the order of the Ombudsman an appeal has been filed before the Hon'ble High Court.

**Commission's views:**

As the matter is pending before the High Court, the Commission would not like to intervene.

**C. Stakeholders Objections/Comments:**

Brief issues raised by Sh. Roland Martins representing M/s Goa CANS are as follows:

1. Public at large should be made aware of the functioning of the CGRF
2. CGRF is working from the south Goa which makes it difficult for the people of North Goa to approach
3. The wires at various places are dilapidated and people get electrocuted because of such wires
4. Consumers should be made aware of the electronic meters and its functioning

**Commission's views:**

The Commission had suggested that the ED-GOA might get a leaflet printed for awareness of the Electronic meter, Grievance redressal forums, functioning of CGRF and Tariff. As regards to the issue raised regarding the electrocution of human due to the network of ED-GOA the **Commission directs the petitioner to submit the report on such instance in the past one year within one month of the issue of this order.**

## **5. REVIEW of ARR FOR FY 2012-13**

### **5.1 Background**

ED-Goa filed its petition for Review of FY 2012-13 and ARR for FY 2013-14 on January 31, 2013. The petition was admitted on February 5, 2012 subject to the removal of infirmities to the extent possible. Subsequent to filing, a technical validation session was held on 21<sup>st</sup> February 2013. The Commission scheduled a hearing for Petition No.99/2013 on 4<sup>th</sup> March 2012.

The Commission has considered the provisional actuals for full year of FY 2011-12, actual of first half of FY 2012-13 wherever available for determination of the ARR for FY 2012-13 as they depict nearly the true performance of the utility. The revised tariff filing formats for FY 2012-13 and FY 2013-14 submitted vide mail dated February 18, 2013 have been considered by the Commission in its analysis of the Review for FY 2012-13.

The Commission has taken into consideration the following for determination of ARR for FY 2011-12:

- i. Actual Performance in FY 2011-12 as approved in the order dated June 27' 2012
- ii. Sales , power purchase and revenue figures based on actual first half of FY 2012-13 and FY 2011-12 (H1 and H2)
- iii. Estimates submitted by the Petitioner for H1 and H2 of FY 2012-13 in the petition along with revised formats submitted vide its submission dated February 18, 2013.
- iv. Depreciation, Interest and Finance Charges, Interest on Working Capital, Interest on Security Deposit, and Return on Net Fixed Assets have been computed as per the JERC tariff regulations 2009.

### **5.2 Analysis of Review for FY 2012-13**

The review of aggregate revenue requirement requires assessment of quantum of energy sales, energy loss as well as various cost elements like power purchase cost, O&M expenses, interest cost and depreciation etc. As regards the various components of ARR, the Commission's analysis thereon and decision in respect of items given below is discussed in the following paras:

- Assessment of Energy Requirement
  - i. Sales Projections
  - ii. Loss Trajectory
  - iii. Energy Balance
  - iv. Power Purchase Sources
  
- Assessment of the Aggregate Revenue Requirement
  - v. Power Purchase Costs & Transmission Charges;
  - vi. Operation and Maintenance Expenses;
    - Employee Expenses
    - Administration & General expenses
    - Repairs & Maintenance Expenses
  - vii. Capital Expenditure and Asset Capitalisation
  - viii. Gross Fixed Assets;
  - ix. Depreciation;
  - x. Interest on Long Term Loans;
  - xi. Interest on Working Capital & Security Deposits;
  - xii. Return on Capital Base/ Net Fixed Assets;
  - xiii. Provision for Bad and Doubtful Debts
  - xiv. Other expenses.

### 5.3 Consumers, Connected Load and Energy Sales

#### Petitioner's Submission

The consumer base of Goa comprises of HT Industry, LT Industry, Commercial and Domestic consumers with the maximum consumption attributable to the domestic category. ED – Goa has been experiencing a constant growth rate over the last few years and foresees a similar kind of trend in the near future. Further, ED – Goa envisages very little increase in number of consumers which is also in line with the number of consumers approved by the Hon'ble Commission in its Tariff Order.

Based on the number of consumers for the year FY 2012-13; the category wise connected load for the 1<sup>st</sup> half and for FY 2012-13 has been projected.

ED – Goa has projected the sales by considering the actual consumption for the 1<sup>st</sup> half of FY 2012-13, i.e. April 2012 to Sep 2012. The sales forecast for the remaining period is based on the trends observed in sales pattern over the previous years during the corresponding 2<sup>nd</sup> half of the respective years. ED – Goa has also considered certain key factor considered while projecting the sales for FY 2012-13:

- The Government of Goa has issued notification to all the mines operating to suspend their operations due to certain illegal matters. As a result of this, the sales have drastically reduced in recent months and are expected to be on lower side in the 2<sup>nd</sup> half of the FY 2012-13. Hence, ED – Goa has used a conservative approach while projecting sales of High Tension Supply during the second half. The Notification issued by the Government of Goa is annexed to this petition at **Annexure II: Suspension Order on Mining Activities**
- Secondly, ED – Goa has shown considered higher sales for Commercial Category during the 2<sup>nd</sup> half of the year FY 2012-13. This is on account of the peak season of tourism which commences from the month September onwards and continues till the month of January/ February. Hence, there is a substantial amount of consumption of power during this period.

The overall sales projected by ED – Goa for the year FY 2012-13 is in the range of Sales figures approved by the Hon'ble Commission.



**Table 4: Energy Sales projected by the Petitioner for FY 2012-13 (MU)**

Category of Consumer	Revised Estimates FY 2012-13		
	H1	H2	FY 2012-13
Low Tension Supply	590	608	1198
Tariff LTD/Domestic and Non - Commercial	416	394	810
<i>First 60 Units</i>	87	83	170
<i>61 - 250 Units</i>	249	237	486
<i>251 Units - 500 Units</i>	62	59	122
<i>Above 500 Units</i>	17	16	32
Tariff LTD/Low Income Group	5	4	9
Tariff LTD/Domestic Mixed	2	2	4
<i>First 400 Units</i>	2	1	3
<i>Above 400 Units</i>	0	0	1
Tariff LTC/Commercial	108	152	260
<i>First 100 Units</i>	53	74	127
<i>100 Units - 1000 Units</i>	49	68	117
<i>Above 1000 Units</i>	6	9	16
Tariff LTP/Motive Power	37	37	74
<i>Connected Load Upto 50 HP</i>	2	2	4
<i>Connected Load Above 50 HP</i>	35	35	70
Tariff-LTP/Mixed (Hotel Industries)	3	3	5
Tariff LTP/Ice Manufacturing	0	0	0
Tariff-LTAG/Agriculture	10	8	18
Tariff-LTPL/Public Lighting	8	8	16
Tariff-LT PWW/Public Water Works	1	1	2
High Tension Supply	852	829	1681
Tariff HT-Mixed	106	100	206
Tariff HTI/Industrial	297	299	596
H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	280	260	540
<i>First 300 Units/kVA</i>	151	141	292
<i>Next 200 Units/kVA</i>	106	99	205
<i>Above 500 Units/kVA</i>	22	21	43
Tariff-HTAG/Agriculture	4	4	8
EHTI/Industrial	59	51	110
H.T. PW/Public Water Supply and Sewage	51	59	110
H.T. MES/Defence Establishments	15	19	34
H.T. Industrial (Steel Rolling)	29	27	56
<i>First 200 Units/kVA</i>	21	19	40
<i>Next 100 Units/kVA</i>	7	6	13
<i>Above 300 Units/kVA</i>	2	2	3
Tariff HT-Industries (IT High Tech).	4	4	7
Tariff HT-Industries (ICE).			
Temporary Supply			
Tariff-LT/Temporary	7	7	14
Tariff-HT/Temporary	0.42	0	1
<b>Total Demand/ Sale Within State/UT</b>	<b>1,442</b>	<b>1,437</b>	<b>2,879</b>

### Commission's analysis

The Commission in its tariff order for FY 2012-13 had approved the sales of 2916 MU's for FY 2012-13 based on the past trends. In terms of the JERC Tariff Regulations, the review of the sales has been undertaken. The Commission while approving the sales has looked at the increase in the period October to March of FY 2011-12 as compared to April to September 2011. The increase is applied on the actual sales submitted by the Petitioner for the period April to September 2012 to arrive at the sales for second half of FY 2012-13. The Petitioner has cited the Government of Goa order for restriction of mining activities for a reduction in Industrial consumption during second half of FY 2012-13. Accordingly, the Commission considering the external influence has accepted the projection for HT Industrial category as per the Petitioner's submission. Further, the sales for the second half of HT MES / Defence establishment is considered as per the petitioner submission owing to the disproportionate ratio between H1 and H2 of FY 2011-12.

As per the estimates of the petitioner the sale for the LTD/ Low income group has been projected at 9 MU for the FY 2012-13, which results into a 632 units per year per consumer. However, consumers under the LTD/LIG – Low Income Group category are allowed a connected load of two 40Watts bulbs = 2 X 40 = 80 W only as per the approved Tariff Schedule. Considering this as the basis, consumption of each consumer under the LIG category works out to be 175.2 (2x40x6x365 /1000) kWh per consumer per year taking average usage of 6 hours per day. Accordingly the Commission has considered the sales for FY 2012-13 for the LTD / LIG category at 2.49 MU per year. The Government of Goa has decided to subsidise the entire revenue gap of the Petitioner, whereby the Commission has not revisited the Tariff for the LTD / LIG category which should at least reach 50% of the average cost of supply.

The estimate of connected load and consumer submitted by the petitioner are reasonable and are approved. The approved sales, number of consumer and load for the FY 2012-13 are shown in the tables below:

**Table 5: Energy Sales approved by the Commission for FY 2012-13 (MU)**

Sr. No.	Category of Consumer	FY 12-13 (Approved vide order dated June 27'2012)	Commission's Approval for Review		
			H1	H2	FY 2012-13
A	Low Tension Supply	1252	585	587	1178
1(a)	Tariff LTD/Domestic and Non - Commercial	744	416	412	828

Sr. No.	Category of Consumer	FY 12-13 (Approved vide order dated June 27'2012)	Commission's Approval for Review		
			H1	H2	FY 2012-13
1(b)	Tariff LTD/Low Income Group	2	1	1	2
1(c)	Tariff LTD/Domestic Mixed	2	2	2	5
2	Tariff LTC/Commercial	351	108	108	216
3	Tariff LTP/Motive Power	96	37	46	83
3(a)	Tariff-LTP/Mixed (Hotel Industries)	6	3	3	5
3 c	Tariff LTP/Ice Manufacturing	7	0	0	0
4	Tariff-LTAG/Agriculture	10	10	7	16
5	Tariff-LTPL/Public Lighting	31	8	7	15
6	Tariff-LT PWW/Public Water Works	2	1	1	2
			0		
B	High Tension Supply	1665	852	861	1713
7	Tariff HT-Mixed	160	106	174	281
8	Tariff HTI/Industrial	596	297	299	596
9	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	496	280	210	490
10	Tariff-HTAG/Agriculture	4	4	1	5
11	EHTI/Industrial	175	59	80	139
12	H.T. PW/Public Water Supply and Sewage	120	51	48	99
13	H.T. MES/Defence Establishments	44	15	19	34
14	H.T. Industrial (Steel Rolling)	49	29	18	47
15	Tariff HT-Industries (IT High Tech).	5	4	4	7
16	Tariff HT-Industries (ICE).				
C	Temporary Supply				
17	Tariff-LT/Temporary	16	7	7	14
18	Tariff-HT/Temporary		0	0	1
			0		
19	Total Demand/ Sale Within State/UT	2916	1438	1448	2886

Table 6: Number of Consumer (in No.s) approved by the Commission for Review of ARR for FY 12-13

Sr. No.	Category of Consumer (Number of Consumers)	FY 2012-13	
		Petitioner's submission	Approved for Review
1(a)	Tariff LTD/Domestic and Non-Commercial	441189	441189
1(b)	Tariff LTD/Low Income Group	14232	14232
1(c)	Tariff LTD/Domestic Mixed	50	50

Sr. No.	Category of Consumer (Number of Consumers)	FY 2012-13	
		Petitioner's submission	Approved for Review
2	Tariff-LTC/Commercial	94471	94471
3 (a)	Tariff-LTP/Motive Power	9521	9521
3 (b)	Tariff-LTP/ Ice Manufacturing	0	0
3 c)	Tariff-LTP/Mixed (Hotel Industries)	0	85
4	Tariff-LTAG/Agriculture	11025	11025
5	Tariff-LTPL/Public Lighting	9020	9020
6	Tariff-LT PWW/Public Water Works	547	547
<b>B</b>	<b>High Tension Supply</b>		
7	Tariff HT-Mixed	201	201
8 (a)	Tariff HTI/Industrial	414	414
9	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	26	26
10	Tariff-HTAG/Agriculture	42	42
11	EHTI/Industrial	4	4
12	H.T. PW/Public Water Supply and Sewage	31	31
13	H.T. MES/Defence Establishments	12	12
14	H.T. Industrial (Steel Rolling)	13	13
15	Tariff HT-Industries (IT High Tech).	8	8
<b>C</b>	<b>Temporary Supply</b>		
16	Tariff-LT/Temporary	409	409
	<b>TOTAL</b>	<b>581217</b>	<b>581302</b>

Table 7: Connected Load (in KW) approved by the Commission for review of ARR for FY 2012-13

Sr. No.	Category of Consumer (Connected Load)	FY 2012-13	
		Petitioner's submission	Approved for Review
1(a)	Tariff LTD/Domestic and Non-Commercial	683332	683332
1(b)	Tariff LTD/Low Income Group	4,560	4,560
1(c)	Tariff LTD/Domestic Mixed	84	84
2	Tariff-LTC/Commercial	257388	257388
3 (a)	Tariff-LTP/Motive Power	333218	333218
3 (b)	Tariff-LTP/ Ice Manufacturing	0	0
3 c)	Tariff-LTP/Mixed (Hotel Industries)	0	1,992.17
4	Tariff-LTAG/Agriculture	66399	66399
5	Tariff-LTPL/Public Lighting	12698.52	12698.52
6	Tariff-LT PWW/Public Water Works	12378	12378
<b>B</b>	<b>High Tension Supply</b>		
7	Tariff HT-Mixed	72972	72972

Sr. No.	Category of Consumer (Connected Load)	FY 2012-13	
		Petitioner's submission	Approved for Review
8 (a)	Tariff HTI/Industrial	233159	233159
9	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	99200	99423
10	Tariff-HTAG/Agriculture	8,450	8469
11	EHTI/Industrial	60,000	60135
12	H.T. PW/Public Water Supply and Sewage	27,080	27,141
13	H.T. MES/Defence Establishments	6,675	6690
14	H.T. Industrial (Steel Rolling)	20000	20045
15	Tariff HT-Industries (IT High Tech).	3188	3195
C	Temporary Supply		
16	Tariff-LT/Temporary	2620	2626
	<b>TOTAL</b>	<b>1903402</b>	<b>1905906</b>

\* Connected Load for LT category is in kW and for HT in kVA

**The Commission therefore approves the Energy sales of 2886 MU for the Review of ARR for FY 2012-13.**

#### 5.4 Intra-state Transmission & Distribution Loss

##### Petitioner's submission

The Distribution Loss for the year FY 2012-13 on overall basis is estimated to be around **12.50%** in line with the approved level of the Hon'ble Commission. ED – Goa has been trying to minimize the Distribution Loss and shall continue with the efforts in reducing the Distribution Loss further. It may be noted that the distribution losses for the State of Goa are comparatively lower than many other state utilities and also competitive. The distribution loss for the year FY 2012-13 is attributable to various activities carried out by ED – Goa viz:

- i) Execution of the works under APDRP which has drastically reduced the outages and the AT&C losses.
- ii) The bifurcation of the feeders, new Sub-Stations which has helped in improving the voltage profile and reliability of power supply.
- iii) Augmentation of the capacities of the Sub-Stations resulting in releasing additional loads to the consumers and consequent increase in revenue.

##### Commission's analysis

The Commission in its Tariff order for FY 2012-13 had approved the intra state transmission and distribution loss level of 12.5%. The Petitioner in its revised estimates for FY 2012-13 has considered the intra state transmission and distribution loss level at 12.5%.

As no review is solicited for the loss levels, therefore the Commission retains its approval of Intra state transmission and distribution losses at 12.5% for the FY 2012-13.

## 5.5 Inter-State Transmission Loss

### Petitioner's submission

It can be seen from the table above, that PGCIL loss for the southern region is on much higher side in the 1<sup>st</sup> half of the year FY 2012-13. This is due to the following reasons:

- i. The Power Scheduled from the SR originates from Ramagundam Periphery, which is located in Andhra Pradesh.
- ii. Hence, the power which shall be made available at Goa periphery is subjected to substantial amount of losses viz Intra State Loss of Andhra Pradesh, Inter State Losses of SR & WR. Further, there was a Grid Diversion for a period of 6 months due to KEB Ckts Breakdown and PP outages; hence there was an additional loss in the energy available at the Goa Periphery in the first half.
- iii. Thus, the PGCIL loss for the southern region tends to be more than the Western Region in H1.
- iv. ED-Goa had written letter to the SRPC on 22<sup>nd</sup> January 2013 seeking explanation on the same and the reply was also provided by SRPC on 22<sup>nd</sup> January 2013 which is provided at Annexure III: SRPC Letter on Transmission Loss

As discussed in above Para, the total PGCIL Losses are considered for both the regions, i.e. WR & SR. And as explained in the reasons above, the PGCIL losses for SR is more than WR. As per discussions with SRPC on the above issue, PGCIL loss for the SR for FY 2012-13 are considered at **9.50%** (Andhra Intra State Transmission Loss + SR Interstate Loss + Karnataka wheeling loss). On the other hand PGCIL losses for the WR are considered as the average of 52 week losses at **3.68%**

### Commission's analysis

The inter-state transmission losses are considered uncontrollable at the hands of the petitioner. The petitioner in its previous submissions had considered the average loss calculations based on the pooled losses. The Petitioner in its submission has considered the actual recorded Input at Goa Periphery to arrive at the inter-state losses. The Commission appreciates the efforts of the

Petitioner to consider the correct method of calculation of actual losses, which brings transparency in the system. The petitioner has considered the actual losses for first half for southern and western region. The Commission has accordingly approved the losses for the first half on actual. The Petitioner has considered losses of 9.5% for the Southern region (Andhra Intra State Transmission Loss + SR Interstate Loss + Karnataka wheeling loss) and 3.68% losses for the western region.

The Commission has considered the western region losses for the H2 of FY 2012-13 at 3.56% based on the past 52 weeks pooled losses for the region. As per the letter of the SRPC submitted by the Petitioner at Annexure III of its Petition the losses for the southern region are in the range of 4% to 5% and the losses approved for open access transaction through Karnataka system is 3.96%. Accordingly, the Commission has considered the inter-state loss level for Ramagundam STPS at 8%.

The Commission would like to mention here that the actual interstate losses as recorded by the WRDLC would be considered at the time of true up.

## 5.6 Power Purchase Quantum and Cost

### **Petitioner's submission**

ED-Goa meets its total energy requirement from its allocation from the Central Generating Stations (CGS), Private Generators like Reliance Infrastructure Ltd; State based Co-generation facilities, Power Exchanges etc. ED-Goa receives power from CGS like NTPC and NPCIL as per allocation from time to time. The quantum of power allocated from the CGS is covered under

Power Purchase quantum for FY13 (H1 + H2): For the year FY 2012-13, ED – Goa has projected the Power Purchase by considering the actual power purchase incurred for the 1<sup>st</sup> half of the year FY 2012-13 (i.e. Apr 12 – Sep 12) as well as the power purchase for the 3<sup>rd</sup> quarter which too is on actual basis. However, for the last quarter for the year FY 2012-13, ED – Goa has considered the Power Purchase Quantum as per LGBR report by CEA. Hence, the total Power Purchase for FY 2013-14 is arrived at by considering the above power purchases done during all the 4 quarters.

**Power Purchase Fixed Cost for overall FY 2012-13:** The fixed cost for the above Power Purchase is done on the basis of allocating the Annual Fixed charges to the percentage share of the State of Goa. It is submitted that the Annual Fixed Charges for the central sector stations have got

revised in FY 2012-13 as against earlier provisional orders issued by CERC in 2011. The copies of orders referred herein below are provided in soft form in the CD.

The annual fixed charges for FY 2012-13 excluding fixed charges for Reliance –IPP have been considered based on the latest available CERC orders

**Power Purchase Variable Cost for overall FY 2012-13:** The variable cost for FY 2012-13 has been computed considering actual average variable cost of each source for first six months period of April-September 2012. It is submitted that no escalation of cost has been considered.

**Power Purchase Other & Supplementary Charges for FY 2012-13:** The other costs which includes ED, Cess, Incentive, MOPA etc. and supplementary charges are considered on actual basis paid in first six months period of April-September 2012 only. It is submitted that there is no projection for H2 of these costs.

**Power Purchase from Renewable Energy Sources:** Further, the Hon'ble Commission vide its order for compliance of Renewable Purchase Obligation (RPO) dated 18<sup>th</sup> Dec 2012 directed ED – Goa to submit a detailed compliance report. ED-Goa would like to submit that it has already floated tender for procurement of Non-Solar Power in subsequent 3 financial years that would include RPO for past years i.e. FY2011-11, FY 2011-12 and FY 2012-13 also. It is submitted that Government of Goa has accorded the approval for initiation of tender process for solar power.

However ED-Goa would like to mention that it is pursuing the matter of RPO in case no. 61/2012 wherein it has pleaded for consideration of meeting RPO for the power purchased from co-generation sources viz Goa Energy Pvt Ltd and Goa Sponge Pvt Ltd which are Waste Heat Recovery based power plants and are qualified under Urban & Industrial Waste source of Renewable Energy Source of Ministry of New & Renewable Energy (MNRE). ED-Goa would like to submit that presentation/ projection of non-solar power in this petition is subject to the order in the matter of case no. 61/2012.



**Table 8: Power Purchase Cost Revised Estimates Comparison for FY 2012-**

Sr. No	Particulars	FY 2012-13 (Projected)		FY 2012-13 (Approved)		FY 2012-13 (Rev.Est)	
		Purchase (Mus)	Total Cost (Rs.Crs)	Purchase (Mus)	Total Cost (Rs.Crs)	Purchase (Mus)	Total Cost (Rs.Crs)
1	NTPC	3,075	563.62	2,902	524.22	3,045	605.51
2	RGPPL	136	54.44	88	40.18	63	31.59
3	NPCIL	193	47.13	200	49.70	185	48.00
4	Traders					21	8.43
5	Overdrawal					60	24.30
6	Co - Generation	172	41.18	172	41.20	93	22.43
7	IPP	108	108.31	-	19.80	105	139.60
8	Renewable Energy Source	88	41.15	88	40.80	-	40.83
9	Transmission Charges		103.59	-	95.70	-	102.10
<b>13</b>	<b>Grand Total</b>	<b>3,772</b>	<b>959.41</b>	<b>3,449</b>	<b>811.60</b>	<b>3,573</b>	<b>1,022.80</b>

**Table 9: Power purchase cost submitted for FY 2012-13**

Sr. No.	Source	Purchase (MU)	VC (Ps/ Unit)	FC (Rs. Crore)	VC (Rs.Crore)	Others (Rs.Crore)	Supplementary (Rs. Crore)	Total (Rs.Crore)
<b>A</b>	<b>Central Sector Power Stations</b>							
<b>I</b>	<b>NTPC</b>	<b>3,044.89</b>		<b>207.27</b>	<b>379.05</b>	<b>1.91</b>	<b>17.29</b>	<b>605.51</b>
	<i>KSTPS</i>	<i>1,507.43</i>	<i>95.40</i>	<i>79.36</i>	<i>143.81</i>	<i>0.94</i>	<i>8.36</i>	<i>232.47</i>
	<i>VSTPS - I</i>	<i>254.34</i>	<i>149.47</i>	<i>15.91</i>	<i>38.02</i>	<i>0.37</i>	<i>6.11</i>	<i>60.41</i>
	<i>VSTPS - II</i>	<i>95.99</i>	<i>140.97</i>	<i>7.10</i>	<i>13.53</i>	<i>0.15</i>	<i>1.16</i>	<i>21.94</i>
	<i>VSTPS - III</i>	<i>85.09</i>	<i>140.58</i>	<i>9.16</i>	<i>11.96</i>	<i>0.14</i>	<i>1.78</i>	<i>23.05</i>
	<i>KGPP</i>	<i>66.81</i>	<i>234.38</i>	<i>9.07</i>	<i>15.66</i>	<i>0.18</i>	<i>(0.53)</i>	<i>24.37</i>
	<i>GGPP</i>	<i>73.00</i>	<i>229.55</i>	<i>10.51</i>	<i>16.76</i>	<i>-</i>	<i>(0.14)</i>	<i>27.13</i>
	<i>SIPAT- I</i>	<i>111.65</i>	<i>139.78</i>	<i>19.84</i>	<i>15.61</i>	<i>0.04</i>	<i>0.66</i>	<i>36.15</i>
	<i>FSTPS</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>0.01</i>	<i>0.01</i>
	<i>KSTPS-III</i>	<i>37.81</i>	<i>93.98</i>	<i>5.87</i>	<i>3.55</i>	<i>0.03</i>	<i>0.30</i>	<i>9.75</i>
	<i>TSTPS</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>0.00</i>	<i>0.00</i>
	<i>KHSTPS-I</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>0.00</i>	
	<i>RSTPS</i>	<i>739.84</i>	<i>150.79</i>	<i>40.36</i>	<i>111.56</i>	<i>-</i>	<i>8.26</i>	<i>160.17</i>
	<i>SIPAT- II</i>	<i>72.91</i>	<i>117.82</i>	<i>10.10</i>	<i>8.59</i>	<i>0.06</i>	<i>(0.06)</i>	<i>18.68</i>
	<i>Less 5/6th amount of LPPF Rvsn due to GCV based pricing mechanism</i>					<i>-</i>	<i>(8.63)</i>	<i>(8.63)</i>
								<i>-</i>

Sr.	Source	Purchase	VC (Ps/	FC (Rs.	VC	Others	Supplementary	Total
II	RGPPL	63.08	500.83		31.59			31.59
III	NPCIL	185.00	259.47		48.00	-	-	48.00
	KAPS	101.08	238.60		24.12			24.12
	TAPS	83.92	284.61		23.88			23.88
	Less: Rebate							-
III	Traders	20.82	405.16		8.43	-	-	8.43
	NVVN Limited (actual of H1)	20.82	405.16		8.43			8.43
V	OVER DRAWAL (actual of H1)	60.09	404.40		24.30			24.30
B	Within State Generations							
I	CO- GENERATION	93.46	240.00	-	22.43	-	-	22.43
	Goa Energy Private Limited	80.04	240.00		19.21			19.21
	Goa Sponge & Power Limited	13.42	240.00		3.22			3.22
C	IPP:							
	Reliance Infra	105.40	1,136.36	19.83	119.77			139.60
E	Renewable Energy Source:	-	-	-	40.83			40.83
F	OTHER CHARGES	-	-	-	-	-	102.10	102.10
	PGCIL Transmission Charges, Wheeling & Other Charges						102.10	102.10
G	Total	3,572.74	2,946.22	227.10	674.41	1.91	119.39	1,022.80

## Commission's Analysis

While estimating the energy availability and cost for FY 2012-13, the Commission has considered the actual Power purchase and cost submitted by the petitioner for first half of FY 2012-13 of, NTPC, IPP, Co-gen, & other sources. The Commission during the technical validation sessions, verified the power purchase bills on random basis and exercised due diligence in the validation of the power purchase costs incurred by the licensee for the period April to September 2012. The Commission has randomly verified the station wise Power purchase bills submitted by the Petitioner for the said period. The Commission has also verified the energy units procured from the Regional Energy Account as recorded by the Western Region Power Committee and Southern Region Power Committee.

The Commission at Para 6.6 of its Tariff order for FY 2012-13, had shown its concerns over the high cost purchases done by the Petitioner. The Commission has given its detailed observations on such an issue. The petitioner has submitted the power purchase cost from various stations. It is observed that the petitioner has purchased power from IPP at the rate of Rs 13.21 per unit. The Commission as indicated at Para 6.6 of the Tariff order for FY 2012-13 also observes that the petitioner being in surplus could have restricted its purchase from the IPP. The Petitioner has sold energy by way of UI under drawl and Sale to Power exchanges of 43.45 MU and 38.71 MU resulting in an income of Rs 29.38 Crores. Such a sale results into an income of Rs 3.58 per unit. However, the Petitioner being in surplus has purchased power from IPP at the rate of Rs 13.21 per unit, which cannot be termed as prudent purchases.

The following table shows that the power availability at the periphery was higher than the required and without purchases of the IPP, the requirement for the state could have been served.

**Table 10: Energy availability situation without IPP purchases**

Particulars	MU's
<b>Total Energy Required at the Periphery</b>	1,663.05
<b>Energy Drawl</b>	
Actual Energy Drawl from SR and WR region	1,553.73
Energy Available from Co-Gen	46.73
Add: Power sold to exchange	38.71
Add: Energy Under drawl	43.45
<b>Total availability</b>	<b>1,682.63</b>

In the instant case, It is seen that the energy available from stations other than energy purchased from IPP could have sufficed the requirement for sale within the state. Under Section 86 of the Electricity Act 2003, the Commission is mandated to regulate electricity purchase and procurement process of the distribution licensee. Further, in view of the Para no. 6.6 in Tariff

order dated June 27'2012 for FY 2012-13 and JERC Tariff Regulations, the power purchase cost can be allowed **on the merit order principles only.**

The above table and the foregoing discussion shows that the purchases made from the IPP were not prudent and were not in line with the merit order dispatch principles as specified by the Commission. The licensee has also not established that there was no alternative cheaper source of power other than IPP at that time. The Petitioner has also not established any fact that the energy purchased from such high cost was required to fulfill the energy requirement.

Therefore, the Commission has not approved any energy procured and corresponding variable cost from the IPP for FY 2012-13. **The Commission directs the petitioner to submit the details of the power purchases from the IPP along with details of time slots, frequency and requirement in which purchases were done, corroborated with the evidence that the energy was not sold by way of under drawl or sale to exchange at the same time slot. The rates of sale through UI or exchange at the same time slot and frequency shall also be correlated with the purchases of the IPP.**

**The Commission may consider the cost of power purchase during true up process, if it could be established by the Petitioner that the power from IPP was sourced due to shortage in the availability from other stations or requirement which could not have been met by way of existing allocation and facts which support that there were no alternative cheaper sources of power available at the time of purchases from the IPP.**

Accordingly, the Commission while approving the cost of the IPP has considered the actual fixed cost paid for the first half of the FY 2012-13 only.

**Table 11: Bifurcation of Power Purchase cost from the IPP as verified from the bills submitted by the petitioner (from April 2012 to September 2012)**

Month/Year	Delivered Energy (MU)	Fixed Charges Rs.	Variable Charges Rs.	Water Charges Rs	Less credit on fixed charges (Rs.)	Claim Amount (Rs.)
April'12	10.32	17677440	132701554	257392	2529600	148106786
May'12	10.608	18266688	131604949	199056	2700720	147369973
June'12	10.272	17677440	113411195	74320	2604000	128558955
<b>Total up to June</b>						<b>424035714</b>
July'12	10.656	18266688	107734033	197344	2626320	123569935
Aug'12	10.53187	18266688	119296952	54516	2700720	134917436

Month/Year	Delivered Energy (MU)	Fixed Charges Rs.	Variable Charges Rs.	Water Charges Rs	Less credit on fixed charges (Rs.)	Claim Amount (Rs.)
Sept'12	10.32	17677440	130944193	0	2529600	146092033
<b>Net Total up to Sept</b>	62.71	107,832,384	735,692,876		15,690,960	828615118

In light of the verification conducted by the Commission for the power purchase bills of power procured from IPP. Commission for review of ARR for FY 2012-13 provisionally **considered the fixed cost for first six months (April to September 2012) at Rs 9.21 Crores for the Power procured from IPP during first half of FY 2012-13**, subject to determination of the tariff for the IPP by the Commission under section 62 of the Electricity Act, 2003.

Accordingly, the power purchase cost approved for the FY 2012-13 (April to September) are tabulated below:

Table 12: Approved Power Purchase for FY 2012-13 (April to September)

Sr. No.	Source	Purchase (MU)	VC (Ps/ Unit)	FC (Rs. Crore)	VC (Rs. Crore)	Others (Rs. Crore)	Supplementary (Rs. Crore)	Total (Rs. Crore)
<b>A</b>	<b>Central Sector Power Stations</b>							
<b>I</b>	<b>NTPC</b>	<b>1,519.02</b>		<b>105.64</b>	<b>190.15</b>	<b>1.91</b>	<b>17.29</b>	<b>314.98</b>
	<i>KSTPS</i>	741.45	95.40	43.26	70.73	0.94	8.36	123.29
	<i>VSTPS - I</i>	122.99	149.47	7.66	18.38	0.37	6.11	32.53
	<i>VSTPS - II</i>	45.65	140.97	3.53	6.44	0.15	1.16	11.28
	<i>VSTPS - III</i>	41.92	140.58	4.71	5.89	0.14	1.78	12.53
	<i>KGPP</i>	37.36	234.38	4.51	8.76	0.18	(0.53)	12.91
	<i>GGPP</i>	40.80	229.55	5.50	9.36	-	(0.14)	14.73
	<i>SIPAT- I</i>	49.22	139.78	6.98	6.88	0.04	0.66	14.56
	<i>KSTPS-III</i>	21.57	93.98	3.09	2.03	0.03	0.30	5.45
	<i>RSTPS</i>	376.75	150.79	21.28	56.81	-	8.26	86.35
	<i>SIPAT- II</i>	41.31	117.82	5.10	4.87	0.06	(0.06)	9.96
	<i>Less 5/6th amount of LPPF Rvsn due to GCV based pricing mechanism</i>						(8.63)	(8.63)
								-
<b>II</b>	<b>RGPPL</b>	<b>31.54</b>	500.83		<b>15.80</b>			<b>15.80</b>
<b>III</b>	<b>NPCIL</b>	<b>96.67</b>			<b>25.09</b>	-	-	<b>25.09</b>
	<i>KAPS</i>	52.72	238.60		12.58			12.58
	<i>TAPS</i>	43.94	284.61		12.51			12.51
<b>III</b>	<b>Traders</b>	<b>20.82</b>	405.16		<b>8.43</b>	-	-	<b>8.43</b>
	<i>NVVN Limited</i>	20.82	405.16		8.43			8.43
			-					-
<b>V</b>	<b>OVER/ UNDER DRAWAL</b>	<b>60.09</b>	404.40		24.30			<b>24.30</b>
<b>B</b>	<b>Within State Generations</b>							
<b>I</b>	<b>CO- GENERATION</b>	<b>46.73</b>	<b>240.00</b>	-	<b>11.21</b>	-	-	<b>11.21</b>
	<i>Goa Energy Private Limited</i>	40.02	240.00		9.60			9.60
	<i>Goa Sponge &amp; Power Limited</i>	6.71	240.00		1.61			1.61
<b>C</b>	<b>IPP:</b>							
	<i>Reliance Infra</i>	-	1,324.55	9.21	-			9.21
<b>D</b>	<b>OTHER CHARGES</b>	-	-	-	-	-		<b>49.15</b>
	<i>PGCIL Transmission Charges, Wheeling &amp; Other Charges</i>							49.15
<b>E</b>	<b>Total</b>	<b>1,774.86</b>		<b>114.85</b>	<b>274.98</b>	<b>1.91</b>	<b>17.29</b>	<b>458.18</b>

## **Power Purchase quantum and cost for FY 2012-13 (October to March)**

The Commission for power procurement from NTPC stations, NPCIL stations and power from co-generation plants for the period October 2012 to March 2013 has adopted the following approach.

### ➤ **Central Generating Stations – NTPC and NPCIL**

The petitioner has firm allocation in the Central Sector Generating Stations of NTPC from the following stations

- Korba Super Thermal Power Station Stage 1 ,2 and 3
- Vindhyachal Super Thermal Power Station Stage I, II & III
- Kawas Gas Power Station
- Gandhar Gas Power Station
- Sipat Super Thermal Power Station Stage I &2
- Ratnagiri Gas and Power Pvt Ltd.
- Ramagundam Super Thermal Power Station Stage 1 and 2

The Commission while estimating the energy availability from the above stations has considered the following assumption:

- **Allocation of Share:** The Commission has considered the firm allocation and allocation from the unallocated quota from the above stations except Ramagundam STPS as per the notification of the Western Region Power Committee vide WRPC/Comml-I/6/Alloc/2012/7576 dated July 30, 2012. The allocation for Ramagundam STPS is considered as per the notification of the Southern Region power Committee vide SRPC/SE-I/54/UA/2012/625-72 dated January 16, 2012.
- **Gross Energy Availability:** The Commission has estimated the gross energy availability from the existing NTPC stations based on the installed capacity and the average Plant Load Factor for the past two years (FY 2010-11 and FY 2011-12). The Net energy sent out has been considered after reducing the applicable auxiliary consumption as per the CERC Tariff Regulation, 2009.

- **Energy Available to the Petitioner:** The effective share from the stations is applied on the energy sent out to arrive at the energy available for the petitioner from respective stations.

The Commission has considered the following assumptions to arrive at the Power purchase cost for the FY 2012-13 from the NTPC stations:

- **Fixed Charges:** The fixed charges are considered based on the formula specified for the stations in the CERC Tariff Regulations, 2009. The Annual Fixed Charges for each stations have been taken as per the latest Tariff orders for the respective stations
- **Variable Charges:** The Commission has considered the average variable cost for the period April 2012 to September 2012 submitted by the petitioner for consideration of the per unit variable charges for the FY 2012-13.
- **Merit Order Despatch:** Further the NTPC stations have been subjected to merit order dispatch and accordingly the power purchase quantum and variable cost are approved. However, the fixed charges are approved for all stations.

Accordingly, the Commission approves the following availability from NTPC stations based on the merit order dispatch principles

**Table 13: Approved Power purchase quantum from NTPC stations under merit order dispatch for H2 of FY 2012-13**

Source	Capacity (MW)	Average PLF	Weighted Average Allocation		Gross Generation (MUs)	Auxilliary Consumption (%)	Net Generation (MUs)	Purchase (MUs)	PGCIL Losses (MUs)	Energy Available at Periphery (MUs)
			%	MW						
KORBA - III	500	86.13	1.09%	5.46	1886	6.50%	1764	19.2	0.7	18.6
KSTPS	2100	86.13	10.12%	212.60	7922	8.50%	7249	733.9	26.1	707.7
SIPAT Stage 2	1000	95.23	1.16%	11.59	4171	6.50%	3900	45.2	1.6	43.6
SIPAT - Stage I	1980	85.00	1.20%	23.79	7372	6.50%	6892	82.8	2.9	79.9
VSTPS -III	1000	92.50	1.16%	11.59	4051	6.50%	3788	43.9	1.6	42.3
VSTPS - II	1000	92.50	1.36%	13.57	4051	6.50%	3788	51.4	1.8	49.6
VSTPS - I	1260	92.50	2.93%	36.94	5105	9.00%	4645	136.2	4.8	131.3
RSTPS	2100	91.68	4.76%	99.96	8433	7.20%	7826	372.5	29.8	342.7
GGPP	657.39	70.50	1.92%	12.63	2030	3.00%	1969	37.8	1.3	36.5
KGPP	656.2	69.10	1.89%	12.37	1986	3.00%	1927	36.3	1.3	35.0
RGPPL	1967	91.67	1.00%	19.67	7898	3.00%	7661	4.5	0.2	4.3
<b>Total</b>	<b>14221</b>			<b>460.16</b>				<b>1,563.7</b>	<b>72.2</b>	<b>1,491.5</b>

Note: Part availability considered from RGPPL



According to the approved energy availability the commission has approved the following cost from the NTPC stations:

**Table 14: Approved Power purchase Cost for H2 FY 2012-13 from NTPC stations**

Source	Energy Available at Periphery (MUs)	Fixed Charges (Rs Crores)	Variable Cost per Unit (H1 FY 2012-13)	Variable Charges (RS Crores)	Total Charges (Rs Crores)
KORBA - III	18.56	2.83	93.98	1.81	4.64
KSTPS	707.73	40.38	95.40	70.01	110.39
SIPAT Stage 2	43.57	5.43	117.82	5.32	10.75
SIPAT - Stage I	79.86	9.10	139.78	11.58	20.68
VSTPS -III	42.32	4.94	140.58	6.17	11.11
VSTPS - II	49.56	3.90	140.97	7.24	11.14
VSTPS - I	131.35	8.77	149.47	20.36	29.13
RSTPS	342.70	22.34	150.79	56.17	78.50
GGPP	36.48	5.51	229.55	8.68	14.20
KGPP	35.03	4.43	234.38	8.51	12.94
RGPPL	4.30	9.79	267.28	1.19	10.99
<b>Total</b>	<b>1,491.46</b>	<b>117.42</b>		<b>197.04</b>	<b>314.46</b>

Note: Reduced availability considered from RGPPL as per requirement

➤ **Central Generating Stations – Nuclear Power Corporation of India Limited**

The petitioner has firm allocation in the Central Sector Generating Stations of NPCIL from the following stations

- Kakrapara Atomic Power Station
- Tarapur Atomic Power Station

The Commission while estimating the energy availability from the above stations have considered the following assumption:

- **Allocation of Share:** The Commission has considered the firm allocation and allocation from the unallocated quota from the above stations as per the Western Region Power Committee vide WRPC/Comm1-I/6/Alloc/2012/7576 dated July 30, 2012.
- **Gross Energy Availability:** The Commission has estimated the gross energy availability from the existing NPCL stations based on the installed capacity and the average Plant Load Factor for the past two years (FY 2010-11 and FY 2011-12) as

recorded by CEA in its monthly generation reports. The Net energy sent out is considered after reducing the auxiliary consumption.

- **Energy Available to the Petitioner:** The effective share from the stations is applied on the energy sent out to arrive at the energy available for the petitioner from respective stations.

The Commission has considered the following assumptions to arrive at the single part tariff for the NPCIL stations during FY 2012-13:

- **Variable Charges:** The Commission has considered the average variable cost for the period April 2012 to September 2012 submitted by the petitioner for consideration of the per unit variable charges for the FY 2012-13.
- **Merit order Dispatch:** The Commission has considered the nuclear plants as must run and has not subjected them for merit order dispatch.

Accordingly, the Commission approves the following availability from NPCIL stations :

**Table 15: Approved Power purchase quantum from NPCIL stations under merit order dispatch**

Source	Capacity (MW)	Average PLF	Weighted Average Allocation		Gross Generation (MUs)	Auxilliary Consumption (%)	Net Generation (MUs)	Purchase (MUs)	PGCIL Losses (MUs)	Energy Available at Periphery (MUs)
			%	MW						
KAPS	440	97.99	3.52%	15.47	1888	10.00%	1700	59.8	2.1	57.6
TAPS	1080	80.01	1.18%	12.73	3785	10.00%	3406	40.2	1.4	38.7
<b>Total</b>	<b>1520</b>			<b>28.21</b>				<b>99.9</b>	<b>3.6</b>	<b>96.4</b>

According to the approved energy, the commission has approved the following cost from the NPCIL stations:

**Table 16: Approved Power purchase Cost for NPCIL Stations**

Source	Energy Available at Periphery (MUs)	Fixed Charges (Rs Crores)	Variable Cost per Unit (H1 FY 2012-13)	Variable Charges (RS Crores)	Total Charges (Rs Crores)
KAPS	57.64	-	238.60	14.26	14.26
TAPS	38.73	-	284.61	11.43	11.43
<b>Total</b>	<b>96.37</b>	-		<b>25.69</b>	<b>25.69</b>

➤ **Co-Generation**

The petitioner has contracted Power from the following Co-Generation plants

- Goa Energy Private Limited
- Goa Sponge and power Limited
- Sesa Goa

The Petitioner has submitted that due to non-finalization of PPA / approval from Govt of Goa the power from Sesa Goa ltd is not expected in the FY 2012-13. The Commission has considered the following assumptions for estimation of energy availability and Power Purchase cost from the above stations and has excluded Sesa Goa as per the submission of the Petitioner:

**Pending the decision on petition no. 61/2012 filed by the petitioner for consideration of meeting RPO for the power purchased from co-generation sources, Commission for the purpose of this order has considered the energy purchase from renewable sources of energy for meeting their RPO obligations and carry forward of RPO obligations to the next year as per the JERC (Procurement of Renewable energy) Regulations, 2010 notified on November 30'2010; The effect, if any, on account of the pending decision in the aforesaid petition or any legislature notified in this regard, shall be considered at the time of truing up of ARR of FY 2012-13.**

- **Energy Availability:** The energy availability has been considered as per the petitioner's submission.
- **Variable Charges:** As observed from the petitioner's submission, the negotiated single part tariff for such power at Rs 2.40 per unit from all the Co-gen. The Commission finds the rate to be prudent and approves the same for FY 2012-13.
- **Merit Order Dispatch:** The Commission in order to promote the purchase from alternative sources of energy has considered these plants as must run stations and are not subjected to merit order dispatch.

Accordingly, the Commission has approved the following availability and cost for Co-Generation.

**Table 17: Approved Power purchase quantum and Cost for Co-Gen for H2 of FY 2012-13**

Source	Purchase (MUs)	Energy Available at Periphery (MUs)	Fixed Charges (Rs Crores)	Variable Charges (RS Crores)	Total Charges (Rs Crores)
Goa Energy Private Limited	40.02	40.02	0	9.60	9.60
Goa Sponge & Power Limited	6.71	6.71	0	1.61	1.61
Sesa Goa	-	-	0	-	-
<b>Total</b>	<b>46.73</b>	<b>46.73</b>	<b>-</b>	<b>11.21</b>	<b>11.21</b>

➤ **IPP**

The petitioner has contracted Power from M/s Reliance Infrastructure Limited 48 MW Gas Based Combined Cycle Power Plant.

The Commission has observed that the Power purchased from the IPP in the past is in excess on Rs 13.25 per unit. As the petitioner itself has projected surplus in the system the Commission finds no merit in considering such high cost power to burden the consumers of the state. In this regard, the Commission has shown its concern in the previous tariff order and has provided an opportunity to the petitioner to justify the high cost of power purchase. The Petitioner still has not been able to justify such high cost purchases.

The Commission has considered the following assumptions for estimation of energy availability and Power Purchase cost from the above station:

- **Energy Availability:** The energy availability has been considered as per the petitioner's submission.
- **Fixed and Variable Charges:** The Commission has observed that the energy procured from the above station is at a very high rate as compared to energy available in competitive market in present scenario. Further, in view of the projected surplus in the system, the energy from the IPP is falling outside merit order dispatch. However, the Commission considers the petitioner's submission and provisionally allows the fixed charges of capacity of 16 MW as projected by the petitioner; subject to determination of the tariff for the IPP by the Commission under section 62 of the Electricity Act, 2003. The IPP falls out of the merit order therefore only fixed cost has been allowed for FY 2012-13.

**Table 18: Approved Power purchase quantum and Cost from IPP for H2 of FY 2012-13**

Source	Purchase (MUs)	Energy Available at Periphery (MUs)	Fixed Charges (Rs Crores)	Variable Charges (RS Crores)	Total Charges (Rs Crores)
IPP- Reliance Infra	-	-	9.92	-	9.92
<b>Total</b>	-	-	<b>9.92</b>	-	<b>9.92</b>

➤ **Transmission Charges (PGCIL, NRLDC F&C and Reactive Energy Charges)**

The Commission has considered the PoC rates as specified by the Central Electricity Regulatory Commission vide its order No. L-1/44/2010-CERC dated 30th November 2012 approving the Transmission charges for the period October to March 2013. Accordingly the Transmission charges for usage of the PGCIL network is approved at **Rs 43.31 Cr.**

The petitioner also utilizes the network of KPTCL for wheeling the power scheduled from Ramagundam STPS. The wheeling charges payable as submitted by the petitioner are 2.5 paise per unit that is pursuant to a contract between the petitioner and KPTCL. The Commission therefore approves **Rs 0.93 Cr** as transmission charges payable to KPTCL for the power wheeled from the KPTCL network.

Further, the Commission also allows the petitioner's claim of other charges for FY 2012-13 including WR and SR fees, Open access charges, reactive energy charges equivalent to the actual of FY 2011-12 amounting to **Rs 2.31 Cr.**

➤ **Power Purchase Cost Approved**

For determining the power purchase cost, merit order dispatch principles are applied as elaborated in the foregoing. The must-run stations have been assumed at the top of the merit order and variable cost incurred for meeting the energy requirement within the state has been calculated from these plants at the top of the merit order.

In accordance with the foregoing paragraphs the Commission has approved the following Power Purchase Cost.

**Table 19: Power Purchase cost approved for October 12 to March 2013**

Source	Purchase (MUs)	PGCIL Losses	Energy Available at	Fixed Charges (Rs Crores)	Variable Charges (RS)	Total Charges (Rs Crores)
NTPC	1,563.7	72.2	1,491.5	117.42	197.04	314.46
NPCIL	99.9	3.6	96.4	-	25.69	25.69
Co-Gen	46.73	-	46.73	-	11.21	11.21
IPP	-	-	-	9.92	-	9.92
Transmission Charges						46.55
Total	1,710.3	75.8	1,634.6	127.3	234.0	407.8

The Commission had allowed the power purchase cost of Rs 40.83 Crores for FY 2012-13 in its tariff order dated June 27'2012 towards purchase of energy from renewable sources of energy for meeting their RPO obligations. The petitioner has proposed the carry forward of RPO obligation to the next financial year and has submitted that it is in a process to float tenders for the Renewable energy procurement. Accordingly, the Commission has not allowed any cost towards RPO obligation for FY 2012-13.

The power purchase cost thus allowed for the entire FY 2012-13 are summarized in the table below:

**Table 20: Power Purchase cost approved for FY 2012-13**

Source	Approved in order dated June 27'2012		Revised Estimates		Approved					
			FY 2012-13		H1 FY 2012-13		H2 FY 2012-13		FY 2012-13	
	Purchase (MU)'s	Total Cost Rs Crores	Purchase (MU)'s	Total Cost Rs Crores	Purchase (MU)'s	Total Cost Rs Crores	Purchase (MU)'s	Total Cost Rs Crores	Purchase (MU)'s	Total Cost Rs Crores
NTPC (incl RGPPL)	2990.4	564.4	3108.0	637.1	1,550.6	330.78	1,563.67	314.46	3,114.23	645.24
NPCIL	199.9	49.7	185.0	48.0	96.7	25.09	99.93	25.69	196.60	50.78
Co-Gen	171.6	41.2	93.5	22.4	46.73	11.21	46.73	11.21	93.46	22.43
Renewable Energy	87.5	40.8	0.0	40.8	-	-	-	-	-	-
IPP	0	19.8	105.4	139.6	62.59	9.21	-	9.92	62.59	19.13
Traders			20.8	8.4	20.82	8.43			20.82	8.43
Overdrawl			60.1	24.3	60.09	24.30			60.09	24.30
Transmission Charges		95.7		102.1		49.15		46.55	-	95.70
Total	3449.3	811.6	3572.7	1022.8	1837.5	458.2	1710.3	407.8	3547.8	866.0

It may be noted that the variation in the approval of the Commission in the last order are broadly attributable to the following reasons

1. Variation of the sales admitted in this review;
2. Non-availability of renewable energy as envisaged under the previous order;
3. Non finalisation of power from Sesa Goa which was envisaged in the previous order;
4. Purchases from IPP during the first half of the FY 2012-13;

5. Supplementary bills amounts to Rs 17.29 Crores raised by NTPC on account of variation in CERC regulation/orders and supplementary charges like ED cess, green cess and FERV (foreign exchange rate variation) during first half of FY 2012-13;
6. UI under / over drawl which was not considered by the Commission in the Approved cost of Power purchase/sale of energy in tariff order dated June 27'2012.

## 5.7 Energy Balance

### Petitioner's Submission

Table 21:Energy Balance submitted by the petitioner for FY 2012-13 (H1)

Sr. No.	Item	April-Sep (Prov. Actual) - WR	April-Sep (Prov. Actual) - SR	April-Sep (Prov. Actual) WR + SR
		FY 2012-13	FY 2012-13	FY 2012-13
1	2	3	3	3
1	Energy Input at Goa Periphery	1,260	294	1,554
2	<b><u>Total Power Scheduled/ Purchased at Goa Periphery</u></b>			
	Total Schedule Billed Drawal - CGS	1,270	377	1,647
	Add: Overdrawal	53	7	60
	Add: Power purchase from NVVN	21	-	21
	Less: Underdrawal	14	30	43
	Less: Power diverted to Exchange	39	-	39
	<b>Total</b>	<b>1,291</b>	<b>354</b>	<b>1,646</b>
3	<b>PGCIL Losses - MUs</b>	32	61	92
	<b>PGCIL Losses - %</b>	2.44%	17.13%	5.60%
4	<b><u>Total Power Purchased within Goa State</u></b>			
	Add: Co-generation	47		47
	Add: Independent Power Producers (IPP)	63		63
	<b>Total</b>	<b>109</b>	<b>-</b>	<b>109</b>
5	<b>Total Power Purchase availability after PGCIL Losses</b>	<b>1,369</b>	<b>294</b>	<b>1,663</b>
	Less: Retail Sales to Consumers			1,442
	Distribution Losses - MUs			221
6	<b>Distribution Losses - %</b>			<b>13.30%</b>

ED-Goa submits that it has tried to schedule less power from central sector during off-peak period to avoid having surplus during the same period. However considering the dynamic power situation, there is some surplus available in the pool which shall be sold to exchanges as submitted by the petitioner. It is difficult to project an energy balance with nil surplus/ deficit on

a realistic scenario. Hon'ble Commission is well aware that ED-Goa is majorly dependent on CGS power and even if a single source of power goes on outage, EDD-Goa has to put restrictions / buy power from open market/ any other available sources including IPP.

Thus, on the basis of the foregoing paras, the Energy Balance for the year FY 2012-13 is computed by ED-Goa shown in the table below:

Table 22:Energy Balance submitted by the petitioner based on the revised estimates for FY 2012-13

Sr. No.	Item	Apr-Mar (Rev.Est) - WR	Apr-Mar (Rev.Est) - SR	Apr-Mar (Rev.Est) WR + SR
		FY 2012-13	FY 2012-13	FY 2012-13
1	2	3	4	5
1	Retail Sales to Consumers			2,879
	<b>Add: Distribution Losses - %</b>			12.50%
	Distribution Losses - MUs			411
<b>2</b>	<b>Net Energy Requirement at Goa Periphery</b>			<b>3,291</b>
<b>3</b>	<b>Total Power Scheduled at Goa Periphery</b>			
	Scheduled Power from NTPC, RGPPL, NPCIL & RSTPS	2,553	740	3,293
	Add: Actuals of Over/Underdrawal, Traders and Sale to exchange - H1	(1)	-	(1)
	Add: Power from Open Market during peak/ (Surplus Power diversion to exchange during off-peak)	(37)	-	(37)
	<b>Total</b>	<b>2,515</b>	<b>740</b>	<b>3,255</b>
<b>4</b>	<b>Less: PGCIL Losses - %</b>	3.68%	9.50%	5.00%
	PGCIL Losses - MUs	93	70	163
<b>5</b>	<b>Total Power Purchased within Goa State</b>			
	Add: Co-generation	93	-	93
	Add: Independent Power Producers (IPP)	105	-	105
	<b>Total</b>	<b>199</b>	<b>-</b>	<b>199</b>
<b>6</b>	<b>Energy Input at Periphery after PGCIL Losses &amp; State Power Purchase</b>	<b>2,621</b>	<b>670</b>	<b>3,291</b>

The Hon'ble Commission is requested to approve the Energy Balance for the year FY 2012-13 as provided in the above table. The energy requirement and source wise power purchase details along with actual cost for H1 are discussed in subsequent section.



## Commission's analysis

The Commission in the foregoing paragraphs has approved the actual sales, internal and external losses based on which the energy balance is considered. The Commission in its previous order had approved the requirement 3332.66 MU to meet the energy requirement within the state to the retail consumers, assuming distribution losses of 12.50% on the approved sales of 2916.08 MU. The Commission has considered the approval of revised sales estimates in this order and the inter-state losses, accordingly the requirement has been adjusted for the approval under the review of FY 2012-13. The Commission has considered the merit order dispatch principles to meet the requirement within the state. Accordingly, only the power purchase units as required to meet the requirement within the territory have been considered.

Further, as elaborated in the Para 5.6 of this order the Commission has not considered any purchases from the IPP. As a result of which the energy available for sale would be reduced. Therefore, the Commission has considered reduced the UI sale and Sale to Power exchanges to the extent of 62 MU's which is the disallowed units of purchase from the IPP.

Accordingly, the approved energy balance for the FY 2012-13 is shown in the table below;

**Table 23: Energy Balance approved by the Commission for FY 2012-13**

Sr. No.	Particulars	FY 12-13	FY 12-13	FY 12-13	FY 12-13	
		(Approved vide order date June 27' 2012)	H1 Approved	H2 Approved	Revised Estimates	Approved
A)	ENERGY REQUIREMENT					
1	<u>Sales within the State/UT</u>	2,916.08	1,437.05	1,448.37	2,879.27	2,885.41
2	Distribution losses					
i)	%	12.50%	13.59%	11.39%	12.50%	12.50%
ii)	MU	416.58	226.00	186.20	411.32	412.20
3	Energy required at State Periphery for Sale to Retail Consumers	3,332.66	1,663.05	1,634.56	3,290.59	3,297.61
4	Add: Sales to common pool consumers/ UI					
I	Sales outside state/UT : UI/Under drawal		-			-
ii)	Sales					
	a) Through PX		19.57		1.25	19.57
	b) Traders				37.12	
iii)	Sales to other distribution licensees					
	a) Bilateral Trade					
	b) Banking Arrangement (NVVN)					
5	Total Energy Requirement for State	3,332.66	1,682.63	1,634.56	3,328.97	3,317.19

Sr. No.	Particulars	FY 12-13 (Approved vide order date June 27' 2012)	FY 12-13	FY 12-13	FY 12-13	
			H1	H2	Revised Estimates	Approved
			Approved	Approved		
6	Transmission losses					
	MU	116.69	92.24	75.76	162.86	168.00
8	Total Energy at Generator end	3,449.35	1,774.86	1,710.33	3,491.83	3,485.19
B)	ENERGY AVAILABILITY / PURCHASED					
1	Net thermal generation (Own+ IPP + Share from Central Stations)	3,361.86	1,693.96	1,710.33	3,491.83	3,404.29
A	Share from Central Sector (NTPC + NPCIL)	3,190.26	1,647.23	1,663.60	3,292.97	3,310.83
B	IPPs	-		-	105.40	-
C	Co-generation within State (GEPL, GSPL & Sesa)	171.60	46.73	46.73	93.46	93.46
2	Net hydel generation (own+shared)					
3	Power Purchased from	87.48	80.91	-		80.91
	a) Common Pool/UI/ OD		60.09			60.09
	b) Traders/ Exchanges		20.82			20.82
	c) Renewable Energy Sources	87.48				
	d) Banking Arrangement (NVVN)					
4	Net power purchase	3,449.34	1,774.86	1,710.33	3,491.83	3,485.19
5	Net Availability	3,332.66	1,682.63	1,634.57	3,328.97	3,317.19

## 5.8 Operation and Maintenance Expenses

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

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

Operation & Maintenance Expenses consists of three elements viz Employee Expenses, A&G Expense and R&M Expense:

- Employee expenses comprise of salaries, dearness allowance, bonus, terminal benefits in the form of pension & gratuity, leave encashment and staff welfare expenses
- Administrative expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances and other debits.

- Repairs and Maintenance Expenses go towards the day to day upkeep of the distribution network of the Company and form an integral part of the Company's efforts towards reliable and quality power supply as also in the reduction of losses in the system.

## **Employee Cost**

### **Petitioner's submission**

Regulation 27 (3) of JERC for the State of Goa and Union Territories (Terms and Conditions for Determination of Tariff) Regulations, 2009 provides for O&M Expense for a distribution licensee. The relevant regulation is re-produced hereunder:

*"27 (3) O&M expenses for distribution functions shall be determined by the Commission as follows:*

- a) O&M expenses as approved by the Commission for the first time for a year shall be considered as base O&M expenses for determination of O&M expenses for subsequent years;*
- b) Base O&M expenses as above shall be adjusted according to variation in the rate of WPI per annum to determine the O&M expenses for subsequent year, where WPI is the Wholesale Price Index on April 1 of the relevant year....."*

Employee Expenses for FY 2012-13: ED – Goa has computed the O&M (Employee Expense) expense in line with the aforesaid Regulation. The base Employee Expense for FY 2011-12 is taken equivalent to the expense, approved by the Hon'ble Commission in its tariff order, at Rs. 125.89 Crs. The Employee Expense for FY 2012-13 is arrived at by considering escalation of 8.94% which is as per WPI data for the year FY 2011-12.

Accordingly, the Employee Expense for the year FY 2012-13 works out to be Rs. 137.14 Crores. Further the actual employee expenses for first six months period from April-September 2012 is Rs. 75.76 Crores.

### **Commission's analysis**

#### **As per JERC Tariff Regulations -**

*O&M expenses as approved by the Commission for the first time for a year shall be considered as base O&M expenses for determination of O&M expenses for subsequent years;*

*Base O&M expenses as above shall be adjusted according to variation in the rate of WPI per*

*annum to determine the O&M expenses for subsequent year, where WPI is the Wholesale Price Index on April 1 of the relevant year;*

The Commission had approved the Employee Cost in its dated June 27' 2012 by escalating the expenses of FY 2011-12 with the available WPI. The Commission while approving the Employee expenses for FY 2012-13 has shown its concern for the high employee expenses. The Commission in its Tariff Order for FY 2012-13 had suggested that the petitioner should bring down its labor cost to bring it closer to the all India average. The Commission has also directed the Petitioner to conduct Employee Cost / Manpower study. However, the Petitioner has not submitted such report on the Manpower. **The Commission reiterates its direction and directs the Petitioner to submit the details within One month of this order.**

However, for the purpose of the Review of FY 2012-13 the Petitioner has claimed no variation from the approved Employee cost of FY 2011-12. Therefore, the Commission has considered the review of the escalation factor of WPI with the available indices up to the month of March 2012. The increase of WPI up to March 2011-12 is 8.94% The Commission has applied the escalation factor of 8.94% per annum for estimation of the increase in the employee expenses from FY 2011-12 (excluding the one-time arrears of sixth pay commission) to FY 2012-13. Accordingly the Commission has approved the Employee Expenses of Rs 136.44 Crores as against the approved figures of Rs 136.21 Crores approved in the Tariff order dated June 27' 2012.

## **A&G Expenses**

### **Petitioner's submission**

As mentioned earlier, Administrative expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances and other debits.

The Commission in the tariff order for FY 2012-13 had approved A&G expenses based on inflation over FY 2011-12. However ED-Goa would like to mention that the A&G expenses for the electricity department for the purpose of ARR is at much lower side. The actual expense for first six months period from April-September 2012 is Rs. 3.10 Crores.

Further ED-Goa has considered the revised budget estimates submitted to Government of Goa for the purpose of revised projections of FY 2012-13 in this petition. The A&G expenses based on provisional actuals and revised estimates for the year FY 2012-13 computes to Rs. 8.59 Crores. Hon'ble Commission is requested to approve A&G expenses as per revised projections for FY 2012-13.

## Commission's analysis

The Commission in its order dated June 27' 2012 had approved the A&G expenses by escalating the A&G expenses with the available WPI. The Petitioner has not submitted any variation of the A&G expenses of FY 2011-12. Therefore, the Commission has considered the revision of WPI available on the website of the Economic Advisor, Ministry of Commerce and Industry for estimation of the increase in the average of WPI index. The Commission in its previous order has approved the A&G expenses of Rs 19.31 Crores for FY 2012-13. The petitioner has submitted the actual figures for the period April 2012 to September 2012 of Rs 3.10 Crores and has estimated Rs 5.50 Crores for the balance period of the FY 2012-13. The proposed A&G expenses of Rs 8.59 Crores for the FY 2012-13 are much less than the approved expenses the Commission. **The Commission therefore considers the revises estimates of the A&G expenses as submitted by the Petitioner and approves Rs 8.59 Crores for the Review of FY 2012-13.**

## R&M Expenses

### Petitioner's submission

ED – Goa has been carrying out various R&M activities as a step towards improvement of systems, reduction in breakdowns, reduction in response time and increasing preventive maintenance. The R&M activities carried out pertain to Plant & Machinery, Hydraulic works, civil works etc.

It is submitted that ED-Goa requests that R&M expenses may not be approved based on the WPI inflation on previous year as R&M expenses are directly linked to the Gross Fixed Assets. It is submitted that ED-Goa has been undertaking huge infrastructure and network development schemes and hence R&M expenses are likely to increase. It is further submitted that if WPI inflation is considered over FY 2011-12 actual amounts, the R&M expenses as per Commission methodology work out to Rs.18.55 Crores.

ED-Goa has actually incurred amount of Rs. 7.70 Crores in the first six months period from April-September 2012. Further ED-Goa has considered the revised budget estimates submitted to Government of Goa for the purpose of revised projections of FY 2012-13 in this petition. The R&M expenses based on provisional actuals and revised estimates for the year FY 2012-13 computes to Rs. 21.19 Crores. The Hon'ble Commission is requested to approve the R&M expenses based on the actual basis or may approve linked to gross fixed assets as is being done in other states.

## Commission's analysis

The Commission had approved the R&M expenses in its dated June 27' 2012 by escalating the expenses of FY 2011-12 with the available WPI at Rs 18.52 Crores.

The petitioner has submitted the R&M expenses for the first half of FY 2012-13 at Rs 7.70 Crores and estimated the expenses of the second half at the Rs 13.50 Crores. The Commission had sought clarification of the sudden increase estimated in the second half. The petitioner has replied to the above stated variation as follows

**Quote**

*"It is submitted that actual expenses of H1 for R & M was Rs.7.70 crores, though works much more than the said amount were executed. This was mainly due to changeover of payment mode by the Government from cash/ cheque basis to ECS mode and also due to delayed monsoons when no work could be carried out. In accordance with the new financial guidelines issued by the Government, sanctions accorded in the previous year would lapse if works were not commenced in that year, and fresh sanctions had to be obtained. However the works are presently gaining momentum and budget estimates submitted to the Government are likely to be utilized fully by the Department. Hence the proposed expenditure of Rs. 21.19 crores is in order." **Unquote***

The Petitioner has claimed no variation from the approved R&M Expenses of FY 2011-12. Therefore, the Commission has considered the review of the escalation factor of WPI with the available indices up to the month of March 2012. The increase of WPI up to March 2011-12 is 8.94% The Commission has applied the escalation factor of 8.94% per annum for estimation of the increase in the R&M expenses from FY 2011-12 to FY 2012-13. Accordingly the Commission has approved the R&M expenses of Rs 18.55 Crores as against the approved figures of Rs 18.52 Crores approved in the order dated June 27' 2012.

**The Commission therefore, approves the R&M expenses for FY 2012-13 at Rs 18.55 Cr.**

**Summary of O&M Expenses approved for FY 2012-13**

The O&M expenses as submitted and approved for FY 2012-13 are as below:

**Table 24: O&M expenses approved by the Commission for FY 2012-13 (Rs Cr)**

Sr. No.	Particulars	FY 2012-13		
		Approved vide order dated June 27'2012	Revised Estimates	Approved
1	Employee Expenses	136.21	137.14	136.44
2	A&G Expenses	21.00	8.59	8.59
3	R&M Expenses	18.52	21.19	18.55
4	<b>Total O&amp;M Expenses</b>	<b>175.74</b>	<b>166.93</b>	<b>163.59</b>

**5.9 Capital Expenditure and Capitalization****Petitioner's submission**

ED – Goa would like to submit that it in line with the Commission's directive it has submitted a detailed Capital Investment Plan to the Hon'ble Commission on 30<sup>th</sup> January 2013 for the Hon'ble Commission's approval. However, for the ease of reference, ED – Goa hereby submits a gist on the Capital Expenditure incurred for the year FY 2012-13.

Sr. No	Name of Scheme	Capex FY 13 (Rs.Crs)
1	Schedule Tribe Development Scheme & Scheduled castes development scheme(P)	34.50
2	Normal Development Schemes (Plan)	19.45
3	Erection of 220/33 KV 1X50 MVA Sub- Station at Cuncolim	5.00
4	Erection of 220 KV line from Xeldem to Cuncolim	3.00
5	Strengthening of 220 KV Transmission Network	5.00
6	Augmentation of Kadamba S/S from 2x40 MVA to 4x40 MVA (Plan) including new 110 KV line	0.21
7	Erection of 220/110/33/11 KV Sub-Station at	0.00

Sr. No	Name of Scheme	Capex FY 13 (Rs.Crs)
	Verna (New)	
8	Erection of 220 KV line from Ponda-Verna-Xeldem	0.00
9	APDRP (State Schemes)	30.00
10	Restructured Accelerated Power Development and Reforms Program	10.00
11	Infrastructure Schemes through Electricity Duty Funds	110.00
12	Other Minor Schemes	7.50
	<b>Total</b>	<b>224.66</b>

The details of opening Capital Works-in-Progress, investments during the year and investments capitalised for the year are summarised in the table below:

Sr. No	Particulars	FY 2012-13 (Rs.Crs)
		<b>Rev. Est</b>
1	Opening balance	344.70
2	Add: New investments	224.66
3	<b>Total</b>	<b>569.36</b>
4	Less investment capitalized	81.30
5	<b>Closing balance</b>	<b>488.06</b>

The Opening Balance of GFA for FY 2012-13 comes to around Rs. **877.10** Crores. The additions to GFA are estimated to be around Rs. **81.30** Crores

### Commission's analysis

The Commission observes that the capital expenditure and the capitalization submitted by the Petitioner for FY 2012-13 is required to meet the increasing demand in the licensee area.

The Petitioner has considered a capitalization of Rs 81.30 Crores as against the approval of Rs 178.53 Crores approved by the Commission for FY 2012-13 vide its order dated June 27' 2012. The Commission observes that out of total opening CWIP of Rs. 569.36 Crores the petitioner has only envisaged Rs. 81.30 Crores of capitalization. The Petitioner replied to the query in this regard, which is reproduced below;

### Quote



*“The majority of schemes incorporated in Capital Expenditure investment plan were sanctioned between the period 2010 and 2011. The work of some of these schemes have been taken up and completed. In respect of other schemes, most of the turnkey projects were tendered out. However, due to Model Code of Conduct for the Assembly Election and subsequently for Panchayat Elections the work orders could not be awarded resulting in delay in its implementation. Apart from above, there was a Writ Petition filed in the Panaji Branch of the Bombay High Court in respect to turnkey tenders not utilizing material procured under rate contract which resulted in stay from the High Court, which Petition has been finalized only in the month, May, 2012. Further, in accordance with the new financial guidelines of the Finance Department works of the previous year but not commenced require fresh Expenditure sanction.*

*Accordingly, the anticipated assets for FY 2012-13 is to the tune of only Rs. 81.90 crores which is low compared to CWIP, whereas the anticipated assets for FY 2013-14 has been taken higher at Rs. 192.77 crores, as more works are anticipated to be completed in this year.” Unquote*

As per the Regulations 21 of JERC for the State of Goa and UTs (Terms and conditions for determination of Tariff), Regulation 2009 specifies that the licensee shall propose in their filings, a detailed capital investment plan, showing ongoing projects separately that will spill into the ensuing year and new projects (along with their justification) that will commence in the ensuing year. The Petitioner has not submitted the capital investment plan as per the regulations

However, for the purpose of the ARR computation, Commission provisionally considers the capitalization of Rs. 81.30 Cr proposed by the Petitioner for FY 2012-13.

## **5.10 GFA and Depreciation**

### **Petitioner’s submission**

The Regulation 26 of JERC for the State of Goa and Union Territories (Terms and Conditions for Determination of Tariff) Regulations, 2009 provides for depreciation to be calculated. Further, as per the regulation, depreciation shall be calculated annually at the rate of depreciation specified by the JERC/ CERC from time to time. Therefore, in line with the Regulation, ED – Goa has calculated the depreciation at Rs. 2.15 Crores.

### **Commission’s analysis**

The Petitioner admittedly, at present does not have a reliable fixed asset register to support the claim for the opening Gross Fixed Assets and has not claimed the same for the purpose of

computation of the depreciation. As such in the absence of updated fixed asset registers, the opening value of fixed assets is on assumption basis.

As per Regulation 26 of JERC Tariff Regulations, “depreciation shall be computed on historical cost of the assets including additions during the year”.

Further, Regulation 22 mandates that “Investments made prior to and up to 31<sup>st</sup> March immediately preceding the date of the notification of these regulations or date of receipt of a petition of tariff determination whichever is earlier shall be considered on the basis of audited accounts or approvals already granted by the Commission”.

Also, in the absence of audited accounts from FY 2011-12, the opening value of the assets is on an assumption basis and is not being allowed.

The Petitioner has projected the addition of assets of Rs.81.30 Cr for the FY 2012-13. The Commission, considering the reasonableness of the expenditure approves the capitalization of Rs. 81.30 Cr for FY 2012-13.

Regulation 26 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 specifies that depreciation for the assets be calculated annually at the rates specified by CERC from time to time. The depreciation rates for distribution assets as specified by CERC vide Appendix-III (Depreciation schedule of CERC (Terms and Conditions of Tariff) Regulations, 2009 has been used to calculate the depreciation. The depreciation for the FY 2012-13 has been considered as shown in the table below:

**Table 25: Depreciation approved by the Commission for FY 2012-13 (Rs Cr)**

Sr. No.	Particulars	FY 2012-13	FY 2012-13	
		Approved in order dated June 27' 2012	Revised Estimates	Approved by the Commission
1	<b>Opening Value of Assets at the beginning of the year</b>	126.00	126.00	126.00
2	Additions during the year	178.53	81.30	81.30
3	GFA at the end of year	304.53	207.30	207.30
4	Rate of depreciation	5.28%	5.28%	5.28%
5	<b>Depreciation</b>	<b>11.37</b>	<b>8.80</b>	<b>8.80</b>

**The Commission therefore approves depreciation as Rs. 8.80 Cr for FY 2011-12.**

## 5.11 Interest and Finance Charges

### Petitioner's submission

The Regulation 29 provides for Interest and Finance Charges on Loan. ED-Goa has submitted that the majority of capital assets are created out of the equity contribution from Government of Goa and the actual borrowing of loan is only to the extent of the APDRP schemes. ED – Goa has also considered the Letter of Credit charges for claiming rebates on power purchase. The total Interest and Finance Charges for the year FY 2012-13 are Rs. **8.99** Crores.

### Commission's analysis

As per the JERC tariff regulations 2009 -

*"25. Interest and Finance Charges on Loan*

*(1) For existing loan capital, interest and finance charges on loan capital shall be computed on the outstanding loans, duly taking into account the rate of interest and schedule of repayment as per the terms and conditions of relevant agreements.*

*(2) Interest and finance charges on loan capital for new investments shall be computed on the loans, duly taking into account the rate of interest and the schedule of repayment as per the terms and conditions of relevant agreements. The rate of interest shall, however, be restricted to the prevailing Prime Lending Rate of the State Bank of India.*

*(3) The interest rate on the amount of equity above 30% treated as loan shall be the weighted average rate of interest on loan capital of the generating company / licensee:*

*Provided that interest and finance charges of renegotiated loan agreements shall not be considered, if they result in higher charges:*

*Provided further that interest and finance charges on works in progress shall be excluded and shall be considered as part of the capital cost.*

*(4) Interest charges on security deposits, if any, made by the consumers with a generating company/licensee, shall be equivalent to the bank rate or at the rate, if any, specified by the Commission whichever is higher.*

*(5) In case any moratorium period is availed of, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.*

(6) The Commission shall allow obligatory taxes on interest, commitment charges, finance charges and any exchange rate difference arising from foreign currency borrowings, as finance cost.

(7) Any saving in costs on account of subsequent restructuring of debt shall be passed on to the consumers.”

In the instant case, the licensee has not provided the actual value of fixed assets, Hence the servicing of assets in the form of interest on loan and return on assets is indeterminate at this stage on the opening GFA, hence interest and finance charges has not been considered on the assumed value of assets. The same shall be considered at true-up stage if full details are made available.

The Commission has considered a normative loan of Rs. 56.91 Cr for FY 2012-13 (being 70% of Rs. 81.30 Cr provisionally considered to be capitalized during FY 2012-13) to calculate the interest on normative loan amount. Commission has considered the weighted average interest rate of interest of 8.49% for the existing loans as submitted by the Petitioner while approving the interest expenses. The table below shows the computation of the normative interest for FY 2012-13 approved by the Commission:

**Table 26: Interest on normative loan approved by the Commission for FY 2012-13 (Rs Cr)**

Sr. No.	Particulars (in Rs Cr)	FY 2012-13	FY 2012-13	
		Approved by vide order dated June 27' 2012	Revised Estimates	Approved
1	Opening Normative Loan	88.20	100.54	88.20
2	Add: Normative Loan during the year	124.97	0	56.91
3	Less: Normative Repayment	8.82	12.82	8.82
4	Closing Normative Loan	204.35	87.72	136.29
5	Average Normative Loan	146.27	94.13	112.24
6	Rate of Interest	14.75%	8.49%	8.49%
7	<b>Interest on Normative Loan</b>	<b>21.58</b>	<b>7.99</b>	<b>9.53</b>

The petitioner has claimed interest on loans taken from PFC, however as the petitioner has not been able to substantiate the opening balance of fixed assets the Commission does not allow

the interest expenses pertaining to formation of the Opening GFA of FY 2011-12 including interest on PFC loans. The Commission would consider the expenses at the time of truing up in accordance with the prevailing regulations supported with the legitimate fixed asset register and audited accounts.

The petitioner has proposed Rs. 1 Crores as LC charges as against the approval of Rs 0.80 Crores approved for FY 2012-13. However, the Petitioner has not submitted any rationale for such variation. Therefore the Commission has restricted the LC charges to the approval vide its order dated June 27' 2012.

**The Commission therefore approves the total interest and finance charges as Rs. (9.53+0.80) 10.33 Cr for FY 2011-12.**

## **5.12 Interest on Working Capital**

### **Petitioner's submission**

The Regulation 29 provides for Interest and Finance Charges on Loan. ED-Goa has submitted that the majority of capital assets are created out of the equity contribution from Government of Goa and the actual borrowing of loan is only to the extent of the APDRP schemes. ED – Goa has also considered the Letter of Credit charges for claiming rebates on power purchase. The total Interest and Finance Charges for the year FY 2012-13 are Rs. **8.99** Crores.

The Interest Rate is considered equivalent to the SBI PLR for the year FY 2012-13 which is at **14.75%**.

In line with the aforesaid regulation, the Interest on Working Capital works out to Rs. **4.59** Crores for FY 2012-13

### **Commission's analysis**

As per Regulation 29 of JERC Tariff Regulations -

- 1) *Subject to prudence check, the working capital for integrated utility shall be the sum of one month requirement for meeting :*
  - a. *Power purchase cost*
  - b. *Employees cost*
  - c. *Administration & general expenses*
  - d. *Repair & Maintenance expenses.*
  - e. *Sum of two-month requirement for meeting Fuel cost.*

- 2) *The rate of interest on working capital shall be equal to the short term Prime Lending Rate of State Bank of India on the 1st April of the relevant financial year. The interest on working capital shall be payable on normative basis notwithstanding that the generating company / licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on the normative figures.”*

The Commission has considered the calculation of the different components of the working capital, based on the above-stipulated norms and as per the values approved in the respective sections of this Order. In accordance with Section 47(4) of the Electricity Act 2003, the distribution licensee is required to pay interest on security deposit collected from the consumers. If this security deposit is invested in the form of interest earning fixed deposits or other similar instruments. The interest earned from such investment could be utilized to pay the interest to the consumers under section 47(4) of the Electricity Act 2003. However, it is noted that the petitioner has not invested any of the security deposit held and the said amount is available to the petitioner. Accordingly, the Commission has allowed the interest payable to the consumer as expense in this order. Commission has considered the security deposit available with the Petitioner as a source to meet working capital requirements and has deducted this amount from the working capital requirement considered for interest for review of FY 2012-13

The Commission clarifies that the SBI PLR rate has now been substituted as SBI Advance Rate. The Commission has considered the SBI advance rate of 14.75% as on 1<sup>st</sup> April 2012 for ARR of FY 2012-13. The details of submission of the Petitioner vis-a-vis approval of the Commission are given in the table below:

**Table 27: Interest on working capital approved by the Commission for FY 2012-13 (Rs Cr)**

Particulars (In Rs Cr)	FY 2012-13	FY 2012-13	
	Approved by the Commission	Revised Estimates	Approved
Power Purchase Cost for one month	67.64	85.23	71.66
Employee Cost for one month	11.35	11.43	11.37
A&G Expenses for one month	1.75	0.72	0.72
R&M Expenses for one month	1.54	1.77	1.55
<b>Total Working Capital for one month</b>	<b>82.28</b>	<b>99.14</b>	<b>85.29</b>
Closing Security Deposit (amount already with ED Goa)	<b>70.24</b>	68.04	70.24
Total Working Capital considered for one month	<b>12.04</b>	<b>31.11</b>	<b>15.05</b>
<b>SBI PLR Rate</b>	<b>14.75%</b>	<b>14.75%</b>	14.75%
<b>Interest on Working Capital</b>	<b>1.78</b>	<b>4.59</b>	<b>2.22</b>

The Commission therefore approves the interest on working capital as Rs. 2.22 Cr for FY 2012-13.

### 5.13 Interest on Security Deposit

#### Petitioner's submission

The Interest Rate is considered equivalent to the SBI PLR for the year FY 2012-13 which is at **14.75%**.

In line with the aforesaid regulation, the Interest on Working Capital works out to Rs. **4.59** Crores for FY 2012-13 which is provided in the table below:

#### Commission's analysis

As per Section 47(4) of the Electricity Act, 2003 and as specified in Regulation 25, of JERC Tariff Regulations 2009, *the distribution licenses shall pay interest on security deposit collected from the consumers, equivalent to the bank rate or more as may be specified by the Commission.*

The Commission has observed that the petitioner has not paid any interest to the consumers on the security deposit held during FY 2012-13. The Commission would like to reiterate its direction that the distribution licensee should deliver its obligation under the Section 47(4) of the Electricity Act, 2003 and it must pay the interest on security deposit w.e.f. April 1'2012 at the rate of 9.5% per annum (Being the Bank Rate as on 1st April 2012) and should explicitly mention the same as the 'Interest on security deposit for FY 2012-13' on the bills of the consumers. The Commission has considered the security deposit from consumers available with the petitioner as on March 31'2012 for calculation of the interest on security deposit (as per the audited accounts of FY 2011-12).

**Table 28: Interest on Security Deposit approved by the Commission for FY 2012-13 (Rs Cr)**

Particulars (In Rs Cr)	FY 2012-13	
	Approved by the Commission	Revised Estimates
Opening Security Deposit	62.57	59.25
Add: Deposits during the Year	9.19	9.62
Less: Deposits refunded	1.52	0.84
<b>Closing Security Deposit</b>	<b>70.24</b>	<b>68.04</b>
<b>Bank Rate</b>	<b>9.50%</b>	9%
<b>Interest on Security Deposit</b>	<b>5.94</b>	<b>5.73</b>

## 5.14 Return on capital base/Net fixed assets

### Petitioner's submission

The proviso of Regulation 23 (2) and Regulation 24 of Tariff Regulations 2009 provides for entitlement for Returns on Capital Base/ Net Fixed Assets by utility / licensee. Thus, in line with the regulation and the methodology adopted by the Hon'ble Commission in its previous order, ED – Goa has calculated the return on capital base at 3%.

### Commission's analysis

ED Goa is an integrated utility in its present form as defined in Regulation 2(9) of the JERC Tariff Regulations and ED Goa is not restructured and corporatized till date. As of now, it is an integrated utility and is entitled to return on capital base under the provisions of Schedule VI of the repealed Electricity (Supply) Act, 1948 vide provision under Regulation 23 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009. The basic requirement for consideration of either return on capital base or return on equity is the audited Annual Accounts and assets & depreciation registers. ED-Goa has not been maintaining adequate information. The same has also been discussed in treatment of this component in the previous chapter.

As discussed in the section on 'GFA and Depreciation', the Commission has allowed additional capitalization FY 2012-13. Further the Commission has also allowed the GFA for FY 2011-12 in its previous order which forms the opening GFA for the FY 2012-13. The Commission has accordingly considered Rs. 126 Cr as the gross block at the beginning of FY 2012-13 and accumulated depreciation of Rs. 3.33 Cr, resulting in the net fixed assets of Rs 122.67 Cr at the beginning of FY 2012-13. The Commission, therefore, approves the return on capital base of Rs 3.68 Cr @3% on the net fixed assets at the beginning of FY 2012-13. The table below shows the computation of the return on capital base as approved by the Commission.

**Table 29: Return on Capital base approved by the Commission for FY 2012-13 (Rs Cr)**

Sr. No.	Particulars (In Rs Cr)	FY 2012-13		
		Approved vide order dated June 27' 2012	Revised Estimates	Approved
1	Gross block at beginning of the year	126.00	126.00	126.00
2	Less accumulated depreciation	3.33	3.33	3.33
<b>3</b>	<b>Net fixed assets at beginning of the year</b>	<b>122.67</b>	<b>122.67</b>	<b>122.67</b>
<b>4</b>	<b>Reasonable return @3% of NFA</b>	<b>3.68</b>	<b>3.68</b>	<b>3.68</b>



## 5.15 Provision for Bad & Doubtful debts

### Petitioner's submission

The Petitioner has not claimed any provision towards bad and doubtful debts.

### Commission's analysis

As specified in Regulation 28 of JERC Tariff Regulations (to be read with the format):

*The Commission may, after the generating company/licensee gets the receivables audited, allow a provision for bad debts **up to 1%** of receivables in the revenue requirement of the generating company/licensee. (Information to be furnished in format 18)*

*Format -18*

<i>S.No.</i>	<i>Particulars</i>	<i>Amount (Rs. in Cr)</i>
<i>1.</i>	<i>2.</i>	<i>3.</i>
<i>1.</i>	<i>Amount of receivable bad and doubtful debts (audited)</i>	
<i>2.</i>	<i><u>Provision made for debts</u> in ARR</i>	

The Commission is of the view that bad and doubtful debts actually written off, limited to 1% as per the regulations, would be considered only after the availability of audited accounts and would be taken up at the time of the true-up of the ARR.

**Table 30: Provision for bad debts approved by the Commission for FY 2012-13**

Particulars	FY 2012-13 Petitioner's Submission	FY 2012-13 Approved
Provision for bad and doubtful debts	Not Claimed	NIL

**The Commission has not considered the provision for bad & doubtful debts for ARR of FY 2012-13 and would consider it up in true up as per the provisions of the regulations.**

## 5.16 Other expenses

### Petitioner's submission

The petitioner has estimated expenses of Rs. 0.60 Crores for FY 2012-13. This expense pertains to the salaries of the members, domestic travel expenses, office expense, advertisement etc. The Hon'ble Commission is requested to approve the CGRF expenses for FY 2012-13.

### Commission's analysis

The Commission observes that the expenses of Rs 0.60 Crores projected are towards the salaries of the members of the CGRF and the associated expenses. The petitioner has clarified that these expenses formed the part of the A&G expenses during FY 2011-12. The A&G expenses claimed by the Petitioner in the review for FY 2012-13 are much less than the approval. **The Commission therefore considers the expenses as reasonable and approves Rs 0.60 Crores for the review of FY 2012-13.**

## 5.17 Non-Tariff Income

### Petitioner's submission

Non-Tariff Income comprises of proceeds from sale of dead stock, waste paper, Receipt from State Electrical Inspectorate & other miscellaneous receipts. The Non-Tariff Income for the year FY 2012-13 comes to Rs. **23.06** Crores which is in line with the Non-Tariff Income approved by the Hon'ble Commission of **Rs. 22.53 Crs.**

### Commission's analysis

The Commission had approved the Non-Tariff income for the FY 2012-13 at Rs 22.53 Crores in its order for FY 2012-13. The Petitioner has submitted the revised estimates at Rs 23.06 Crores, which is in line with the Commission's approval. **Therefore, the Commission approves the Non-Tariff Income of Rs 23.06 Crores for the Review of FY 2012-13.**

## 5.18 Revenue from Sale of Surplus Power

### Petitioner's submission

There has been surplus of Power available during FY 2012-13 and ED – Goa has been diverting / selling to grid, Power Exchanges. The total revenue from sale of such surplus power through UI Pool for first six months is Rs. **11.94** Crores for **43** MUs. The revenue from power diverted to

exchange for first six months is Rs. **12.08** Crores for **39** MUs.

The revenue estimated from surplus power available during H2 of FY 2012-13 is Rs. **11.58** Crores for **37** MUs.

The revenue from sale of surplus power for FY 2012-13 computes to Rs.**35.61** Crores and Hon'ble commission is requested to approve the same.

### Commission's analysis

The Commission has found that the petitioner had purchased costlier power, mainly from the IPP, and the sale proceeds were much lower thereby losing money on such transactions. The Commission in its previous order at Para 6.6 had given clear directions for the commercially unviable purchases which is affecting cost of power purchase adversely. The Commission feels that this cannot be treated as a prudent commercial practice. As per the provisions of Section 61 of the Electricity Act, 2003, the Commission is required to determine the tariff considering that generation, transmission, distribution and supply of electricity are conducted on commercial principles. The Commission is fully justified in not recognizing the business transactions not performed on prudent commercial principles. However, the Commission would consider the same at the time of true up based on the actual and the power availability and demand requirement. The Petitioner would be required to give full justification for the need of such high cost power. The Commission has considered the Sale of Surplus energy lower by 62.59 MU equivalents to the disallowance of the power procured from the IPP as the units would not have been available for sale in such a condition. However, the Commission for the projection during second half of FY 2012-13 has considered the power purchase quantum as per the merit order dispatch principles; as such, the sale of surplus power has not been considered for second half of FY 2012-13.

**Table 31: Revenue from sale of surplus power for FY 2012-13 (Rs Cr)**

S.No.	Particulars	Petitioner's Submission	Approved
1	Revenue from sale of surplus power – UI Pool	11.94	0
2	Revenue from sale of surplus power- Exchanges	23.66	6.11

**Accordingly, the Commission has approved the Revenue from surplus power of Rs 6.11 Crores**

## 5.19 Aggregate Revenue Requirement (ARR) for FY 2012-13

### Commission's analysis

The Commission has considered and approved ARR for FY 2012-13 based on the items of expenditure and revenue discussed in the preceding sections and the same has been summarized in the table below.

**Table 32: Aggregate Revenue Requirement (ARR) approved by the Commission for the Review of FY 2012-13 (Rs Cr)**

Sr. No.	Particulars (In Rs Cr)	FY 2012-13	FY 2012-13	
		Approved by the Commission	Revised Estimates	Approved
1	Cost of power purchase	811.64	1,022.80	866.01
2	Employee costs	136.21	137.14	136.44
3	R&M expenses	18.52	21.19	18.55
4	Administration and general expenses	21.00	8.59	8.59
5	Depreciation	11.37	8.80	8.80
6	Int and Finance Charges	22.38	8.99	10.33
7	Interest on Working Capital	1.78	4.59	2.22
8	Interest on Security Deposit	5.94	5.73	5.94
9	Return on NFA	3.68	3.68	3.68
10	Provision for Bad Debts	NIL	-	-
11	Other Expenses	-	0.60	0.60
<b>12</b>	<b>Total Revenue Requirement</b>	<b>1,032.51</b>	<b>1,222.11</b>	<b>1,061.18</b>
13	Less: Non-Tariff Income	22.53	23.06	23.06
14	Less: Revenue from Sale of Power - UI Pool	-	11.94	-
15	Less: Revenue from Sale of Power-Exchanges	-	23.66	6.11
16	Less: Revenue from Sale / Banking of Power	-		
<b>17</b>	<b>Aggregate Revenue Requirement</b>	<b>1,009.98</b>	<b>1,163.44</b>	<b>1,032.01</b>

The Commission therefore approves the Aggregate Revenue Requirement at Rs 1,032.01 Cr for the Review of FY 2012-13.

## 5.20 Revenue at existing tariff for FY 2012-13

### Petitioner's submission

The revenue from sale of power from existing retail tariffs for H1 of FY 2013-14 on actual basis is Rs. 471.17 Crores.

The revenue computed based on revised (approved) tariff for H2 of FY 2012-13 computes to Rs. 456.88 Crores. Accordingly, the total revenue from sale of power estimated for FY 2012-13 is Rs. 928.05 Crores.

### Commission's analysis

The Commission has considered the actual for the period April 2012 to September 2012 submitted by the Petitioner. The Commission has approved the category wise sales for the second half of FY 2012-13 as elaborated in the Para5.3 of this order. Accordingly, the Commission has considered the revenue from existing tariff for FY 2012-13 that is shown in the table below:

**Table 33: Revenue at existing tariff approved by the Commission for FY 2012-13 (Rs Cr)**

S. No.	Category/Consumption Slab	FY 12-13 (H1)		FY 12-13 (H2)		FY 12-13	
		Sales (MU)	Revenue (Rs Crores)	Sales (MU)	Revenue (Rs Crores)	Sales (MU)	Revenue (Rs Crores)
<b>A</b>	<b>Low Tension Supply</b>	<b>585</b>	<b>123</b>	<b>587</b>	<b>137</b>	<b>1172</b>	<b>261</b>
1(a)	Tariff LTD/Domestic and Non – Commercial	<b>416</b>	<b>70</b>	<b>412</b>	<b>74</b>	<b>828</b>	<b>144</b>
	<i>First 60 Units</i>	87	10.48	86	10.62	173.48	21.10
	<i>61 - 250 Units</i>	249	38.05	248	41.32	497.79	79.37
	<i>251 Units - 500 Units</i>	62	16.22	62	16.98	124.74	33.20
	<i>Above 500 Units</i>	17	4.99	15	4.94	32.08	9.93
1(b)	Tariff LTD/Low Income Group	1	0.17	1	0.21	2.49	0.38
1(c)	Tariff LTD/Domestic Mixed	<b>2</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>1</b>
	<i>First 400 Units</i>	2	0.52	2	0.52	3.87	1.04
	<i>Above 400 Units</i>	0	0.16	0	0.11	0.72	0.27
2	Tariff LTC/Commercial	<b>108</b>	<b>37</b>	<b>108</b>	<b>39</b>	<b>216</b>	<b>76</b>
	<i>First 100 Units</i>	53	15.89	53	16.44	105.90	32.32
	<i>100 Units - 1000 Units</i>	49	18.48	49	19.24	97.26	37.72
	<i>Above 1000 Units</i>	6	2.66	6	2.85	12.97	5.50
3	Tariff LTP/Motive Power	<b>37</b>	<b>11</b>	<b>46</b>	<b>19</b>	<b>83</b>	<b>30</b>
	<i>Connected Load Upto 50 HP</i>	2	0.46	3	0.97	4.60	1.43
	<i>Connected Load Above 50 HP</i>	35	10.49	43	17.99	78.02	28.49
3(a)	Tariff-LTP/Mixed (Hotel Industries)	3	1.02	3	1.05	5.08	2.06
3 c	Tariff LTP/Ice Manufacturing	0	-	0	0.00	0.00	0.00
4	Tariff-LTAG/Agriculture	10	1.18	7	1.05	16.35	2.23
5	Tariff-LTPL/Public Lighting	8	2.37	7	2.41	15.30	4.78
6	Tariff-LT PWW/Public Water Works	1	0.29	1	0.49	2.30	0.77
<b>B</b>	<b>High Tension Supply</b>	<b>852</b>	<b>337</b>	<b>861</b>	<b>340</b>	<b>1713</b>	<b>677</b>
7	Tariff HT-Mixed	106	40.07	174	62.51	280.51	102.58
8	Tariff HTI/Industrial	297	115.66	299	123.18	596.00	238.84

S. No.	Category/Consumption Slab	FY 12-13 (H1)		FY 12-13 (H2)		FY 12-13	
		Sales (MU)	Revenue (Rs Crores)	Sales (MU)	Revenue (Rs Crores)	Sales (MU)	Revenue (Rs Crores)
9	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	280	115	210	82	490	198
	<i>First 300 Units/kVA</i>	151	60.28	113	42.82	264.35	103.10
	<i>Next 200 Units/kVA</i>	106	45.02	80	32.08	186.03	77.10
	<i>Above 500 Units/kVA</i>	22	10.12	17	7.38	39.67	17.49
10	Tariff-HTAG/Agriculture	4	0.47	1	0.28	5.02	0.75
11	EHTI/Industrial	59	24.97	80	32.67	139.13	57.63
12	H.T. PW/Public Water Supply and Sewage	51	17.75	48	17.39	99.49	35.14
13	H.T. MES/Defence Establishments	15	4.95	19	6.77	34.00	11.72
14	H.T. Industrial (Steel Rolling)	29	11	18	8	47	20
	<i>First 200 Units/kVA</i>	21	7.58	13	5.85	34.23	13.43
	<i>Next 100 Units/kVA</i>	7	2.77	4	1.98	10.56	4.75
	<i>Above 300 Units/kVA</i>	2	0.83	1	0.53	2.63	1.36
15	Tariff HT-Industries (IT High Tech).	4	1.20	4	1.25	7.03	2.45
16	Tariff HT-Industries (ICE).	0	-	0	0.00	0.00	0.00
<b>C</b>	<b>Temporary Supply</b>						
17	Tariff-LT/Temporary	7	5.16	7	5.16	13.76	10.32
18	Tariff-HT/Temporary	0	0.31	0	0.31	0.84	0.63
		0					
<b>19</b>	<b>Total Demand/ Sale Within State/UT</b>	<b>1,438</b>	<b>461</b>	<b>1,448</b>	<b>477.37</b>	<b>2,886</b>	<b>938</b>

The Commission accordingly approves the revenue from existing tariff at Rs. 938 Crores for the Review of FY 2012-13. Further, the petitioner has also considered the revenue from FPPCA levied on the consumer. The petitioner has submitted the calculation of the FPPCA charge for the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> quarter to be levied in the subsequent quarter. The total FPPCA charge estimated to be levied during FY 2012-13 is Rs. 33.03 Crores. The Commission has therefore considered the amount of Rs 33.03 Crores in addition to the revenue estimated from sale of power.

**Therefore, the Commission approves the Revenue from sale of power including FPPCA charge at Rs. 970.94 Crores (937.91 + 33.03FPPCA).**

## 5.21 Revenue Gap at existing tariff for FY 2012-13

### Commission's analysis

The revenue gap worked out for the Review of FY 2012-13 is Rs 61.08 Crores based on the aggregate revenue requirement of Rs 1032.01 Cr and the revenue from existing tariff of Rs. 970.94 Cr.

The petitioner has submitted that the entire gap for FY 2012-13 is committed to be funded by the Hon'ble Government of Goa by way of budgetary support. The petitioner in this regard has also submitted the letter from Government of Goa wherein the Government of Goa has assured to provide requisite budgetary support to meet the deficit at the existing tariff for FY 2012-13. In view of the budgetary support for FY 2012-13 from the Government of Goa, there is no net revenue gap for FY 2012-13.

**Table 34: Revenue Gap at existing tariff approved by the Commission for FY 2012-13 (Rs Cr)**

Particulars	Approved by the Commission vide order dated June 27' 2012	Review for FY 2012-13	
		Revised Estimates	Approved
Aggregate Revenue Requirement	1,009.98	1,163.44	1,032.01
Revenue from Existing Tariff including FPPCA	967.72	950.45	970.94
Gap / (Surplus)	42.26	213.00	61.08
Budgetary Support from Govt of Goa		213.00	61.08
Net Revenue Gap / (Support		-	-

## **6. Aggregate Revenue Requirement (ARR) for FY 2013-14**

### **6.1 Background**

The ARR Petition for FY 2013-14 was filed by ED- Goa before the Commission on 31<sup>st</sup> January 2013 as per the relevant provisions mentioned in the JERC Tariff Regulations.

The Commission has taken into consideration the following for ARR and tariff determination for FY 2012-13:

- i. Approved ARR for the FY 2011-12 by the Commission vide its order dated June 27' 2012
- ii. Estimates submitted by the Petitioner for FY 2013-14
- iii. Review for FY 2012-13 approved by the Commission

### **6.2 Analysis of Aggregate Revenue Requirement of FY 2013-14**

The determination of Aggregate Revenue Requirement requires assessment of quantum of energy sales, loss as well as various cost elements like power purchase cost, O&M expenses, interest cost, depreciation etc. Revised estimates/pre-actuals submitted by the Petitioner as regards to various components of ARR of previous year, the Commission's analysis thereon and decision in respect of items given below is discussed in the following paras:

- Assessment of Energy Requirement
  - i.Sales Projections
  - ii.Loss Trajectory
  - iii.Energy Balance
  - iv.Power Purchase Sources
- Assessment of the Aggregate Revenue Requirement
  - i. Power Purchase Costs & Transmission Charges;
  - ii. Operation and Maintenance Expenses;
    - Employee Expenses
    - Administration & General expenses



- Repairs & Maintenance Expenses
- iii. Capital Expenditure and Asset Capitalisation
- iv. Gross Fixed Assets;
- v. Depreciation;
- vi. Interest on Long Term Loans;
- vii. Interest on Working Capital & Security Deposits;
- viii. Return on Capital Base/ Net Fixed Assets;
- ix. Provision for Bad and Doubtful Debts
- x. Other expenses

As per the regulation no. 13 of JERC Tariff Regulations,  
“

1) *The Aggregate Revenue Requirement of the generating company or the licensee shall comprise of the following:*

- i. Fuel Cost for own generation, if applicable.*
- ii. Cost of Power Purchase, if any*
- iii. Operation and Maintenance Expenses,*
- iv. Depreciation, including Advance Against Depreciation,*
- v. Interest and Cost of Finance,*
- vi. Return on Equity,*
- vii. Income Tax*
- viii. Provision for Bad & Doubtful Debts*
- ix. Other Expenses.*

2) *The data should be provided for three years*

- i. Audited figures for the previous year; Information for the previous year shall be based on the audited accounts; in the absence thereof, the audited accounts for the immediately preceding year shall be filed along with the un-audited accounts for the previous year.*

- ii. *Estimated figures for the current financial year should be based on actual figures for the first six months and the estimated figures for the second six-months of the year. The estimated figures for the second half year of the current financial year should be based on the actual audited figures for the second half of the previous year with adjustments that reflect known and measurable changes expected to occur between them. These adjustments must be specifically documented and justified.*
- iii. *Forecasted figures for the ensuing year should be based on the current year figures with adjustments that reflect known and measurable changes expected to occur between them. These adjustments must be specifically documented and justified.”*

“

- 4) *The Aggregate Revenue Requirement of the generating company or the licensee shall be worked out by adjusting the following in the revenue requirement computed under Clause (1) above:*
  - i. *Necessary adjustments under Regulation 9 ‘Review and Truing Up’.*
  - ii. *Income from surcharge and additional surcharge from Open Access Consumers, if any ;*
  - iii. *Transmission and/or Wheeling Charges recovered from the Open Access Customers, if any ;*
  - iv. *Authorized portion of Income/revenue from Other Business engaged in by the licensee for optimum utilization of assets, if any, in accordance. “*

### **6.3 Consumers, Connected Load and Energy Sales**

#### **Petitioner’s Submission**

The consumer base of Goa comprises of HT Industry, LT Industry, Commercial and Domestic consumers with the maximum consumption attributable to Domestic Consumers. The petitioner foresees a minimal growth in LT category in the near future. Therefore ED-Goa has considered a minimal increase of 0.5% increase in number of consumers and in the load for LT Categories over the previous year. Further, ED-Goa has not considered any increase for consumers and connected load HT Category.

The consumer base of Goa consists of HT Industry, LT Industry, Commercial and Domestic consumers. Sales mix is primarily dominated by HT Industry & LT Industry, followed by Domestic category. The total consumption for HT Industry is approximate 56 percent and Domestic category contributes to around 29 percent of total sales. The balance sales are

contributed by other categories of consumers. Thus, the sales forecast would mostly depend on the sales expected in the HT Industry & Domestic Category.

The sales forecast is based on the trends observed in the sales pattern of various categories over the past years, new developments on account of Government Policies, Socio economic changes, industrial growth, etc. that would affect consumption across various categories of consumers.

ED – Goa has been witnessing increase in sales in particular categories. Hence, in order to arrive at the Category wise Sale projections for FY 2013-14; ED – Goa on the basis of 5 year CAGR has projected the sales by assuming a certain growth percentage over the previous year's Sales figures

### Commission's analysis

#### Consumers

The past trends of the number of consumers from FY 2009-10 to FY 2012-13 as per the available data have been analysed. The Commission has considered the 3 year CAGR growth rate on the approved values of FY 2012-13 to project the number of consumers for FY 2013-14. The Commission has considered a zero growth rate, wherever the 3 year CAGR was negative.

The approved number of consumers for FY 2013-14 vis-à-vis the petitioner's submission has been tabulated below:

**Table 35: Number of consumers approved by the Commission for FY 2013-14**

Sr. No.	Category of Consumer	FY 13-14	
		Proposed	Approved
1(a)	Tariff LTD/Domestic and Non-Commercial	443395	451591
1(b)	Tariff LTD/Low Income Group	14303	14232
1(c)	Tariff LTD/Domestic Mixed	50	52
2	Tariff-LTC/Commercial	94944	98146
3 (a)	Tariff-LTP/Motive Power	9569	10580
3 (b)	Tariff-LTP/ Ice Manufacturing	0	0
3 c)	Tariff-LTP/Mixed (Hotel Industries)		85
4	Tariff-LTAG/Agriculture	11080	11501
5	Tariff-LTPL/Public Lighting	9065	9636
6	Tariff-LT PWW/Public Water Works	550	558

Sr. No.	Category of Consumer	FY 13-14	
		Proposed	Approved
<b>B</b>	<b>High Tension Supply</b>		
7	Tariff HT-Mixed	201	211
8	Tariff HTI/Industrial	414	434
9	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)		
	<b>TOTAL</b>	<b>26</b>	<b>26</b>
10	Tariff-HTAG/Agriculture	42	43
11	EHTI/Industrial	4	4
12	H.T. PW/Public Water Supply and Sewage	31	31
13	H.T. MES/Defence Establishments	12	13
14	H.T. Industrial (Steel Rolling)	13	13
15	Tariff HT-Industries (IT High Tech).	8	8
<b>C</b>	<b>Temporary Supply</b>		
16	Tariff-LT/Temporary	413	427
	<b>TOTAL</b>	<b>584121</b>	<b>597591</b>

### Connected Load

The past trends of the connected load from FY 2009-10 to FY 2012-13 as per the available data have been analysed. The Commission has considered the 3 year CAGR growth rate on the approved values of FY 2012-13 to project the connected load for FY 2013-14. The Commission has considered a zero growth rate, wherever the 3 year CAGR was negative.

The approved connected load for FY 2012-13 vis-à-vis the petitioner's submission has been tabulated below:

**Table 36: Connected Load approved by the Commission for FY 2013-14\***

Sr. No.	Category of Consumer	FY 13-14	
		Proposed	Approved
1(a)	Tariff LTD/Domestic and Non-Commercial	686749	702223
1(b)	Tariff LTD/Low Income Group	4,583	4560
1(c)	Tariff LTD/Domestic Mixed	85	85
2	Tariff-LTC/Commercial	258675	264192
3 (a)	Tariff-LTP/Motive Power	334885	333593
3 (b)	Tariff-LTP/ Ice Manufacturing	0	0
3 c)	Tariff-LTP/Mixed (Hotel Industries)	1,992.17	1992
4	Tariff-LTAG/Agriculture	66731	66474
5	Tariff-LTPL/Public Lighting	12762.01595	14033
6	Tariff-LT PWW/Public Water Works	12440	12431
<b>B</b>	<b>High Tension Supply</b>		
7	Tariff HT-Mixed	72972	77558
8	Tariff HTI/Industrial	233159	233159

Sr. No.	Category of Consumer	FY 13-14	
		Proposed	Approved
9	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	99423	99423
10	Tariff-HTAG/Agriculture	8469	8469
11	EHTI/Industrial	60135	60135
12	H.T. PW/Public Water Supply and Sewage	27,141	27141
13	H.T. MES/Defence Establishments	6690	6690
14	H.T. Industrial (Steel Rolling)	20045	20045
15	Tariff HT-Industries (IT High Tech).	3195	3195
C	Temporary Supply		
16	Tariff-LT/Temporary	2652	2626
17	Tariff-HT/Temporary		
	TOTAL	1,912,782	1,938,025

\* Connected Load for LT category is in kW and for HT in kVA

### **Energy Sales**

The Commission has analysed the past trends of the sales from FY 2007-08 to FY 2012-13. The 5 year CAGR (from 2007-08 to 2012-13) has been applied on the approved sales for the FY 2012-13 to arrive at the approved sales for FY 2013-14. The modified 5 year CAGR has been considered normally whereas in case the CAGR is negative, then zero growth is assumed for the consumer class. The Commission has considered the sales for the FY 2012-13 as approved in this order under the Review.

Consumers under the LTD/LIG – Low Income Group category are allowed a connected load of two 40Watts bulbs =  $2 \times 40 = 80$  W only as per the approved Tariff Schedule. Considering this as the basis, consumption of each consumer under the LIG category works out to be 175.2 ( $2 \times 40 \times 6 \times 365 / 1000$ ) kWh per consumer per year taking average usage of 6 hrs per day which is considered adequate in rural areas.

The Petitioner has claimed consumption of 9 MUs for 14232 consumers in this category, thereby giving an average consumption of 629 units/consumer/year. The Petitioner has not furnished any basis for arriving at the consumption assessed for such unmetered consumption.

The Commission, therefore, adopts the assessed consumption of 175.2 unit/year/ consumer arrived by the Commission as explained above. On the basis of this, the Commission approves the sales for the LTD/LIG consumers at 2.49 MU.

The Commission has further considered the sales within slabs in the proportion as proposed by the Petitioner. The approved Sales for the FY 2013-14 are shown in the table below:

**Table 37: Energy Sales approved by the Commission for FY 2013-14**

Sr. No.	Category of Consumer	FY 13-14 (Proposed)	FY 13-14 (Approved)
<b>A</b>	<b>Low Tension Supply</b>	<b>1229</b>	<b>1258</b>
1(a)	Tariff LTD/Domestic and Non - Commercial	834	904
1(b)	Tariff LTD/Low Income Group	9	2.49
1(c)	Tariff LTD/Domestic Mixed	4	5
2	Tariff LTC/Commercial	265	224
3	Tariff LTP/Motive Power	74	84
3(a)	Tariff-LTP/Mixed (Hotel Industries)	5	5
3 c	Tariff LTP/Ice Manufacturing	0	0
4	Tariff-LTAG/Agriculture	18	16
5	Tariff-LTPL/Public Lighting	16	15
6	Tariff-LT PWW/Public Water Works	2	2
<b>B</b>	<b>High Tension Supply</b>	<b>1690</b>	<b>1776</b>
7	Tariff HT-Mixed	208	290
8	Tariff HTI/Industrial	599	616
9	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	543	506
10	Tariff-HTAG/Agriculture	8	5
11	EHTI/Industrial	110	144
12	H.T. PW/Public Water Supply and Sewage	110	110
13	H.T. MES/Defence Establishments	34	34
14	H.T. Industrial (Steel Rolling)	56	49
15	Tariff HT-Industries (IT High Tech).	7	7
16	Tariff HT-Industries (ICE).		0
<b>C</b>	<b>Temporary Supply</b>		
17	Tariff-LT/Temporary	14	14
18	Tariff-HT/Temporary	1	1
<b>19</b>	<b>Total Demand/ Sale Within State</b>	<b>2,919</b>	<b>3,034</b>

#### 6.4 Intra-Transmission & Distribution Loss

##### Petitioner's submission

As mentioned earlier, ED – Goa has been taking up efforts to reduce the Distribution Loss to an optimum level. Various works under APDRP has drastically reduced the outages and the AT&C losses. The bifurcation of the feeders, new Sub-Stations has also helped in improving the voltage profile and reliability of power supply. Augmentation of the capacities of the Sub-Stations has helped in releasing additional loads to the consumers and consequent increase in revenue.

The distribution losses considered for FY 2013-14 are 12.50%. It may be noted that the distribution losses for the State of Goa are comparatively lower than many other state utilities and also competitive. ED-Goa expects that post the completion of various works carried out under Capital Expenditure; it would be in a better position to reduce the losses further.

### **Commission's analysis**

Commission observes the submissions made by the Petitioner for FY 2013-14 is at the same level that was approved in tariff order for FY 2012-13 dated June 27' 2012. Further, the Petitioner has not provided the energy audit, report for FY 2012-13.

As per the regulation 15 of JERC Tariff regulations, 2009

*"15. AT& C Losses*

- 1. The licensee shall give information of total AT&C losses in Previous Year and Current Year and the basis on which such losses have been worked out.*
- 2. The licensee shall also propose a loss reduction programme for the Ensuing Year as well as for the next three years giving details of the measures proposed to be taken for achieving the same.*
- 3. Based on the information furnished and field studies carried out and the loss reduction program proposed by the licensee, the Commission shall fix separate targets for reduction of Transmission and Distribution losses and for commercial efficiency for the period specified by the Commission:*

*Provided further that in the event of unbundling of the integrated utility, the Commission may fix separate transmission and distribution loss targets and commercial efficiency targets, as the case may be, for each successor licensee taking into account its area of operation, its consumer mix, state of the network, level of metering, metering initiatives planned, etc.*

- 4. The licensee shall conduct regular energy audit to substantiate its estimation of T&D losses. The licensee shall also furnish six monthly energy audit reports to the Commission.*

*The energy audit report for the first six months of the year shall be provided by November end of the same year. Similarly energy audit report for the last six months of the year shall be provided by May end of the next year.*

5. *In the absence of energy audit, the Commission may not accept the claim of the licensee and may proceed to fix the loss levels on the basis of any other information available and its own judgment.*

In the absence of energy audit, the Commission is not accepting the claim of the licensee. Therefore, the Commission has considered a normative reduction of 0.50% for the FY 2013-14

**Table 38: Intra-transmission losses & distribution losses approved by the Commission for FY 2013-14**

Particulars	FY 2012-13 Approved	FY 2013-14 Petitioner's Submission	FY 2013-14 Approved
Intra-transmission and distribution losses	12.50%	12.50%	12.00%

## 6.5 Inter-State Transmission Loss

### Petitioner's submission

PGCIL losses are on account of two regions – Western Region (WR) and Easter Region (ER). Hence, while computing the Energy Requirement, losses from both the regions has been considered. The transmission loss for WR & SR for FY 2013-14 have been considered at 3.68% and 9.50% respectively.

### Commission's Analysis

The Commission for projecting the inter-state transmission losses has considered the 52 weeks moving average pooled losses for the Western Region. Accordingly, the Commission **considers inter-state transmission losses for the western region at 3.55% as reasonable and approves the same for FY 2012-13. Further the Commission has considered the Southern Region losses at 8% as explained in the Para 5.5 of this order. The Commission would like to mention here that the actual interstate losses as recorded by the WRLDC would be considered at the time of true up.**

Since the Commission has considered the merit-order dispatch principles (discussed in detail in the section of Power Purchase Cost) the inter-state transmission losses in terms of the quantum of units have only been allowed to the extent required to meet the energy requirement in the State. The inter-state transmission losses approved are 157.62 MU. The



transmission charges have been allowed, as they are fixed in nature and the utility would have to pay for them irrespective of the units procured from the generator. The same is discussed in the following section of power purchase for FY 2013-14.

## 6.6 Power Purchase Quantum and Cost

### **Petitioner's submission**

The petitioner has submitted that the merit order dispatch principles are typically adopted when determining the power purchases from various generating stations. The petitioner submits since most of the power is tied-up through long term PPAs it has to purchase all the power that is available at its disposal. ED – Goa proposes to meet the energy requirement from Central Sector Stations, Co-generation, and IPPs etc. Due to the dynamic load profile & urgency in the system, ED-Goa submits that it may be required to purchase power from open market whenever there is shortage. During off-peak hours there is surplus available with ED-Goa and also due to unpredictable changes in demand the available power is disposed to exchanges. However ED-Goa tries to schedule less power during off-peak hours from the allocated quota to avoid commercial loss to the extent possible.

**Power purchase from Central Sector Stations:** The majority of power procurement of ED – Goa comes from Central Sector Stations which is around 84%. In absence of LGBR for FY 2013-14, ED-Goa has projected same quantum of FY 2012-13 for FY 2013-14.

Further due to long term PPAs with CGS on RTC basis, there is surplus power available to ED-Goa during off-peak period. ED-Goa has been taking every possible step to avoid commercial loss and accordingly schedules less power from CGS quota. The power stations where ED-Goa has planned to schedule less power in FY 2013-14 are tabulated below:

**Power Purchase from Renewable Energy:** ED-Goa would be procuring power of 20 MUs for Solar and 123 MUs for non-solar in FY 2013-14.

**Power Purchase from Co-generation:** It is submitted that considering the share of ED-Goa from the existing co-generation plants viz Goa Energy Private Ltd and Goa Sponge Private Ltd, the power purchase for FY 2013-14 is projected at same level as of FY 2012-13. Further there has been delay in arranging power from another co-generation plant M/s.Sesa Goa Limited due to Government approval process and subsequent approval from Commission for

PPA. It is expected that the power would be available in FY 2013-14 and accordingly 55.00 MUs have been considered from M/s.Sesa Goa Ltd.

**Power Purchase from Reliance IPP:** It is submitted that ED-Goa has not projected any power from Reliance IPP in FY 2013-14. However, petitioner submits that considering that PPA is valid till August 2014, it is committed to pay fixed charges which are factored in the ARR petition. ED-Goa would like to further mention that in case of urgency and requirement of power during peak periods and if grid/ exchange/ open market power is unavailable, power would be procured from Reliance IPP under intimation to Hon'ble Commission. The cost of such power purchase shall be claimed through FPPCA.

**Power Purchase from Open Market/ Traders:** The petitioner submits that it is estimated that ED-Goa would require 20 MW of peak power i.e 4 hours in morning and 3 hours in evening. So considering 7 hours requirement for 365 days and at 80% PLF, the power available would be around 41 MUs for FY 2013-14.

**Power Purchase cost of Open Market for FY 2013-14:** The power purchase cost for power to be procured from open market during peak hours is estimated at Rs.5.00/kWh for the purpose of ARR projections. ED-Goa will intimate Commission about such short-term power purchase and abide by the guidelines of Ministry of Power. The cost of power purchase from open market computes to Rs. **20.50** Crores

**Power Purchase from Renewable Energy Sources:** Total quantum of renewable energy to be procured would be **143** MUs at a total cost of Rs. **43.21** Crores. However ED-Goa would like to mention that it is pursuing the matter of RPO in case no. 61/2012 wherein it has pleaded for consideration of meeting RPO for the power purchased from co-generation sources viz Goa Energy Pvt Ltd and Goa Sponge Pvt Ltd which are Waste Heat Recovery based power plants and are qualified under Urban & Industrial Waste source of Renewable Energy Source of Ministry of New & Renewable Energy (MNRE). ED-Goa would like to submit that presentation/ projection of non-solar power in this petition is subject to the order in the matter of case no. 61/2012.

**Power purchase from Co-Generation:** ED-Goa has power purchase agreement with Goa Energy Private Limited (GEPL) and Goa Sponge & Power Limited (GSPL). Further ED-Goa has also entered into PPA with Sesa Goa Ltd for which approval are being taken from concerned authorities.

The table below shows the Power purchase for FY 2013-14 submitted by the Petitioner

Table 39: Summary of Power purchase cost submitted by the petitioner (FY 2013-14)

Sr. No.	Source	Purchase (MU)	VC (Ps/ Unit)	FC (Rs. Crore)	VC (Rs.Crore)	Total (Rs.Crore)
1	2	10	13	14	15	18
<b>A</b>	<b>Central Sector Power Stations</b>					
<b>I</b>	<b>NTPC</b>	<b>2,943.00</b>		<b>211.86</b>	<b>359.81</b>	<b>571.67</b>
	<i>KSTPS</i>	<i>1,507.43</i>	<i>95.40</i>	<i>82.13</i>	<i>143.81</i>	<i>225.94</i>
	<i>VSTPS - I</i>	<i>230.33</i>	<i>149.47</i>	<i>16.44</i>	<i>34.43</i>	<i>50.87</i>
	<i>VSTPS - II</i>	<i>95.99</i>	<i>140.97</i>	<i>6.21</i>	<i>13.53</i>	<i>19.74</i>
	<i>VSTPS -III</i>	<i>85.09</i>	<i>140.58</i>	<i>9.21</i>	<i>11.96</i>	<i>21.18</i>
	<i>KGPP</i>	<i>42.80</i>	<i>234.38</i>	<i>9.16</i>	<i>10.03</i>	<i>19.19</i>
	<i>GGPP</i>	<i>48.98</i>	<i>229.55</i>	<i>10.74</i>	<i>11.24</i>	<i>21.99</i>
	<i>SIPAT- I</i>	<i>111.65</i>	<i>139.78</i>	<i>20.40</i>	<i>15.61</i>	<i>36.01</i>
	<i>FSTPS</i>	-	-	-	-	-
	<i>KSTPS-III</i>	<i>37.81</i>	<i>93.98</i>	<i>6.04</i>	<i>3.55</i>	<i>9.59</i>
	<i>TSTPS</i>	-	-	-	-	-
	<i>KHSTPS-I</i>	-	-	-	-	-
	<i>RSTPS</i>	<i>710.00</i>	<i>150.79</i>	<i>41.42</i>	<i>107.06</i>	<i>148.48</i>
	<i>SIPAT- II</i>	<i>72.91</i>	<i>117.82</i>	<i>10.09</i>	<i>8.59</i>	<i>18.68</i>
	<i>Mouda</i>	-	-	-	-	-
	<i>VSTPS -IV (first 6 months)</i>	-	-	-	-	-
	<i>VSTPS -IV (next 6 months)</i>	-	-	-	-	-
			-			
	<i>Add: Impact of Supplementary Orders CERC</i>					-
						-
<b>II</b>	<b>RGPPL</b>	<b>51.40</b>	<i>500.83</i>		<b>25.74</b>	<b>25.74</b>
<b>III</b>	<b>NPCIL</b>	<b>185.00</b>			<b>48.00</b>	<b>48.00</b>
	<i>KAPS</i>	<i>101.08</i>	<i>238.60</i>		<i>24.12</i>	<i>24.12</i>
	<i>TAPS</i>	<i>83.92</i>	<i>284.61</i>		<i>23.88</i>	<i>23.88</i>
	<i>Less: Rebate</i>					
<b>IV</b>	<b>Traders</b>	<b>41.00</b>	<i>500.00</i>		<b>20.50</b>	<b>20.50</b>
	<i>NVVN Limited / Open Market</i>	<i>41.00</i>	<i>500.00</i>		<i>20.50</i>	<i>20.50</i>
						-
						-
<b>B</b>	<b>Within State Generations</b>					
<b>I</b>	<b>CO- GENERATION</b>	<b>148.46</b>	<b>240.00</b>	-	<b>35.63</b>	<b>35.63</b>
	<i>Goa Energy Private Limited</i>	<i>80.04</i>	<i>240.00</i>		<i>19.21</i>	<i>19.21</i>

Sr. No.	Source	Purchase (MU)	VC (Ps/ Unit)	FC (Rs. Crore)	VC (Rs.Crore)	Total (Rs.Crore)
	<i>Goa Sponge &amp; Power Limited</i>	13.42	240.00		3.22	3.22
	<i>Sesa Goa Limited</i>	55.00	240.00		13.20	13.20
<b>C</b>	<b>IPP:</b>					
	<b><i>Reliance Infra</i></b>	-	-	<b>19.83</b>	-	<b>19.83</b>
<b>D</b>	<b>Renewable Energy Source:</b>	<b>143.49</b>	<b>301.16</b>	-	<b>43.21</b>	<b>43.21</b>
	<i>Non-Solar</i>	122.99			43.21	43.21
	<i>Solar</i>	20.50				-
<b>E</b>	<b>OTHER CHARGES</b>	-	-	-	-	<b>103.36</b>
	<i>PGCIL Transmission Charges, Wheeling &amp; Other Charges</i>					103.36
<b>F</b>	<b>Total</b>	<b>3,512.35</b>	<b>151.72</b>	<b>231.69</b>	<b>532.90</b>	<b>867.95</b>

### Commission's View

The following approach has been adopted by the Commission for approving the power procurement from NTPC stations, NPCIL stations and power from co-generation plants.

#### ➤ **Central Generating Stations – National Thermal Power Corporation and NPCIL**

The petitioner has firm allocation in the Central Sector Generating Stations of NTPC from the following stations

- Korba Super Thermal Power Station Stage 1 ,2 and 3
- Vindhyachal Super Thermal Power Station Stage I, II & III
- Kawas Gas Power Station
- Gandhar Gas Power Station
- Sipat Super Thermal Power Station Stage I &2

- Ratnagiri Gas and Power Pvt Ltd.
- Ramagundam Super Thermal Power Station Stage 1 and 2

The petitioner has submitted that the scheduling of power from Kawas, Gandhar VSTPS-1, RGPPL and RSTPS for FY 2013-14 had been assumed on a lower side as there were surplus expected in the system. The Commission has also noticed the surplus available in the system. However the surplus has to be treated in line with the merit order principles to optimize the purchase quantum. Accordingly, the Commission has considered Merit order dispatch for the purchased quantum.

The Commission while estimating the energy availability from the above stations has considered the following assumption:

- **Allocation of Share:** The Commission has considered the firm allocation and allocation from the unallocated quota from the above stations except Ramagundam STPS as per the notification of the Western Region Power Committee vide WRPC/Comml-I/6/Alloc/2013/308 dated March 12, 2013. The allocation for Ramagundam STPS is considered as per the notification of the Southern Region power Committee dated November 29, 2012.
- **Gross Energy Availability:** The Commission has estimated the gross energy availability from the existing NTPC stations based on the installed capacity and the average Plant Load Factor for the past two years (FY 2010-11 and FY 2011-12). The Net energy sent out has been considered after reducing the applicable auxiliary consumption as per the CERC Tariff Regulation, 2009.
- **New Station:** Further, it is also pertinent to mention here that the first unit of VSTPS IV and Mouda STPS Stage -1, attained COD and the power is considered available for FY 2013-14. The Commission has considered the PLF at 85% equivalent to the Normative Availability specified in the CERC Generation Regulation, 2009.
- **Energy Available to the Petitioner:** The effective share from the stations is applied on the energy sent out to arrive at the energy available for the petitioner from respective stations.

The Commission has considered the following assumptions to arrive at the Power purchase cost for the FY 2013-14 from the NTPC stations:

- **Fixed Charges:** The fixed charges are considered based on the formula specified for the stations in the CERC Tariff Regulations, 2009. The Annual Fixed Charges for each stations have been taken as per the latest Tariff orders for the respective stations
- **Variable Charges:** The Commission has considered the average variable cost for the period April 2012 to September 2012 submitted by the petitioner for consideration of the per unit variable charges for the FY 2012-13.
- **Merit Order Despatch:** Further, the NTPC stations have been subjected to merit order dispatch and accordingly the power purchase quantum and variable cost are approved. However, the fixed charges are approved for all stations. Accordingly, the Commission approves the following availability from NTPC stations based on the merit order dispatch principles

**Table 40: Approved Power purchase quantum from NTPC stations under merit order dispatch**

Source	Capacity (MW)	Average PLF	Weighted Average Allocation		Gross Generation (MUs)	Auxilliary Consumption (%)	Net Generation (MUs)	Purchase (MUs)	PGCIL Losses (MUs)	Energy Available at Periphery (MUs)
			%	MW						
KORBA - III	500	86.13	1.09%	5.45	3772	6.50%	3527	38.5	1.4	37.1
KSTPS	2100	86.13	10.12%	212.59	15844	8.50%	14498	1,467.6	52.1	1,415.5
SIPAT Stage 2	1000	95.23	1.16%	11.59	8342	6.50%	7800	90.4	3.2	87.2
SIPAT - Stage I	1980	85.00	1.20%	23.78	14743	6.50%	13785	165.6	5.9	159.7
VSTPS -III	1000	92.50	1.16%	11.59	8103	6.50%	7576	87.8	3.1	84.7
VSTPS IV	1000	85.00	0.66%	6.55	7446	6.50%	6962	45.6	1.6	44.0
VSTPS - II	1000	92.50	1.36%	13.56	8103	6.50%	7576	102.7	3.6	99.1
VSTPS - I	1260	92.50	2.93%	36.94	10209	9.00%	9290	272.4	9.7	262.7
RSTPS	2100	91.68	4.76%	99.96	16865	7.20%	15651	745.0	59.6	685.4
GGPP	657.39	70.50	1.92%	12.63	4060	3.00%	3938	75.7	2.7	73.0
KGPP	656.2	69.10	1.89%	12.37	3972	3.00%	3853	15.0	0.5	14.4
RGPPL	1967	91.67	1.00%	19.67	15796	3.00%	15322	153.2	-	-
MOUDA STPS	1000	85.00	0.66%	6.55	7446	6.50%	6962	45.6	-	-
<b>Total</b>	<b>16221</b>			<b>473</b>				<b>3305.0</b>	<b>143.4</b>	<b>2962.7</b>

Note: Part availability considered from KGPP and no availability considered from RGPPL and Mouda STPS under the merit order principles

According to the approved energy, the commission has approved the following cost from the NTPC stations:

**Table 41: Approved Power purchase Cost from NTPC stations**

Source	Energy Available at Periphery (MUs)	Fixed Charges (Rs Crores)	Variable Charges (Rs Per Unit)	Variable Charges (RS Crores)	Total Charges (Rs Crores)
KORBA - III	37.11	5.82	0.94	3.62	9.44
KSTPS	1,415.55	83.57	0.95	140.01	223.58
SIPAT Stage 2	87.15	10.86	1.18	10.65	21.50
SIPAT - Stage I	159.69	18.71	1.40	23.14	41.86
VSTPS -III	84.65	9.93	1.41	12.34	22.27
VSTPS IV	44.00	5.21	1.41	6.41	11.63
VSTPS - II	99.07	6.81	1.41	14.48	21.29
VSTPS - I	262.69	18.13	1.49	40.71	58.84
RSTPS	685.39	45.85	1.51	112.34	158.19
GGPP	72.97	11.31	2.30	17.37	28.67
KGPP	14.45	9.47	2.34	3.51	12.98
RGPPL	-	19.20	2.67	0.00	19.20
MOUDA STPS	-	8.42	3.01	0.00	8.42
<b>Total</b>	<b>2,962.7</b>	<b>253.3</b>		<b>384.6</b>	<b>637.9</b>

➤ **Central Generating Stations – Nuclear Power Corporation of India Limited**

The petitioner has firm allocation in the Central Sector Generating Stations of NPCIL from the following stations

- Kakrapara Atomic Power Station
- Tarapur Atomic Power Station

The Commission while estimating the energy availability from the above stations has considered the following assumption:

- **Allocation of Share:** The Commission has considered the firm allocation and allocation from the unallocated quota from the above stations as per the notification of the Western Region Power Committee vide WRPC/Comml-1/6/Alloc/2013/308 dated March 12, 2013.
- **Gross Energy Availability:** The Commission has estimated the gross energy availability from the existing NPCL stations based on the installed capacity and the average Plant Load Factor for the past two years (FY 2010-11 and FY 2011-12) as recorded by CEA in its monthly generation reports. The Net energy sent out is considered after reducing the auxiliary consumption.

- **Energy Available to the Petitioner:** The effective share from the stations is applied on the energy sent out to arrive at the energy available for the petitioner from respective stations.

The Commission has considered the following assumptions to arrive at the single part tariff for the NPCIL stations during FY 2013-14:

- **Variable Charges:** The Commission has considered the average variable cost for the period April 2012 to September 2012 submitted by the petitioner for consideration of the per unit variable charges for the FY 2013-14.
- **Merit order Dispatch:** The Commission has considered the nuclear plants as must run and has not subjected them for merit order dispatch.

Accordingly, the Commission approves the following availability from NPCIL stations :

T

**Table 42: Approved Power purchase quantum from NPCIL stations under merit order dispatch**

Source	Capacity (MW)	Average PLF	Weighted Average Allocation		Gross Generation (MUs)	Auxiliary Consumption (%)	Net Generation (MUs)	Purchase (MUs)	PGCIL Losses (MUs)	Energy Available at Periphery (MUs)
			%	MW						
KAPS	440	97.99	3.52%	15.47	3777	10.00%	3399	119.5	4.2	115.3
TAPS	1080	80.01	1.18%	12.73	7570	10.00%	6813	80.3	2.9	77.5
<b>Total</b>	<b>1520</b>			<b>28.21</b>				<b>199.9</b>	<b>7.1</b>	<b>192.8</b>

According to the approved energy the commission has approved the following cost from the NPCIL stations:

**Table 43: Approved Power Purchase Cost for NPCIL Stations**

Source	Energy Available at Periphery (MUs)	Fixed Charges (Rs Crores)	Variable Charges (Rs Per Unit)	Variable Charges (RS Crores)	Total Charges (Rs Crores)
KAPS	115.30	-	2.39	28.52	28.52
TAPS	77.47	-	2.85	22.86	22.86
<b>Total</b>	<b>192.77</b>	-		<b>51.38</b>	<b>51.38</b>



## ➤ Co-Generation

The petitioner has contracted Power from the following Co-Generation plants

- Goa Energy Private Limited
- Goa Sponge and power Limited
- Sesa Goa

**Pending the decision on petition no. 61/2012 filed by the petitioner for consideration of meeting RPO for the power purchased from co-generation sources, Commission for the purpose of this order has considered the energy purchase from renewable sources of energy for meeting their RPO obligations and carry forward of RPO obligations to the next year as per the JERC (Procurement of Renewable energy) Regulations, 2010 notified on November 30'2010; The effect, if any, on account of the pending decision in the aforesaid petition or any legislature notified in this regard, shall be considered at the time of review/truing up of ARR of FY 2013-14.**

The Commission has considered the following assumptions for estimation of energy availability and Power Purchase cost from the above stations:

- **Energy Availability:** The energy availability has been considered as per the petitioner's submission.
- **Variable Charges:** As observed from the petitioner's submission, the negotiated single part tariff for such power at Rs 2.40 per unit from all the Co-gen. The Commission finds the rate to be prudent and approves the same for FY 2013-14.
- **Merit Order Dispatch:** The Commission has considered these plants as must run stations and are not subjected to merit order dispatch.

Accordingly, the Commission has approved the following availability and cost for Co-Generation.

**Table 44: Approved Power purchase quantum and Cost for Co-Gen**

Source	Purchase (MUs)	Energy Available at Periphery (MUs)	Fixed Charges (Rs Crores)	Variable Charges (Rs Per Unit)	Variable Charges (RS Crores)	Total Charges (Rs Crores)
Goa Energy Private Limited	80.04	80.04	0	2.40	19.21	21.61
Goa Sponge & Power Limited	13.42	13.42	0	2.40	3.22	5.62
Sesa Goa	55.00	55.00	0	2.40	13.20	15.60
<b>Total</b>	<b>148.46</b>	<b>148.46</b>	<b>-</b>		<b>35.63</b>	<b>42.83</b>

➤ **IPP**

The petitioner has contracted Power from M/s Reliance Infrastructure Limited 48 MW Gas Based Combined Cycle Power Plant.

The Petitioner has not projected any purchase from the IPP mentioned above. The Petitioner in its submission has submitted as follows:

**Quote “Power Purchase from Reliance IPP:** *It is submitted that ED-Goa has not projected any power from Reliance IPP in FY 2013-14. However considering that PPA is valid till August 2014, it is committed to pay fixed charges which are factored in the ARR petition. ED-Goa would like to further mention that in case of urgency and requirement of power during peak periods and if grid/ exchange/ open market power is unavailable, power would be procured from Reliance IPP under intimation to Hon’ble Commission. The cost of such power purchase shall be claimed through FPPCA”.* **Unquote**

The Commission has also observed that the power from the IPP in the first half of FY 2012-13 was Rs 13.21 per unit, which can be termed as an uneconomical purchase. **The Commission accordingly has not considered any purchases from the IPP. Further, such variation cannot be claimed as the part of the FPPCA charge as the IPP do not form the part of approved stations.**

However, as the petitioner is under obligation for the PPA the fixed charges would be payable to the IPP even if the power is not drawn. Therefore, the Commission has considered the fixed cost provisionally of Rs 19.83 Crores. The fixed charges approved are Provisional and subject to approval of the Tariff of the IPP by the Commission under the Section 62 of the Electricity Act, 2003 and actual payment to the IPP by the petitioner.

➤ **Renewable Energy Obligation**

As per JERC (Procurement of Renewable Energy) Regulations 2010 clause 1 sub clause (1)

*Each distribution licensee shall purchase electricity (in kWh) from renewable energy sources, at a defined minimum percentage of the total consumption of all the consumers in its area during a year.*

The Petitioner has to purchase 3% of total energy purchase for sale to the consumers in its area as power purchase from renewable sources for FY 2012-13 including 0.40% for Solar and 2.60% for Non-Solar. The petitioner has submitted that the RPO obligation for the previous years and the current year would be cumulatively achieved in the three

years starting FY 2013-14. Accordingly the petitioner at Table 4-16 of its petition has considered the RPO purchases for solar and non-solar.

The Commission has therefore considered the submission of the petitioner and accordingly allowed the procurement of renewable energy provisionally as proposed by the petitioner.

**Table 45: Approved Power purchase quantum and Cost from Renewable Energy Sources**

Source	Purchase (MUs)	PGCIL Losses	Energy Available at Periphery (MUs)	Variable Charges (Rs Per Unit)	Variable Charges (RS Crores)	Total Charges (Rs Crores)
Non Solar	122.99	-	122.99	400	49.20	49.20
Solar	20.50	-	20.50	900	18.45	18.45
<b>Total</b>	<b>143.49</b>	-	<b>143.49</b>		<b>67.65</b>	<b>67.65</b>

➤ **Transmission Charges (PGCIL, NRLDC F&C and Reactive Energy Charges)**

The Commission has considered the PoC rates as specified by the Central Electricity Regulatory Commission vide its order No. L-1/44/2010-CERC dated 30th November 2012 approving the Transmission charges for the period October to March 2013. Accordingly, the Transmission charges for usage of the PGCIL network are approved at **Rs 89.59 Cr.**

The petitioner also utilizes the network of KPTCL for wheeling the power scheduled from Ramagundam STPS. The wheeling charges payable as submitted by the petitioner are 2.5 paise / unit which is pursuant to a contract between the petitioner and KPTCL. The Commission therefore approves **Rs 1.86 Cr** as transmission charges payable to KPTCL for the power wheeled from the KPTCL network.

Further, the Commission also allows the petitioner's claim of other charges for FY 2013-14 including WR and SR fees, Open access charges, reactive energy charges equivalent to the actual of FY 2011-12 amounting to **Rs 6.05 Cr.**

Accordingly, the total Transmission charges approved for the FY 2013-14 are Rs 90.89 Crores:

➤ **Power Purchase Cost Approved**

For determining the power purchase cost, merit order dispatch principles are applied as elaborated in the foregoing. The must-run stations have been assumed at the top of the

merit order and variable cost incurred for meeting the energy requirement within the state has been calculated from these plants at the top of the merit order.

In accordance with the foregoing paragraphs the Commission has approved the following Power Purchase Cost.

**Table 46: Power Purchase cost approved for FY 2013-14**

Source	Purchase (MUs)	PGCIL Losses	Energy Available at	Fixed Charges (Rs Crores)	Variable Charges (RS)	Total Charges (Rs Crores)
NTPC	3,305.0	143.4	2,962.7	253.30	384.57	637.87
NPCIL	199.9	7.1	192.8	-	51.38	51.38
Co-Gen	148.46	-	148.46	-	35.63	35.63
IPP	-	-	-	19.83	-	19.83
Renewable Energy Purchases	143.49		143.49		67.65	67.65
Transmission Charges						97.50
Total	3,796.8	150.5	3,447.4	273.1	539.2	909.9

## 6.7 Energy Balance

### Petitioner's Submission

As explained in the previous chapter, PGCIL losses are on account of two regions – Western Region (WR) and Eastern Region (ER). Hence, while computing the Energy Requirement, losses from both the regions has been considered. The transmission loss for WR & SR for FY 2013-14 have been considered at **3.68%** and **9.50%** respectively.

Accordingly the Energy Balance for the year FY 2013-14 is computed and presented in the table below:

Sr. No.	Item	Apr-Mar (Proj) - WR	Apr-Mar (Proj) - SR	Apr-Mar (Proj) WR + SR
		FY 2013-14	FY 2013-14	FY 2013-14
1	2	3	4	5
1	Retail Sales to Consumers			2,919
	<b>Add: Distribution Losses - %</b>			12.50%
	Distribution Losses - MUs			417
<b>2</b>	<b>Net Energy Requirement at Goa Periphery</b>			<b>3,336</b>
<b>3</b>	<b>Total Power Scheduled at Goa Periphery</b>			
	Scheduled Power from NTPC, RGPL, NPCIL & RSTPS	2,469	710	3,179
	Add: Power from Open Market during peak	41	-	41
	Less: (Surplus Power diversion to exchange during off-peak)	(17)	-	(17)
	<b>Total</b>	<b>2,493</b>	<b>710</b>	<b>3,203</b>
<b>4</b>	<b>Less: PGCIL Losses - %</b>	3.68%	9.50%	4.97%
	PGCIL Losses - MUs	92	67	159
<b>5</b>	<b>Total Power Purchased within Goa State</b>			
	Add: Co-generation	148	-	148
	Add: Renewable Energy Sources	143	-	143
	Add: Independent Power Producers (IPP)	-	-	-
	<b>Total</b>	<b>292</b>	<b>-</b>	<b>292</b>
<b>6</b>	<b>Energy Input at Periphery after PGCIL Losses &amp; State Power Purchase</b>	<b>2,693</b>	<b>643</b>	<b>3,336</b>

### Commission's analysis

The Commission has approved the 3448.58 MU that would be required to meet the energy requirement within the state to the retail consumers, assuming distribution losses of 12.00% on the approved sales of 3034.75 MU. The Commission has considered the merit order dispatch principles to meet the energy requirement within the state. Accordingly, only the power purchase units as required to meet the requirement within the territory have been considered i.e. 3448.58 million units and after considering the inter-state transmission losses of 116.52 million units, the net power purchase effectively arrived at 3565.10 million units. In accordance with the consideration of merit order dispatch principles for estimation of purchase of power; energy sale outside the state through the common pool/UI has not been allowed by the Commission for FY 2013-14. The approved energy balance for the FY 2013-14 is shown in the table below:

**Table 47: Energy balance approved by the Commission for FY 2013-14**

Sr. No.	Particulars	FY 13-14	
		Proposed	Approved
<b>A)</b>	<b>ENERGY REQUIREMENT</b>		
1	Sales within the State/UT	2,919.00	3,033.75
2	Distribution losses		
i)	%	12.50%	12.00%
ii)	MU	417.00	413.69
3	Energy required at State Periphery for Sale to Retail Consumers	3,336.00	3,447.44
4	Add: Sales to common pool consumers/ UI		
i	Sales outside state/UT : UI/Under drawl	17.12	
ii)	Sales		
	a) Through PX		
	b) Traders		
iii	Sales to other distribution licensees		
	a) Bilateral Trade		
	b) Banking Arrangement (NVVN)		
<b>5</b>	<b>Total Energy Requirement for State</b>	<b>3,353.12</b>	<b>3,447.44</b>
6	Transmission losses		
ii)	MU	159.23	150.52
8	Total Energy at Generator end	3,512.35	3,597.96
<b>B)</b>	<b>ENERGY AVAILABILITY / PURCHASED</b>		
1	Net thermal generation (Own+ IPP + Share from Central Stations)	3,327.86	3,454.47
a	Share from Central Sector (NTPC + NPCIL)	3,179.40	3,306.01
b	IPPs		
c	Co-generation within State (GEPL, GSPL & Sesa)	148.46	148.46
2	Net hydel generation (own+shared)		
3	Power Purchased from	184.49	143.49
	a) Common Pool/UI/ OD		
	b) Traders/ Exchanges	41.00	
	c) Renewable Energy Sources	143.49	143.49
	d) Banking Arrangement (NVVN)		
<b>4</b>	<b>Net power purchase</b>	<b>3,512.35</b>	<b>3,597.96</b>
<b>5</b>	<b>Net Availability (after considering transmission losses)</b>	<b>3,353.12</b>	<b>3,447.44</b>

## 6.8 Operation and Maintenance Expenses

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

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

The Petitioner maintains its accounts on cash basis. Further, the Petitioner has submitted that it does not maintain its accounts purely in the above categorisation of O&M heads. It has various heads such as salaries, medical treatment, domestic travelling, office expense, other charges towards supply materials; minor repair works etc which are categorised into O&M heads for the purpose of Aggregate Revenue Requirement.

### **Employee Cost**

#### **Petitioner's submission**

The expense head of employee cost consists of salary and allowance, bonus, Leave Travel Concession (LTC) & Honorarium etc. For the year FY 2013-14, ED-Goa has projected the employee cost by escalating the Employees Expense for previous on the basis of Wholesale Price Index.

The Employee Expense for FY 2013-14 is arrived at by considering escalation of 8.94% which is as per WPI data for the year FY 2011-12. The employee expense for FY 2013-14 works out to Rs. 149.40 Crores considering inflation over FY 2012-13 revised estimates.

#### **Commission's analysis**

##### **As per JERC Tariff Regulations -**

*O&M expenses as approved by the Commission for the first time for a year shall be considered as base O&M expenses for determination of O&M expenses for subsequent years;*

*Base O&M expenses as above shall be adjusted according to variation in the rate of WPI per annum to determine the O&M expenses for subsequent year, where WPI is the Wholesale Price Index on April 1 of the relevant year;*

The Commission is concerned about the relatively high cost of Employees in the ED-Goa. The Commission has given directions in this regard at Para 5.8 of this order which may be referred and complied.

The Commission has approved employee cost as Rs 136.44 Cr for ARR for Review of FY 2012-13 for reasons explained therein. The latest WPI index till March 2012 has been used as available on the website of Economic Advisor, Ministry of Commerce and Industry for estimation of the increase in the average of WPI index and considering the increase in WPI of FY 2011-12 over FY 2010-11) employee Cost for FY 2013-14 works out to Rs. 148.64 Crores. **The Commission considers the employee cost of Rs 148.64 Crores for FY 2013-14.**

**Table 48: Employee expenses approved by the Commission for FY 2013-14 (Rs Cr)**

Particulars	FY 2012-13 Approved	FY 2013-14 Petitioner's Submission	FY 2013-14 Approved
Employee Expenses	136.44	149.40	148.64

### **A&G Expenses**

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

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

### **Petitioner's submission**

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

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

The A&G expenses are projected considering inflation of 8.94% over revised estimates of FY 2012-13.



### **Commission's analysis**

The Commission has considered A&G expenses as Rs 8.59 Crores for Review of ARR for FY 2012-13 for reasons explained therein. In line with the JERC Tariff Regulations 2009, taking Rs. 8.59 Crores for FY 2012-13 and applying escalation of 8.94% (for reasons explained above in section of employee expenses), the A&G expense works out at Rs 9.36 Crores for FY 2013-14.

**The Commission considers the A&G expenses of Rs 9.36 Crores as reasonable and approves the same for FY 2013-14.**

### **Repair & Maintenance Expenses**

#### **Petitioner's submission**

In line with methodology adopted in FY 2012-13, ED-Goa has projected R&M expenses as submitted to Government of Goa in Budget Estimates. ED-Goa has been undertaking various Repairs and Maintenance activities as a step towards improvement of systems, reduction in breakdowns, reduction in response time and increasing preventive maintenance.

#### **Commission's analysis**

The Commission is of the view that adequate R&M expenses are necessary for maintenance of infrastructure and for ensuring proper Standard of Performance of the integrated utility.

The Commission has considered R&M expenses as Rs 18.55 Crores for Review of ARR for FY 2012-13 for reasons explained therein. In line with the JERC Tariff Regulations 2009, taking Rs. 18.55 Crores for FY 2012-13 and applying escalation of 8.94% (for reasons explained above in section of employee expenses), the A&G expense works out at Rs 20.21 Crores for FY 2013-14.

**The Commission considers the A&G expenses of Rs 20.21 Crores as reasonable and approves the same for FY 2013-14.**

#### **Summary of O&M Expenses approved for FY 2013-14**

The O&M expenditure estimated by the Petitioner vis-à-vis approved by the Commission for FY 2013-14 is given below:

**Table 49: O&M expenses approved by the Commission for FY 2013-14**

Sr. No.	Particulars	FY 2013-14	
		Estimates	Approved
1	Employee Expenses	149.40	148.64
2	A&G Expenses	9.36	9.36
3	R&M Expenses	25.07	20.21
4	<b>Total O&amp;M Expenses</b>	<b>183.83</b>	<b>178.22</b>

## 6.9 Capital Expenditure and Capitalisation

### Petitioner's submission

The Petitioner has submitted that in line with the Commission's directive it has submitted a detailed Capital Investment Plan to the Hon'ble Commission on 30th January 2013 for the Hon'ble Commission's approval.

ED-Goa proposes to incur an amount of Rs. 266.11 Crores towards Capital Expenditure, out of which the works proposed to be incurred from the Electricity Duty Reserve/ Fund Accounts are estimated to be Rs. 75.00 Crores. The total capitalization of the assets from the above capital expenditure is projected at Rs. 192.77 Crores for FY 2013-14.

### Commission's analysis

The Commission observes that the capital expenditure and the capitalization submitted by the Petitioner for FY 2013-14 is required to meet the increasing demand.

The treatment of the capital expenditure and capitalisation is the same as discussed in the chapter on Review for FY 2012-13. As per the Regulations 21 of JERC for the State of Goa and UTs (Terms and conditions for determination of Tariff), Regulation 2009 specifies that the licensee shall propose in their filings, a detailed capital investment plan, showing ongoing projects separately that will spill into the ensuing year and new projects (along with their justification) that will commence in the ensuing year. The Petitioner has submitted the capital investment plan as per the regulations, which is being considered separately for the approval.

**However, for the purpose of the ARR for FY 2013-14 the Commission has considered the capitalisation of Rs 192.77 Crores as submitted by the Petitioner.**

## 6.10 GFA and Depreciation

### **Petitioner's submission**

The Opening Balance of GFA for FY 2013-14 comes to around Rs. 958.40 Crores. The additions to GFA are estimated to be around Rs. 192.77 Crores

### **Commission's analysis**

#### **GFA and Capitalisation**

The petitioner admittedly, at present does not have a reliable fixed asset register to support the claim for the opening Gross Fixed Assets for FY 2011-12 and has not claimed the same for the purpose of computation of the ARR. The Commission is of the view that fixed assets register records the asset wise details and various types of information can be extracted from the same including the aging schedule of the asset, present value and capital works in progress etc. As such in the absence of updated fixed asset registers, the opening value of fixed assets is on assumption basis.

As per Regulation 26 of JERC Tariff Regulations, *"depreciation shall be computed on historical cost of the assets including additions during the year"*.

Further, Regulation 22 mandates that *"Investments made prior to and up to 31<sup>st</sup> March immediately preceding the date of the notification of these regulations or date of receipt of a petition of tariff determination whichever is earlier shall be considered on the basis of audited accounts or approvals already granted by the Commission"*.

In addition, in the absence of audited accounts from FY 2007-08, the opening value of the assets is on an assumption basis and is not allowed.

The Petitioner has projected the addition of assets of Rs. 192.77 Cr for FY 2013-14. The Commission, considering the reasonableness of the expenditure approves the capitalization of Rs. 192.77 Cr for FY 2013-14. This amount is the net addition to the assets on the approved closing balance of FY 2012-13 of Rs 207.30 Cr, resulting in the closing GFA approved for FY 2013-14 of Rs 400.07 Cr.

**Table 50: Gross Fixed Assets approved by the Commission for FY 2013-14**

Sr. No.	Particulars	FY 2012-13	FY 2013-14	
		Approved by the Commission	Estimates	Approved by the Commission
1	<b>Opening Value of Assets at the beginning of the year</b>	126.00	207.30	207.30
2	Additions during the year	81.30	192.77	192.77
3	Value of assets sold/disposed off			
4	<b>Gross Fixed Assets at the end of year</b>	<b>207.30</b>	<b>400.07</b>	<b>400.07</b>

### Depreciation

In the absence of the Fixed Asset Register and the audited accounts for the previous years, the Petitioner has not considered any depreciation on the opening value of gross fixed assets of FY 2011-12. The Commission has accordingly considered the depreciation on the addition to the fixed assets for the FY 2013-14 on the closing GFA approved for FY 2012-13, taken as the opening GFA for FY 2013-14.

Further, the Regulation 26 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 specifies that depreciation for the assets shall be calculated annually at the rates specified by CERC from time to time. The effective rate of depreciation for distribution assets is 5.28% vide Appendix-III (Depreciation schedule of CERC (Terms and Conditions of Tariff) Regulations, 2009. As a standard practice, and as per the Regulation 26 of the JERC Tariff Regulations, depreciation is computed on the average value of assets at the end of the year, which is reasonable and appropriate method. Based on this assumption, the depreciation for the FY 2012-13 works out at Rs 16.03 Cr.

Further, the Commission is of the view that *depreciation is a charge for use of assets deployed in rendering the service for which Tariff is being determined. Say total assets are Rs. 100 Cr, obsolete unusable assets are of Rs. 20 Cr plus assets written off plus assets not written off or not declared obsolete but not usable lying in store etc cannot be considered for determination of tariff. The asset that will qualify for depreciation is only the net value, which are deployed to provide service to the consumer. This value will be adjusted further for depreciation already claimed.*

The table below captures the depreciation as submitted by the Petitioner and as approved by the Commission for FY 2013-14.

**Table 51: Depreciation approved by the Commission for FY 2013-14**

Sr. No.	Particulars	FY 2012-13	FY 2013-14	
		Approved by the Commission	Estimates	Approved by the Commission
1	<b>Opening Value of Assets at the beginning of the year</b>	126.00	207.30	207.30
2	Additions during the year	81.30	192.77	192.77
3	Value of assets sold/disposed off			
<b>4</b>	<b>Gross Fixed Assets at the end of year</b>	<b>207.30</b>	<b>400.07</b>	<b>400.07</b>
<b>5</b>	<b>Rate of depreciation</b>	5.28%	5.28%	5.28%
<b>6</b>	<b>Depreciation</b>	<b>8.80</b>	<b>16.03</b>	<b>16.03</b>

### 6.11 Interest and Finance Charges

#### Petitioner's submission

The Regulation 29 provides for Interest and Finance Charges on Loan. ED-Goa has submitted that the majority of capital assets are created out of the equity contribution from Government of Goa and the actual borrowing of loan is only to the extent of the APDRP schemes. ED – Goa has also considered the Letter of Credit charges for claiming rebates on power purchase. The total Interest and Finance Charges for the year FY 2013-14 are Rs. 7.60 Crores.

#### Commission's analysis

The Commission in line with Regulation 25 of the JERC Tariff Regulations allows the normative interest charges of Rs 15.70 Cr on the average normative loan of Rs 196.50 Cr. The addition in the normative loan amount has been taken to be 70% of the capitalized amount approved for the year i.e  $0.70 \times 192.70 = \text{Rs } 134.94 \text{ Cr}$ . Commission has considered the weighted average rate of existing loans of 7.99% as proposed by the petitioner for the approval of the Interest charges . The Commission approves the normative interest charges for the year at Rs. 15.70 Cr. The table below shows the computation of the normative interest for FY 2012-13 approved by the Commission:

**Table 52: Interest on normative loan approved by the Commission for FY 2013-14**

Sr. No.	Particulars (in Rs Cr)	FY 2012-13	FY 2013-14	
		Approved	Estimates	Approved
1	Opening Normative Loan	88.20	87.72	136.2892
2	Add: Normative Loan during the year	56.91	0	134.94
3	Less: Normative Repayment	8.82	10.23	14.51
4	Closing Normative Loan	136.29	77.49	256.72
5	Average Normative Loan	<b>112.24</b>	<b>82.61</b>	<b>196.50</b>
6	Rate of Interest	8.49%	7.99%	7.99%
7	<b>Interest on Normative Loan</b>	<b>9.53</b>	<b>6.60</b>	<b>15.70</b>

The Petitioner has claimed the interest on loans taken from PFC, however as the petitioner has not been able to substantiate the opening balance of fixed assets the Commission does not allow the interest expenses pertaining to formation of the Opening GFA for FY 2011-12 including interest on PFC loans. The Commission would consider the expenses at the time of truing up in accordance with the prevailing regulations supported with the legitimate fixed asset register and audited accounts.

**The Commission has also allowed the LC charges of Rs 1 Cr as claimed by the Petitioner resulting in total interest and finance charges approved of Rs 16.70 Cr for FY 2013-14.**

## 6.12 Interest on Working Capital

### Petitioner's submission

As per Regulation 29 of JERC for the State of Goa and Union Territories (Terms and Conditions for Determination of Tariff) Regulations, 2009, Interest on Working Capital for a licensee shall be the sum of the following for one month:

- Power Purchase Cost.
- Employees Cost.
- Administration & General Expenses &
- Repair & Maintenance Expenses.

The Interest Rate is considered equivalent to the SBI PLR for the year FY 2013-14 which is at

14.75%.

In line with the aforesaid regulation, the Interest on Working Capital is calculated for the year FY 2013-14

### Commission's analysis

The Commission has considered the calculation of the working capital as per Regulation 29 of the JERC Tariff Regulations. The different components of the working capital have been considered as per the values approved in the respective sections of this Order. The Commission has considered the amount collected from the consumers as security deposit as available with the Petitioner. The security deposit available with the Petitioner has been treated as available to meet the working capital required for FY 2013-14.

Further, the Commission clarifies that the SBI PLR rate has now been substituted as SBI Advance Rate. The Commission has considered the SBI advance rate of 14.45%<sup>1</sup> for ARR of FY 2013-14. The detailed calculation of the interest on working capital is as mentioned below.

**Table 53: Interest on working capital approved by the Commission for FY 2013-14**

Particulars (In Rs Cr)	FY 2013-14	
	Estimates	Approved
Power Purchase Cost for one month	72.33	75.82
Employee Cost for one month	12.45	12.39
A&G Expenses for one month	0.78	0.78
R&M Expenses for one month	2.09	1.68
<b>Total Working Capital for one month</b>	<b>87.65</b>	<b>90.67</b>
Closing Security Deposit (amount already with ED Goa)	76.82	79.03
Total Working Capital considered for one month	<b>10.83</b>	<b>11.65</b>
<b>SBI PLR Rate</b>	14.75%	14.45%
<b>Interest on Working Capital</b>	<b>1.60</b>	<b>1.68</b>

<sup>1</sup> SBI advance rate notified on 14.02.2011; Thereafter four revisions in the SBI advance rate was notified in FY 2011-12 and are as under: 25.04.2011- 13.25%; 12.05.2011-14% ; 11.07.2011-14.25%; 13.08.2011 – 14.75%; 27.09.2012- 14.50%; 04.02.2013 -14.45% ;No further revision has been notified

## 6.13 Interest on Security Deposit

### Petitioner's submission

The Regulation 25 of JERC (for the State of Goa and Union Territories (Terms and Conditions for Determination of Tariff) Regulations, 2009 provides for Interest on Security Deposit, if any, made by the consumer with the licensee. The provision of interest on security deposits is to be made at the bank rate. The prevailing Bank rate is considered at 9.00% as notified by Reserve Bank of India vide circular dated 19th April 2012 provided at Annexure VI: RBI Bank Rate notification

In lieu of the above, Interest on Security Deposit is calculated at Rs. 6.52 Crores. The table below shows details of Interest on Security Deposit for FY 2013-14:

### Commission's analysis

As per Section 47(4) of the Electricity Act, 2003 and as specified in Regulation 25 of JERC Tariff Regulations 2009, *the distribution licenses shall pay interest on security deposit collected from the consumers, equivalent to the bank rate or more as may be specified by the Commission.*

The Commission observes that the Petitioner has the security deposit of the consumers but it is not paying any interest on the security deposit to the consumers. The submission of the Petitioner that it has made sent a proposal to Government of Goa for payment of security deposit is noted.

On account of provisions mentioned in the Act and regulations, the Commission directs the Petitioner to pay the interest on security deposit collected from the consumers irrespective of the difficulties faced in disbursement of the same.

The Commission directs that the Petitioner must pay interest on consumer security deposit for FY 2013-14 (at the Bank Rate i.e. 8.75%<sup>2</sup> per annum applicable as on 29<sup>th</sup> January 2013) with effect from 1<sup>st</sup> April 2013 to the consumers on their security deposit irrespective of petitioner's

---

<sup>2</sup> As per RBI Circular: RBI/2012-13/402 Ref: DBOD.No.Ret.BC. 77/12.01.001/2012-13 dated January 29' 2013, the bank rate stands revised to 8.75% from 9.00% with effect from January 29' 2013



constraints and this needs to be explicitly indicated on the consumers bill, a sum of Rs. *(calculated amount)* as 'Interest on security deposit' at the rate of 8.75% per annum for the FY 2013-14. **The Commission in this regard shall view any non-compliance seriously.**

**Table 54: Interest on security deposit approved by the Commission for FY 2013-14**

Particulars (In Rs Cr)	FY 2013-14	
	Estimates	Approved
Opening Security Deposit	68.04	70.24
Add: Deposits during the Year	9.62	9.62
Less: Deposits refunded	0.84	0.84
<b>Closing Security Deposit</b>	<b>76.82</b>	<b>79.03</b>
<b>Bank Rate</b>	9.00%	8.75%
<b>Interest on Security Deposit</b>	<b>6.52</b>	<b>6.15</b>

#### 6.14 Return on Capital base/ Net Fixed Assets

##### **Petitioner's submission**

The proviso of Regulation 23 (2) and Regulation 24 of Tariff Regulations 2009 provides for entitlement for Returns on Capital Base/ Net Fixed Assets by utility / licensee. Thus, in line with the regulation and the methodology adopted by the Hon'ble Commission in its previous order, ED – Goa has calculated the return on capital base at 3%.

##### **Commission's analysis**

ED Goa is an integrated utility in its present form as defined in Regulation 2(9) of the JERC Tariff Regulations and ED Goa is not restructured and corporatized till date. As of now, it is an integrated utility and is entitled to return on capital base under the provisions of Schedule VI of the repealed Electricity (Supply) Act, 1948 vide provision under Regulation 23 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009. The basic requirement for consideration of either return on capital base or return on equity is the audited Annual Accounts and assets & depreciation registers. ED-Goa has not been maintaining adequate information. The same has also been discussed in treatment of this component in the previous chapter.

As discussed in the section on 'GFA and Depreciation', the Commission has allowed additional capitalization for FY 2012-13 and FY 2013-14. The Commission has considered Rs. 207.30 Cr as the gross block at the beginning of FY 2013-14 and accumulated depreciation of Rs. 12.13 Cr, resulting in the net fixed assets of Rs 195.17 Cr at the beginning of FY 2013-14. The Commission,

therefore, approves the return on capital base of Rs 5.86 Cr @3% on the net fixed assets at the beginning of FY 2013-14. The table below shows the computation of the return on capital base as approved by the Commission.

**Table 55: Return on capital base approved by the Commission for FY 2013-14**

S.No	Particulars (In Rs Cr)	FY 2012-13	FY 2013-14	
		Approved	Estimates	Approved
1	Gross block at beginning of the year	126.00	207.30	207.30
2	Less accumulated depreciation	3.33	12.13	12.13
<b>3</b>	<b>Net fixed assets at beginning of the year</b>	<b>122.67</b>	<b>195.17</b>	<b>195.17</b>
<b>4</b>	<b>Reasonable return @3% of NFA</b>	<b>3.68</b>	<b>5.86</b>	<b>5.86</b>

#### 6.15 Provision of Bad & Doubtful debts

##### Petitioner's submission

The Petitioner has not claimed any Provisions for bad and doubtful debts

##### Commission's analysis

In accordance with Regulation 28 of the JERC Tariff Regulations, the Commission is of the view that bad and doubtful debts actually written off, limited to 1% as per the regulations, would be considered only after the availability of audited accounts and would be taken up at the time of the true-up of the ARR.

**Table 56: Provision for bad debts approved by the Commission for FY 2013-14 (Rs Cr)**

Particulars	Petitioner's Submission FY 2012-13	Approved
Provision for bad and doubtful debts	Not Claimed	NIL

**The Commission has not considered the provision for bad & doubtful debts for ARR of FY 2013-14 and would consider it up in true up as per the provisions of the regulations.**

## 6.16 Other expenses

### **Petitioner's submission**

The Hon'ble Commission has issued JERC (Establishment of Forum for Redressal of Grievances of the Consumers) Regulation, 2009 and according to the Regulations, every distribution licensee needs to establish a forum for Redressal of Grievances of consumers.

The petitioner has estimated expenses of Rs. **1.02** Crs for FY 2013-14. This expense pertains to the salaries of the members, domestic travel expenses, office expense, advertisement etc. The Hon'ble Commission is requested to approve the CGRF expenses for FY 2013-14.

### **Commission's analysis**

The Commission observes that the expenses of Rs 1.02 Crores projected are towards the salaries of the members of the CGRF and the associated expenses. The Commission therefore considers the expenses legitimate and approves **Rs 1.02 Crores** for the ARR of FY 2013-14.

## 6.17 Non Tariff Income

### **Petitioner's submission**

The Non-Tariff Income estimated for FY 2013-14 is Rs. 22.53 Crores which comprises of proceeds from sale of dead stock, waste paper & other miscellaneous receipts.

### **Commission's analysis**

The Commission has analysed the past trends of the expenditure under the head of 'Non Tariff Income' based on the provisional actuals of FY 2009-10, FY 2010-11 and FY 2011-13 of Rs 12.76 Cr, Rs 9.61 Cr and Rs. 21.06 Cr respectively. The approved figures for FY 2012-13 is Rs 23.06 Cr and noting the submission of the Petitioner under the various heads of the non-tariff income, the Commission approves the non-tariff income of Rs 22.53 Cr as submitted by the Petitioner as reasonable.

## **6.18 Revenue from Sale of Surplus Power**

### **Petitioner's submission**

ED – Goa has considered Revenue from Sale of Surplus Power wither through grid/ exchanges. As shown in Energy Balance table for FY 2013-14, the surplus power during off peak is 17 MUs and the average rate for sale of surplus power is assumed at Rs. 4.00/unit.

The total revenue from sale of such surplus power is estimated at Rs. 6.85 Crores.

### **Commission's analysis**

The Commission as also discussed in the section of power purchase of this chapter, has applied merit order dispatch principles in estimating the power procurement requirement of the utility. Based on this, the Commission has only allowed power purchase as required to meet the requirement within the utility and as such, no surplus power is available for sale outside the territory. The Commission, therefore, has not considered the revenue earned from outside sales for FY 2013-14.

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

### **Petitioner's Submission**

The petitioner has submitted the Aggregate Revenue Requirement at Rs 1061.03 Crores.

### **Commission's analysis**

The Commission has approved ARR for FY 2013-14 based on the items of expenditure and revenue discussed in the preceding sections and the same has been summarized in the table below. The Commission approves the ARR at Rs 1112.99 Cr for FY 2013-14. The same is tabulated below and the comparison with the submission is as shown below-

**Table 57: Aggregate Revenue Requirement approved by the Commission for FY 2013-14 (Rs Cr)**

Sr. No.	Particulars (In Rs Cr)	FY 2013-14	
		Estimated	Approved
1	Cost of power purchase	867.95	909.86
2	Employee costs	149.40	148.64
3	R&M expenses	25.07	20.21
4	Administration and general expenses	9.36	9.36
5	Depreciation	16.03	16.03
6	Interest and Finance Charges	7.60	16.70
7	Interest on Working Capital	1.60	1.68
8	Interest on Security Deposit	6.52	6.15
9	Return on NFA	5.86	5.86
10	Provision for Bad Debts	-	
11	Other Expenses	1.02	1.02
<b>12</b>	<b>Total Revenue Requirement</b>	<b>1,090.40</b>	<b>1,135.52</b>
13	Less: Non-Tariff Income	22.53	22.53
14	Less: Revenue from Sale of Power - UI Pool		
15	Less: Revenue from Sale of Power-Exchanges	6.85	
16	Less: Revenue from Sale / Banking of Power		
<b>17</b>	<b>Aggregate Revenue Requirement</b>	<b>1,061.03</b>	<b>1,112.99</b>

**6.20 Revenue at existing tariff for FY 2013-14****Petitioner's Submission**

The revenue from sale of power from existing retail tariffs for FY 2013-14 comes to Rs. 944.93 Crores and category wise revenue is tabulated below:

**Table 58: Revenue at existing tariff submitted by the petitioner for FY 2013-14 (Rs. Crores)**

Sr. No	Consumer Category	Energy Sale	Revenue	Avg. Revenue
		MUs	Rs. Crs	Rs./unit
1	2	3	4	5
<b>A</b>	<b>Low Tension Supply</b>	<b>1,229</b>	<b>285.17</b>	<b>2.32</b>
1(a)	Tariff LTD/Domestic and Non-Commercial	834	149.60	1.79
1(b)	Tariff LTD/Low Income Group	9	0.43	0.46
1(c)	Tariff LTD/Domestic Mixed	4	1.19	2.88
2	Tariff-LTC/Commercial	265	93.87	3.54
3 (a)	Tariff-LTP/Motive Power	74	30.16	4.06
3 (b)	Tariff-LTP/ Ice Manufacturing	-	-	-
3(c)	Tariff-LTP/Mixed (Hotel Industries)	5	2.05	4.00
4	Tariff-LTAG/Agriculture	18	2.27	1.24
5	Tariff-LTPL/Public Lighting	16	5.01	3.17
6	Tariff-LT PWW/Public Water Works	2	0.59	2.56
<b>B</b>	<b>High Tension Supply</b>	<b>1,625</b>	<b>648.70</b>	<b>3.99</b>
7	Tariff HT-Mixed	208	80.86	3.89
8(a)	Tariff HTI/Industrial	548	224.38	4.09
8(b)	Tariff HTI/Hotel Industries	51	22.25	4.40
8(c)	Tariff HTI/Ice Manufacturing	0	0.09	3.00
9	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	543	196.69	3.62
10	Tariff-HTAG/Agriculture	8	1.21	1.58
11	EHTI/Industrial	110	48.93	4.45
12	H.T. PW/Public Water Supply and Sewage	110	38.70	3.52
13	H.T. MES/Defence Establishments	34	12.34	3.59
14	H.T. Industrial (Steel Rolling)	56	20.74	3.69
15	Tariff HT-Industries (IT High Tech).	7	2.51	3.55
<b>C</b>	<b>Temporary Supply</b>	<b>15</b>	<b>11.06</b>	<b>7.50</b>
16	Tariff-LT/Temporary	14	10.42	7.50
17	Tariff-HT/Temporary	1	0.63	7.50
	<b>Total Demand/ Sale Within State</b>	<b>2,868</b>	<b>944.93</b>	<b>3.29</b>

### Commission's analysis

Based on the estimates of sales, consumers and connected load approved by the Commission for FY 2013-14, the Commission has arrived at the revenue from existing tariff of Rs. 981 Cr. The slab wise consumers, sales and the connected load have been pro-rated as per the submission of FY 2013-14 by the petitioner.

**Table 59: Revenue at existing tariff approved by the Commission for FY 2013-14 (Rs Cr)**

S. No.	Category/Consumption Slab	FY 2013-14			
		Sales	Fixed Charges	Energy Charges	Total Charges
<b>A</b>	<b>Low Tension Supply</b>	<b>1258</b>	<b>22</b>	<b>268</b>	<b>289</b>
1(a)	Tariff LTD/Domestic and Non - Commercial	<b>904</b>	<b>6</b>	<b>156</b>	<b>162</b>
	<i>First 60 Units</i>	189	0.58	22.71	23.29
	<i>61 - 250 Units</i>	543	3.26	86.90	90.17
	<i>251 Units - 500 Units</i>	136	1.57	35.39	36.96
	<i>Above 500 Units</i>	35	0.63	10.50	11.13
1(b)	Tariff LTD/Low Income Group	2	0.43	0.00	0.43
1(c)	Tariff LTD/Domestic Mixed	<b>5</b>	<b>0</b>	<b>1</b>	<b>1</b>
	<i>First 400 Units</i>	4	0.00	1.14	1.14
	<i>Above 400 Units</i>	1	0.00	0.29	0.29
2	Tariff LTC/Commercial	<b>224</b>	<b>3</b>	<b>77</b>	<b>80</b>
	<i>First 100 Units</i>	110	1.15	32.92	34.06
	<i>100 Units - 1000 Units</i>	101	1.58	38.29	39.87
	<i>Above 1000 Units</i>	13	0.39	5.51	5.90
3 (a)	Tariff LTP/Motive Power	<b>84</b>	<b>11</b>	<b>25</b>	<b>36</b>
	<i>Connected Load Upto 50 HP</i>	5	0.56	1.16	1.73
	<i>Connected Load Above 50 HP</i>	79	10.17	23.67	33.84
3(b)	Tariff-LTP/Mixed (Hotel Industries)	<b>5</b>	<b>0.06</b>	<b>2.05</b>	<b>2.11</b>
3 (c)	Tariff LTP/Ice Manufacturing	0	0.00	0.00	0.00
4	Tariff-LTAG/Agriculture	16	0.53	1.96	2.50
5	Tariff-LTPL/Public Lighting	15	0.42	4.59	5.01
6	Tariff-LT PWW/Public Water Works	2	0.40	0.57	0.97
<b>B</b>	<b>High Tension Supply</b>	<b>1776</b>	<b>149</b>	<b>543</b>	<b>692</b>
7	Tariff HT-Mixed	290	16.29	91.31	107.59
8	Tariff HTI/Industrial	616	48.96	203.24	252.20
9	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	<b>506</b>	<b>53.69</b>	<b>133</b>	<b>187</b>
	<i>First 300 Units/kVA</i>	273	28.99	68.29	97.28
	<i>Next 200 Units/kVA</i>	192	20.32	52.86	73.18
	<i>Above 500 Units/kVA</i>	41	4.38	12.30	16.68
10	Tariff-HTAG/Agriculture	5	0.25	0.63	0.88
11	EHTI/Industrial	144	12.63	47.44	60.07
12	H.T. PW/Public Water Supply and Sewage	110	5.70	33.00	38.70
13	H.T. MES/Defense Establishments	34	1.00	11.33	12.34
14	H.T. Industrial (Steel Rolling)	<b>49</b>	<b>10</b>	<b>10</b>	<b>19</b>
	<i>First 200 Units/kVA</i>	35	6.85	6.37	13.22
	<i>Next 100 Units/kVA</i>	11	2.24	2.46	4.69
	<i>Above 300 Units/kVA</i>	3	0.54	0.82	1.35
15	Tariff HT-Industries (IT High Tech).	7	0.67	1.89	2.56
16	Tariff HT-Industries (ICE).	0	0.00	0.00	0.00
<b>C</b>	<b>Temporary Supply</b>				
17	Tariff-LT/Temporary	14	0.00	10.32	10.32
18	Tariff-HT/Temporary	1	0.00	0.63	0.63
<b>19</b>	<b>Total Demand/ Sale Within State/UT</b>	<b>3,034</b>	<b>171</b>	<b>811</b>	<b>981</b>

## 6.21 Revenue Gap at existing tariff for FY 2013-14

### Petitioner's submission

The net Aggregate Revenue Requirement for FY 2013-14 is Rs. 1,067.46 Crores and the revenue at existing tariff works out to Rs. 944.93 Crores. Accordingly the revenue gap for FY 2013-14 computes to Rs. 122.53 Crores which is 11.50% of net ARR. ED-Goa submits that this revenue gap shall be met through the budgetary support to be provided by Government of Goa

### Commission's analysis

The revenue gap worked out for FY 2013-14 is Rs 131.88 Cr based on the aggregate revenue requirement of Rs 1112.99 Cr and the revenue from existing tariff of Rs. 981 Cr. The table below shows the approved revenue gap for FY 2013-14 at the existing tariff:

**Table 60: Revenue Gap at existing tariff approved by the Commission for FY 2013-14 (Rs Cr)**

Particulars	FY 2013-14 Petitioner's Submission	FY 2013-14 Approved
Aggregate Revenue Requirement	1,061.03	1,112.99
Revenue from existing tariff	944.93	981.11
<b>Revenue Gap at existing tariff</b>	<b>116.10</b>	<b>131.88</b>

## 6.22 Average Cost of Supply for FY 2013-14

The average cost of supply for FY 2013-14 based on the approved ARR and total sale is as shown below.

**Table 61: Average cost of supply approved by the Commission for FY 2013-14 (Rs/kWh)**

Particulars	FY 2012-13 Approved as per Review of ARR	FY 2013-14 Petitioner's Submission	FY 2013-14 Approved
<b>Average Cost of Supply (Rs/kWh)</b>	3.57	3.63	3.67



## 7. Compliance of Directives

The Commission had in its previous order issued directives to ED-GOA within the parameters of Section 61 of the Electricity Act, 2003 which stipulates that the Commission shall be guided by the factors which would encourage competition, efficiency, economical usage of resources, grid performance and optimum investment in specifying the terms and conditions for determination of tariff. The directives as provided by the Hon'ble Commission and the status of the said directives are below:

### **Compliance of Directives issued by the Commission in the tariff order on Petition no 32/2011 for FY 2011-12 dated September 13' 2011**

#### Directive

##### 1. Annual Statement of Accounts

Electricity Department Goa has not prepared accounts for the electricity business separately. As electricity business comes under the preview of Electricity Act, 2003, the accounts pertaining to electricity are required to be prepared separately and got audited. It is directed that the accounts of the licensee need to be prepared on commercial principles for regulated business of electricity as per regulatory requirement by October 31, 2012.

#### **Petitioner's submission**

##### **Quote**

*"The Hon'ble Commission in its order directed ED – Goa to prepare Annual Statement of Accounts separately and on commercial principles. ED – Goa would like to submit that the accounts for the electricity business are always maintained separately. This is in line with Government of Goa Notification (Pro-forma Accounts), hence commercial principles are already being implemented. Further, ED – Goa would like to submit that the Annual Accounts for FY 2006-07 has been audited and certified. With this certification the audit of accounts for the year FY 2007-08 are already in process and shall be completed at the earliest. ED – Goa assures the Hon'ble Commission that it would complete this exercise of bringing the audited accounts updated on priority basis and inform the Hon'ble Commission from time to time."* **Unquote**

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

The Commission had given a time bound direction in its order for FY 2012-13, however the Petitioner has failed to appreciate the requirement of the audited accounts. The Commission would like to reiterate its direction to the Petitioner for getting its accounts audited at the

earliest. Further, the Commission also directs the petitioner to file a monthly status report for the above.

## 2. Preparation of Asset and Depreciation Register

ED-Goa is directed to prepare Asset and Depreciation Register function wise and asset classification wise. The Petitioner is directed to submit quarterly progress report and the completion date of the preparation of the asset and depreciation registers function wise after getting them audited.

### Petitioner's submission

#### Quote

*"The Hon'ble Commission has directed ED – Goa to prepare Asset and Depreciation Register function wise and asset classification wise. ED – Goa hereby submits that there are two functions carried out by ED – Goa viz Transmission and Distribution functions. ED – Goa has already taken steps for preparing the Asset register for both Transmission and Distribution. The classification of Assets is being done similar to the classification heads provided by the Hon'ble Commission in the Tariff Regulations. Further, ED – Goa has sent the formats to various divisions (field offices); which are annexed to this petition at Annexure VIII: Format for Asset & Depreciation Information for reference of the Hon'ble Commission. Further, the depreciation register is also being prepared in line with the Hon'ble Commission's directive. ED – Goa also submits that once the compilation of classification of assets and depreciation register information is received from the field officers, Hon'ble Commission shall be intimated. The required information shall be submitted to Hon'ble Commission after due verification by Accounts Department preferably within a period of 6-8 months." Unquote*

### Commission's Comments

The action taken is noted.

## 3. Energy Audit and T&D Losses

ED-GOA is directed to get its distribution system studied so that appropriate loss reduction trajectory could be fixed. It is also directed that the Petitioner shall furnish six monthly energy audit reports to the Commission as required under Regulation 15(4) of the JERC Tariff Regulations, 2009.

The Petitioner is directed to furnish segregation of losses into transmission, distribution and commercial losses separately in their next petition along with a status report on energy accounting and T&D losses.

The Commission would like the Petitioner to prepare a loss reduction road map for bringing down losses to 10% level and submit to the Commission by 31<sup>st</sup> October 2012. The Commission on receipt and acceptance of the loss reduction road map shall approve loss reduction trajectory for subsequent years.

#### **Petitioner's submission**

##### **Quote**

*“ED – Goa would like to submit that a Consultant has been appointed in this regards and the process is being carried out. In line with the Hon’ble Commission’s directive, ED – Goa shall carry out the Energy Audit for the first 6 months period of FY 2012-13 and submit to Hon’ble Commission. Thereafter upon receipt of comments/ suggestions from the Hon’ble Commission, the 2<sup>nd</sup> Energy Audit for next 6 months period or as may be directed by Hon’ble Commission shall be conducted through consultants.”* **Unquote**

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

The action taken is noted.

#### **4. Metering of consumer installations / replacement of non-functional or defective Meters**

Under Section 55 (1) of Electricity Act 2003, no licensee shall supply electricity after expiry of 2 years from the appointed date except through installation of correct meter. Accordingly, metering is required to be done in line with CEA (installation and operation of meters) Regulations 2006 to all consumers.

ED, Goa is directed to install meters to all consumers including Low Income Group & agriculture who are not metered for supply of electricity presently.

ED-Goa is directed to furnish the status of metering and action plan for the same by 31<sup>st</sup> October 2012.

**Petitioner's submission****Quote**

*"ED – Goa submits that all the connections (Consumer Installations) are metered and the connections are being released to metered consumers only. As regards replacement of non functional or defective meters, electronic meters have been procured and made available to the Divisions, and directives issued for prompt replacement of non-functioning /defective meters."* **Unquote**

**Commission's Comments**

The action taken is noted.

**5. Demand Side Management and Energy Conservation**

Demand Side Management and Energy Conservation are very important areas, which should be in focus in ED Goa particularly in context of Peak load. ED Goa is directed to conduct a detailed study on demand side management and energy conservation for efficient use of electricity by various means.

ED-GOA should take steps to develop and promote energy efficient technologies in line with the guidelines issued by the BEE. BEE, an autonomous body of MOP is taking several steps to make it mandatory to use 5-star equipments such as Refrigerators, AC, Tubelights, lights, distribution transformers upto 200KVA etc. The same should be implemented by the utility in a phased manner and an action plan for the same be furnished by 30<sup>th</sup> September 2012.

**Petitioner's submission**

**Quote** *"ED – Goa would like to submit that it has undertaken various measures to reduce the losses. Following measures have been carried out by ED – Goa:*

*-Replacement of conventional energy meters provided to consumers by State of Art Electronic Meters which has resulted in about 15% loss reduction on the consumption of these consumers;*

*-Use of Energy Efficient Star Rated transformers and other equipments;*

*Implementation of various energy efficient schemes through Bureau of Energy Efficiency (BEE):*

*-Bachat Lamps Yojana; wherein a provision of providing 15 lakhs of CFL to households and other states has been made. The work has already been awarded in consultation with BEE;*

*-LED demonstration scheme on National Highway-17 being implemented in consultation with BEE;*

*-Replacement of 250 Watts HPSV fixtures by Energy Efficient T-5 fixtures;*

*-Conducting investment grade energy audit of 11 Government buildings in the State;"* **Unquote**

### **Commission's Comments**

The action taken is noted and appreciated.

## **6. Employee Cost/Manpower Study**

ED-GOA is directed to analyze its employee strength and their relative deployment, and rationalize their requirement to reduce its manpower and related costs.

The Commission has analyzed the trends of the number of employees/1000 consumers since the year 2009-10. The analysis of the previous years shows one employee was serving 108, 114 and 111 consumers in FY 2009-10, FY 2010-11 and FY 2011-12 respectively. In FY 2012-13, the petitioner has projected one employee would be serving 84 consumers. This number as projected by the Petitioner is too high, considering that the all India average number of employee per thousand consumers is 0.40<sup>3</sup> as per the annual plan of FY 2011-12, which translates into one employee catering to 2500 consumers. Here, in the case of ED-Goa one employee is catering to only 84 consumers of the total consumer base as per the submission of Petitioner for FY 2012-13. This shows that ED-Goa is extremely overstaffed.

The Commission direct the petitioner that a detailed work force study should be conducted and report be submitted to the Commission by 31st October 2012.

### **Petitioner's Submission**

**Quote** *"The Hon'ble Commission in its Tariff order has directed ED – Goa to analyze its employee strength and their relative deployment, and rationalize their requirement to reduce its manpower and related costs. ED – Goa would like to submit that a Consultant has been appointed in this regards and the study is under process. ED – Goa would like to submit that this study shall be submitted to the Hon'ble Commission in 3 months time i.e. around end of April 2013."* **Unquote**

### **Commission's Comments**

The action taken is noted.

---

<sup>3</sup> Annexure 4.20 of Annual Report on the working of State Power Utilities & Electricity Departments published by Planning Commission, Government of India in October 2011.

## 7. Interest on Security Deposit

The Petitioner is directed to pay interest on consumer security deposit at the applicable bank rate (presently at 9.5% per annum) for FY 2012-13 and at the bank rate of 6% for FY 2011-12 effective 1<sup>st</sup> April 2012.

### **Petitioner's Submission**

*The Hon'ble Commission has directed ED – Goa to pay the interest on security deposit due for FY 2011-12. ED – Goa would like to submit that at present the consumer deposits are accounted in the Public Account under the Budget Head of Accounts in the Finance Department of Government of Goa. Hence, any disbursement of funds is subjected to the approval by the Finance Department, Government of Goa; and the release of funds to the department is a time consuming process. However, ED –Goa has proposed a scheme for streamlining the payment of interest on consumer deposit and the same has been submitted for approval of Government. The proposed scheme is annexed to this petition at Annexure IX: Proposal for payment of Interest on Consumer Security Deposit.*

### **Commissions Comments**

The Commission directs the Petitioner to pay the interest on security deposit as required under the Electricity Act, 2003 irrespective of the constraints faced by the utility. The Commission in this regard would view any non-compliance seriously.

## 8. Bill Payment:

The facility of online payments needs to be introduced. The Petitioner is directed to introduce multiple payment gateways/agencies for online collection and action plan for the implementation of the above program be submitted within three months. In addition, the payment hours should be extended/alternative options explored so that the consumers can make the payment outside the working hours. The bill delivery mechanism should be tuned to provide 15 days time to the consumer to make the payment as per the regulations of the Commission.

### **Petitioner's Submission**

**Quote** *“As per the Hon'ble Commission's directive; ED – Goa is to introduce multiple payment gateways/ agencies for online collection and an action plan is to be submitted to the Hon'ble Commission. ED – Goa would like to submit that such online collection of bill payment shall be carried out under the ambit of R-APDRP (Part-A) Scheme, which ED – Goa is in the process of*

doing through IT implementing Agency. However, ED – Goa has around 323 bill payment centres in different banks across various locations. Further, post the issuance of Tariff Order by Hon’ble Commission in June 2012; additional 8 banks were added to the list of Bill Payment Centres totalling to around 331. Many of the banks work outside normal office hours. The list of the Bill Payment Centres is annexed to the petition at **Annexure X: Bill Payment Centres**. In major towns of Panaji & Margao there are bank counters in the Department’s Office. More such counters are being opened elsewhere. Cheque drop box facility has been introduced in some places and will be extended” **Unquote**

### **Commission’s Comments**

The action taken is noted

### **9. Capital expenditure:**

The Commission directs the utility to furnish the capital expenditure plan of the utility prior to filing the petition for the respective year. The capex for FY 2013-14 as part of the petition for the respective year would not be considered without the prior approval of the Commission.

The Capital Expenditure plan should clearly highlight the cost benefit analysis of each of the schemes envisaged for the year. Benefits accruing to the consumers out of the schemes should be clearly brought out.

The Commission also directs the utility to furnish a certificate to the Commission showing how the capital expenditure of the previous years has benefited the consumers.

### **Petitioner’s Submission**

**Quote** “The Hon’ble Commission in its Tariff Order directed ED – Goa to furnish the capital expenditure plan of the utility prior to filling the petition for the respective year. ED – Goa would like to submit that the same has already been submitted on 30<sup>th</sup> January 2013.”

**Unquote**

### **Commission’s Comments**

Action taken is noted.

**10. Data on the consumption and load profile of Advertisement Hoardings, Sign boards, Signages etc.**

The Petitioner is directed to separately capture the data regarding consumption and the load profile of the users of advertisement hoardings, signboards, signages etc. and propose tariff for this category separately in the next tariff filing, so that differential tariff for this category could be set as they draw maximum power mainly during the peak hours.

**Petitioner's Submission**

**Quote** *"ED – Goa would like to submit that the compilation of data regarding consumption and the load profile of Advertisement Hoardings, Sign boards etc is in progress and the same shall be submitted to the Hon'ble Commission at the earliest."* **Unquote**

**Commission's Comments**

The data with regard to the above direction was required for the determination of tariff this year. The Commission feels that such an approach to the directives are not appreciated. The Commission however, reiterates its direction and directs the Petitioner to file the details within One week of issuance of this order

**11. Assessment of the open access consumers**

The Petitioner is directed to provide an assessment of the number of open access consumers greater than 1 MW to the Commission by 30th September 2012. The Petitioner is also directed to provide the detailed scheme to operationalize open access scheme including setting up of the STU and SLDC (nodal agency) by the power department of the appropriate government.

**Petitioner's Submission**

*"The details of Open Access Consumers (1 MW and above) and detailed scheme on operationalization of Open Access are being submitted separately under Case No. 78/2012."*

**Commission's Comments**

Action Taken is noted

**12. Short-term procurement of power by the licensee**

As per the Ministry of Power Resolution dated May 15, 2012, the licensee is directed to comply with the guidelines for short term procurement of power by distribution licensees through tariff based bidding process.



### **Petitioner's Submission**

**Quote** "ED – Goa would like to submit that it will abide by MoP guidelines and the Hon'ble Commission's directive for Short Term Power Procurement through tariff based biddings and shall maintain to do so." **Unquote**

### **Commission's Comments**

Action Taken is noted

## **13. Standard of Performance**

The Commission has notified the JERC (Standards of Performance) Regulation, 2009, wherein the Guaranteed and overall standard of performance are prescribed to ensure the quality of supply. The Petitioner is bound to adhere to the Regulations prescribed and impart the stipulated performance standards. The Commission in this regard directs the Petitioner to submit the information regarding the standards of performance achieved for FY 2011-12 within one month from the issue of this order. Further, the licensee should ensure timely submission of the information as per the requirement laid down in the JERC (Standards of Performance) Regulation, 2009.

### **Petitioner's Submission**

**Quote** "ED – Goa would like to submit that it has submitted it has been regularly complying to this directive and the reports for 1<sup>st</sup> quarter and 2<sup>nd</sup> quarter have been submitted to Commission.  
." **Unquote**

### **Commission's Comments**

Action Taken is noted

### **New Directive**

1. Since 2000, some consumers are set to be served by the IPP directly as can be observed from the salient features of PPA submitted by the petitioner executed between Govt. of Goa and IPP in the state of Goa. Commission cannot overlook the interest of those consumers and such situation where the IPP fails to serve the commitment as per the PPA agreement. In view of the hardship to be faced by the consumers of the State of Goa, the Commission directs the Electricity Department, Goa being an authorised distribution licensee in the State of Goa should device an action plan for providing them

with the alternative arrangement for supply of power, so that those consumers should not be left unattended. **The petitioner in accordance with universal supply obligations mandated by Electricity Act, 2003 and ensuring the provisions of the JERC (Electricity Supply Code) Regulations, 2010, should submit within 2 months of this order an action plan in this regard.**

2. The Commission directs the petitioner to submit the details of the power purchases from the IPP along with details of time slots, frequency and requirement in which purchases were done, corroborated with the evidence that the energy was not sold by way of under drawl or sale to exchange at the same time slot. The rates of sale through UI or exchange at the same time slot and frequency shall also be correlated with the purchases of the IPP.

## 8. Tariff Philosophy and category-wise tariffs for FY 2013-14

### 8.1 Preamble

The Commission in determining the revenue requirement and retail supply tariff for the financial year 2013-14 has been guided by the provisions of the Electricity Act, 2003 and the Tariff Policy. Section 61 of the Act lays down the broad principles, which shall guide determination of retail tariff.

In view of the above, the tariff needs to be designed in such a way that cross subsidy between different categories of consumers is progressively brought within + / - 20% of average cost of supply and that even for BPL category consumers, tariff rates are close to 50% of the average cost of supply. Commission has taken a considerate view in this regard balancing the interest of the utility and the consumer, thus compensating the department with additional revenue and provides the reasonable hike in consumer's tariff.

Keeping view of the above, the Commission has designed the tariff for different categories of consumers as brought out subsequently.

### 8.2 Revenue Gap for FY 2012-13 and Recovery

In its ARR Petition for FY 2013-14, the petitioner projected a revenue gap for FY 2012-13 of Rs. 213 Cr at existing tariffs. The Petitioner in its submission of the 'Tariff Proposal for FY 2013-14' has submitted that the entire revenue gap for FY 2012-13 as per the revised estimates is to be met through budgetary support and there is no revenue gap of FY 2012-13 to be carried forward in FY 2013-14. The petitioner in its ARR and Tariff petition for FY 2013-14, has projected a revenue gap of Rs. 122.53 Cr (at existing tariff) for FY 2013-14. The petitioner has submitted that the entire proposed gap computed at Rs. 122.53 Crores shall be met by Government of Goa as budgetary support. The Petitioner has submitted the letter from the Government of Goa for budgetary support, the relevant excerpts of the said letter is reproduced below. The letter is addressed to Electricity Department of Goa, and signed by the Hon'ble Under Secretary Finance, (Bud-1), Government of Goa.

*"I am directed to state that the Government of Goa has decided to continue with the existing Electricity Tariff for the consumers in the state as per Tariff Order of Hon'ble JERC dated 27-06-2012. Therefore Government shall provide the requisite Budgetary Support to meet the Revenue Gap / Deficit as per revised working for FY 2012-13 and hence this revenue gap may not be carried forward in ARR for FY 2013-14.*

*Further the Government shall also provide the requisite Budgetary support of Rs. 123 Crores (proposed by Petitioner) or such figure as arrived at by Hon'ble Commission in connection with Revenue Gap / Deficit of ARR for FY 2013-14..”*

As elaborated in foregoing sections of this Order, the Commission has approved the aggregate revenue requirement of Rs. 1034.42 Cr for the review of FY 2012-13 and aggregate revenue requirement of Rs. 1113.27 Cr for FY 2013-14. Considering the submission made by the petitioner with respect to the budgetary support from the Government of Goa, Commission has considered the entire revenue gap of FY 2012-13 and FY 2013-14 as determined in this Order having met through the budgetary support from the Government of Goa, thus leaving no gap to be amortised through tariff.

The Commission has considered the submission of the Petitioner and the letter of the Government of Goa for budgetary support. Accordingly, the Commission has retained the tariff as approved in the previous order for FY 2012-13 dated June 27, 2012.

### 8.3 Average Cost of Supply

The average tariff as a percentage of average cost of supply approved in this tariff order for FY 2013-14 is as shown in the table below.

**Table 62: Tariff as a percentage of ACOS for FY 2013-14**

S. No.	Category/Consumption Slab	FY 2013-14				
		Sales	Total Charges	ABR	ACoS	% of ACoS
<b>A</b>	<b>Low Tension Supply</b>	<b>1258</b>	<b>289</b>			
1(a)	Tariff LTD/Domestic and Non - Commercial	904	162			
1(b)	Tariff LTD/Low Income Group	2	0.43	1.72	3.67	47%
1(c)	Tariff LTD/Domestic Mixed	5	1	2.86	3.67	78%
2	Tariff LTC/Commercial	224	80	3.57	3.67	97%
3 (a)	Tariff LTP/Motive Power	84	36	4.26	3.67	116%
3(b)	Tariff-LTP/Mixed (Hotel Industries)	5	2.11	4.12	3.67	112%
3 ©	Tariff LTP/Ice Manufacturing	0	0.00			
4	Tariff-LTAG/Agriculture	16	2.50	1.53	3.67	42%
5	Tariff-LTPL/Public Lighting	15	5.01	3.28	3.67	89%
6	Tariff-LT PWW/Public Water Works	2	0.97	4.24	3.67	116%
<b>B</b>	<b>High Tension Supply</b>	<b>1776</b>	<b>692</b>			
7	Tariff HT-Mixed	290	107.59	3.71	3.67	101%
8	Tariff HTI/Industrial	616	252.20	4.10	3.67	112%
9	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	506	187	3.70	3.67	101%
10	Tariff-HTAG/Agriculture	5	0.88	1.76	3.67	48%

S. No.	Category/Consumption Slab	FY 2013-14				
		Sales	Total Charges	ABR	ACoS	% of ACoS
11	EHTI/Industrial	144	60.07	4.18	3.67	114%
12	H.T. PW/Public Water Supply and Sewage	110	38.70	3.52	3.67	96%
13	H.T. MES/Defense Establishments	34	12.34	3.59	3.67	98%
14	H.T. Industrial (Steel Rolling)	49	19	3.93	3.67	107%
15	Tariff HT-Industries (IT High Tech).	7	2.56	3.52	3.67	96%
16	Tariff HT-Industries (ICE).	0	0.00			
<b>C</b>	<b>Temporary Supply</b>					
17	Tariff-LT/Temporary	14	10.32	7.50	3.67	204%
18	Tariff-HT/Temporary	1	0.63	7.50	3.67	204%

#### 8.4 Applicability of Tariffs

The Commission has retained the tariff as approved in the order dated June 27' 2012. The tariffs will be applicable from April 1, 2013 upto March 31'2014.

**Table 63: Comparison of Retail Tariffs approved for FY 2012-13 and FY 2013-14**

S. No.	Category/Consumption Slab	Approved Tariff-FY 2012-13		Approved Tariff-FY 2013-14	
		Fixed Charges <sup>4</sup>	Variable Charges <sup>5</sup>	Fixed Charges <sup>6</sup>	Variable Charges <sup>7</sup>
<b>A</b>	<b>Low Tension Supply</b>				
<b>1(a)</b>	<b>Tariff LTD/Domestic and Non-Commercial</b>				
	First 60 Units	5.00	1.20	5.00	1.20
	61 to 250 Units	10.00	1.60	10.00	1.60
	251 to 500 Units	20.00	2.60	20.00	2.60
	Above 500 Units	30.00	3.00	30.00	3.00
<b>1(b)</b>	<b>Tariff LTD/Low Income Group</b>	25.00	-	25.00	-
<b>1(c)</b>	<b>Tariff LTD/Domestic Mixed</b>				
	First 400 Units	20.00	2.70	20.00	2.70
	Above 400 Units	30.00	3.70	30.00	3.70
<b>2</b>	<b>Tariff-LTC/Commercial</b>				
	First 100 Units	20.00	3.00	20.00	3.00
	From 101 to 1000 Units	30.00	3.80	30.00	3.80
	All Consumption above 1000 Units	50.00	4.10	50.00	4.10
<b>3(a)</b>	<b>Tariff-LTP/Motive Power</b>				

<sup>4</sup> Rs. per connection or KW or HP or KVA on monthly basis as applicable and detailed in the attached tariff schedule

<sup>5</sup> Rs. per KWh

<sup>6</sup> Rs. per connection or KW or HP or KVA on monthly basis as applicable and detailed in the attached tariff schedule

<sup>7</sup> Rs. per KWh

S. No.	Category/Consumption Slab	Approved Tariff-FY 2012-13		Approved Tariff-FY 2013-14	
		Fixed Charges <sup>4</sup>	Variable Charges <sup>5</sup>	Fixed Charges <sup>6</sup>	Variable Charges <sup>7</sup>
	Connected Load upto 50 HP	20.00	2.50	20.00	2.50
	Connected Load above 50 HP	20.00	3.00	20.00	3.00
<b>3(b)</b>	<b>Tariff-LTP/ Ice Manufacturing</b>				
	Connected Load upto 100 HP	20.00	3.00	20.00	3.00
<b>3(c)</b>	<b>Tariff-LTP/Mixed (Hotel Industries)</b>	25.00	4.00	25.00	4.00
<b>4</b>	<b>Tariff-LTAG/Agriculture</b>	5.00	1.20	5.00	1.20
<b>5</b>	<b>Tariff-LTPL/Public Lighting</b>	25.00	3.00	25.00	3.00
<b>6</b>	<b>Tariff-LT PWW/Public Water Works</b>	20.00	2.50	20.00	2.50
<b>B</b>	<b>High Tension Supply</b>				
<b>7</b>	<b>Tariff HT-Mixed</b>	175.00	3.15	175.00	3.15
<b>8 (a)</b>	<b>Tariff HTI/Industrial</b>	175.00	3.30	175.00	3.30
<b>8 (b)</b>	<b>Tariff HTI/ Hotel Industries</b>	175.00	3.30	175.00	3.30
<b>8 (c)</b>	<b>Tariff HTI/ Ice Manufacturing</b>	175.00	3.00	175.00	3.00
<b>9</b>	<b>H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)</b>				
	First 300 Units/kVA	450.00	2.50	450.00	2.50
	Next 200 Units/kVA	450.00	2.75	450.00	2.75
	Above 500 Units/kVA	450.00	3.00	450.00	3.00
<b>10</b>	<b>Tariff-HTAG/Agriculture</b>	25.00	1.25	25.00	1.25
<b>11</b>	<b>EHTI/Industrial</b>	175.00	3.30	175.00	3.30
<b>12</b>	<b>H.T. PW/Public Water Supply and Sewage</b>	175.00	3.00	175.00	3.00
<b>13</b>	<b>H.T. MES/Defence Establishments</b>	125.00	3.30	125.00	3.30
<b>14</b>	<b>H.T. Industrial (Steel Rolling)</b>				
	First 200 Units/kVA	400.00	1.80	400.00	1.80
	Next 100 Units/kVA	400.00	2.25	400.00	2.25
	Above 300 Units/kVA	400.00	3.00	400.00	3.00
<b>15</b>	<b>Tariff HT-Industries (IT High Tech).</b>	175.00	2.60	175.00	2.60
<b>C</b>	<b>Temporary Supply</b>				
<b>16</b>	<b>Tariff-LT/Temporary</b>	-	7.50	-	7.50
<b>17</b>	<b>Tariff-HT/Temporary</b>	-	7.50	-	7.50

## 9. Determination of open access charges

### Petitioner's Submission

ED-Goa would like to submit that as per the methodology proposed in the suo-moto petition 78 / 2012, the details of computation of wheeling charges & cross-subsidy surcharges are provided at Annexure 2.

### **Computation of Wheeling Charges & Cross Subsidy Surcharges Proposed Allocation Matrix for Segregation of Wheeling & Supply**

S. No.	Particulars	As Per Open Staff Paper	
		Methodology & GED's Proposal	
		Network Cost	Supply Cost
1	Power Purchase Expenses	0%	100%
2	Operation & Maintenance Expenses		
2.1	Employee Expenses	70%	30%
2.2	Administration & General Expenses	50%	50%
2.3	Repair & Maintenance Expenses	90%	10%
3	Depreciation, including advance against depreciation	90%	10%
4	Interest on Long-term Loan Capital & Finance Charges	90%	10%
5	Interest on Working Capital	22%	78%
6	Interest on consumer security deposits	0%	100%
7	Return on Equity Capital/ NFA	90%	10%
8	CGRF Expenses	0%	100%
10	Less: Non Tariff Income	0%	100%
11	Less: Revenue from Sale of Power-Exchanges	0%	100%

## Top 5% of Power Purchase Cost (Marginal Power)

S No	Source	Purchase (MU)	Reasons	VC (Ps/Unit)	Top 5% Energy (MU)	Cost of Top 5% Energy (Rs Cr)
1	RGPPL	51	Must Run (5 MW)	501	17.00	8.52
2	NVVN Limited / Open Market	41		500	41.00	20.50
3	Renewable Energy Sources	143	Must Run	301	-	-
4	TAPS	84	Must Run	285	-	-
5	Goa Energy Private Limited	80	Must Run	240	-	-
6	Goa Sponge & Power Limited	13	Must Run	240	-	-
7	Sesa Goa Limited	55	Must Run	240	-	-
8	KAPS	101	Must Run	239	-	-
9	KGPP	43		234	42.80	10.02
10	GGPP	49		230	48.98	11.27
11	RSTPS	710		151	25.76	3.89
12	VSTPS - I	230		149	-	-
13	VSTPS - II	96		141	-	-
14	VSTPS -III	85		141	-	-
15	SIPAT- I	112		140	-	-
16	SIPAT- II	73		118	-	-
17	KSTPS	1,507		95	-	-
18	KSTPS-III	38		94	-	-
19	<b>Total</b>	<b>3,511</b>			<b>175.62</b>	<b>54.19</b>
Top 5% Volume of Energy		175.62	Must run stations not considered while determining Top 5% Power Purchase Cost.			
Cost of Top 5% Energy		54.19				
Per Unit Cost		<b>3.085</b>				



### Segregation of Costs as per Proposed Allocation Matrix

S. No.	Particulars	Ensuing Year (FY 2013-14)	As Per Open Staff Paper Methodology & GED's Proposal			
		Projection (Rs.Crs)	Network Cost	Supply Cost	Network Cost (Rs.Crs)	Supply Cost (Rs.Crs)
1	Power Purchase Expenses	868	0%	100%	-	868
2	Operation & Maintenance Expenses					
2.1	Employee Expenses	149	70%	30%	105	45
2.2	Administration & General Expenses	9	50%	50%	5	5
2.3	Repair & Maintenance Expenses	25	90%	10%	23	3
3	Depreciation, including advance against depreciation	5	90%	10%	5	1
4	Interest on Long-term Loan Capital & Finance Charges	8	90%	10%	7	1
5	Interest on Working Capital	2	22%	78%	0	1
6	Interest on consumer security deposits	7	0%	100%	-	7
7	Return on Equity Capital/ NFA	23	90%	10%	21	2
8	CGRF Expenses	1	0%	100%	-	1
9	<b>Aggregate Revenue Requirement</b>	<b>1,097</b>	<b>15%</b>	<b>85%</b>	<b>165</b>	<b>932</b>
10	Less: Non Tariff Income	23	0%	100%	-	23
11	Less: Revenue from Sale of Power-Exchanges	7	0%	100%	-	7
12	<b>Aggregate Revenue Requirement</b>	<b>1,067</b>	<b>15%</b>	<b>85%</b>	<b>165</b>	<b>903</b>
13	<b>Aggregate Revenue Requirement</b>		<b>165</b>	<b>903</b>		
14	<b>Sales (MUs)</b>	<b>2,919</b>				
15	<b>Avg Wheeling Charges (Rs/kWh)</b>		<b>0.56</b>			

### Voltage wise GFA Ratio & Loss Assumptions

Particulars	GFA Ratio FY 2013-14	Losses Breakup FY 2013-14
Upto 33 kV level	20%	6.7%
11 kV level	50%	10.0%
LT Level	30%	16.0%

### Voltage wise supply cost apportioned

Particulars	Unit	FY 2013-14
Upto 33 kV level	Rs. Crs	32.90
11 kV level	Rs. Crs	82.25
LT Level	Rs. Crs	49.35
<b>Total Cost</b>	Rs. Crs	<b>164.50</b>

**Voltage Wise Consumption**

Particulars	Unit	% Sales	FY 2013-14
Upto 33 kV level	MUs	20.00%	584
11 kV level	MUs	30.00%	876
LT Level	MUs	50.00%	1,460
<b>Total Sales</b>	<b>MUs</b>	<b>100.00%</b>	<b>2,919</b>

Particulars	Network Cost (Rs. Crs)	Sales (MUs)	% of Sales	% of Sales between 11 kV & LT Level	Wheeling Cost (Rs. Crs)	Formula For Wheeling Cost	Wheeling Cost (Rs./kWh)
Upto 33 kV level	33	584	20%		7	33X20%	0.11
11 kV level	82	876	30%	38%	41	33 X (20%) X 38% + 82 X 38%	0.46
LT Level	49	1,460	50%	63%	117	Balancing figure	0.80
<b>Total</b>	<b>165</b>	<b>2,919</b>	<b>100%</b>	<b>100%</b>	<b>165</b>		<b>0.56</b>

**Calculation of 'C' Component**

Calculation of Total Cost - Based on ARR FY 2013-14					
	Particulars	Unit	Upto 33 kV	11 kV	LT Level
<b>C =</b>	Weighted average cost of power purchase of 5% at the margin excluding UI and renewable power	Rs./Unit	3.09	3.09	3.09
<b>D =</b>	Wheeling Charges	Rs./Unit	0.11	0.46	0.80
<b>L =</b>	System Losses for the applicable voltage level	%	6.70%	10.00%	16.00%
<b>Total</b>	<b>[C (1+ L / 100) + D]</b>	<b>Rs./Unit</b>	<b>3.20</b>	<b>3.55</b>	<b>3.89</b>

<b>Computation of Cross Subsidy Surcharge - FY 2013-14</b>					
<b>Major Consumer Categories</b>		<b>Tariff (Rs/kWh)</b>	<b>Surcharge upto 33 kV (Rs/kWh)</b>	<b>Surcharge at 11 kV (Rs/kWh)</b>	<b>Surcharge at LT Level (Rs/kWh)</b>
8(a)	Tariff HTI/Industrial	4.091	0.892	0.538	0.198
9	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	3.624	0.425	0.071	-
11	EHTI/Industrial	4.448	1.248	0.895	0.555
14	H.T. Industrial (Steel Rolling)	3.685	0.485	0.132	-

### **Commission's Analysis**

The Commission with an objective to generate debate and seek suggestions/comments of the stakeholders on this issue, had also highlighted the steps required & sample calculation of open charges as per the open access regulations to be notified by the Commission shortly to enable open access in the state of Goa and the UTs and had also floated a staff paper titled 'STAFF PAPER ON OPERATIONALISATION OF OPEN ACCESS (OA) IN THE STATE OF GOA AND THE UTs' in September 2012. The complete draft consultation paper is available on the Commission's website [www.jercuts.gov.in](http://www.jercuts.gov.in)

As mentioned above the petitioner has submitted the open access charges for FY 2012-13. The Commission feels that the year FY 2012-13 has already been over and presently there are no open access consumers in the ED-Goa, whereby the need of such charges for FY 2012-13 does not arise. The Commission has therefore in order to facilitate the open access has approved the Open Access related charges for FY 2013-14.

It is also seen from the Petitioner's submission that the Transmission and Distribution business has not been segregated and the ED-GOA continues to function as an integrated utility. The Commission in line with the petitioner's submission and the fact that the expenses of the utility are consolidated has considered "NIL" transmission charges for the open access consumers in the State.

### **Allocation Matrix**

The Commission feels that there has to be proper bifurcation of all expenses pertaining to the Petitioner between functions of wheeling business (wire business) and retail supply business. As the petitioner has not proposed any such bifurcation based on facts the Commission feels prudent to consider the allocation matrix for bifurcation of wheeling and retail ARR as proposed in the 'STAFF

PAPER ON OPERATIONALISATION OF OPEN ACCESS (OA) IN THE STATE OF GOA AND THE UTs' in September 2012. The allocation between wheeling and retail supply business for FY 2012-13 and FY 2013-14 as per the approved ARR in this order is provided in the table below:

**Table 64:: Allocation of ARR between Wheeling and Retail Supply**

Wheeling and Retail Supply ARR (Rs. Crores) - Goa									
S.No.	Particulars	Allocation (%)		Allocation FY 2012-13			Allocation FY 2013-14		
		Wheeling	Supply	Wheeling	Supply	Total	Wheeling	Supply	Total
1	Cost of Fuel	0%	100%	-	-	-	-	-	-
2	Power Purchase Expenses (incl transmission charges)	0%	100%	-	866.01	866.01	-	909.86	909.86
3	Employee cost	70%	30%	95.51	40.93	136.44	104.05	44.59	148.64
4	Repair & Maintenance expenses	90%	10%	16.70	1.86	18.55	18.19	2.02	20.21
5	Administration & General expenses	50%	50%	4.30	4.30	8.59	4.68	4.68	9.36
6	Depreciation	90%	10%	7.92	0.88	8.80	14.43	1.60	16.03
7	Interest & Finance Charges	90%	10%	9.30	1.03	10.33	15.03	1.67	16.70
8	Interest on working capital	22%	78%	0.49	1.73	2.22	0.37	1.31	1.68
9	Interest on Security Deposit	0%	100%	-	5.94	5.94	-	6.15	6.15
10	Return on Net Fixed Assets /Equity	90%	10%	3.31	0.37	3.68	5.27	0.59	5.86
11	Provision for Bad & Doubtful Debt	0%	100%	-	-	-	-	-	-
12	Other expenses	90%	10%	0.54	0.06	0.60	0.92	0.10	1.02
13	<b>Total Revenue Requirement</b>			<b>138.06</b>	<b>923.12</b>	<b>1,061.18</b>	<b>162.94</b>	<b>972.58</b>	<b>1,135.52</b>
14	Less: Non Tariff Income	0%	100%	-	23.06	23.06	-	22.53	22.53
15	Less: Revenue from Sale through UI	0%	100%	-	-	0.00	-	-	-
16	Less: Revenue from Sale of Power (Exchanges)	0%	100%	-	6.11	6.11	-	-	-
17	<b>Net Revenue Requirement (13-14-15-16)</b>			<b>138.06</b>	<b>893.95</b>	<b>1,032.01</b>	<b>162.94</b>	<b>950.05</b>	<b>1,112.99</b>

### Voltage wise Wheeling Charges

The Petitioner has submitted that the voltage wise bifurcation of expenses and assets are not available. The Commission opines that in the absence of the details of bifurcation of assets and expenses the open access should not be restricted due to lack of information. The Commission in this regard would like to mention that the apportionment of wheeling charges have to account for losses. Therefore in the absence of the voltage wise details the Commission has considered the bifurcation of wheeling cost based on the sales and losses at each voltage level. The petitioner has considered the losses on arbitrary basis and not on actual basis. The Commission in the absence of such details the Commission has benchmarked the losses to the losses determined by ED-Daman and Diu as the energy audit report is available for the said UT. Accordingly the Commission has considered the losses at HT and EHT at 3.636%. The loss for FY 2013-14 has been approved by the Commission at 12% in this order. Accordingly, the balancing loss has been considered at the LT level.

Therefore to arrive at the network usage the input energy at each level has been arrived and shown in the table below:

**Table 65: Determination of input energy for network usage percentage**

Particulars	UoM	Amount
Total Input	MU	3,447.44
Input for HT and EHT Sales	MU	1,843.16
Losses for HT and EHT	%	3.636%
Losses	MU	67.02
Sales at 11 kV and above	MU	1,776.14
Input for LT	MU	1,604.29
Losses at LT level	%	22%
Losses	MU	346.68
Sales at 11 kV and above	MU	1,257.61
Balance	MU	0.00

Accordingly, the wheeling cost has been considered in the ratio of 53:47 and the wheeling charge so arrived has been shown in the table below

**Table 66: Wheeling charges approved for FY 2013-14**

Particulars	UoM	S. No	FY 2013-14
Wheeling Cost	Rs Crores	A	162.94
Wheeling Cost at EHT and HT (53%)	Rs Crores	B=A*53%	87.12
Wheeling Cost at LT (47%)	Rs Crores	C=A*47%	75.83
Energy Input at Discom Periphery	MU	D	3,447.44
<b>Wheeling Charge at EHT and HT level</b>	Rs per Unit	E=B/D*10	0.25
EHT and HT losses	%	F	4%
EHT and HT losses	MU	G	125.35
Sales at EHT and HT level	MU	H	1,776.14
Energy Input at LT	MU	I=D-G-H	1,545.95
<b>Wheeling Charge at LT level</b>	Rs per Unit	J=C/I*10	0.49
Sales at LT level	MU	K	1,257.61
LT Losses	MU	L=I-K	288.34
	MU	M=G+L	413.69
Total Losses	%		12.00%

### **Cross Subsidy Surcharge**

The Cross subsidy surcharge is based on the following formula given in the Tariff Policy as below:

$$S = T - [C (1+L/100) + D]$$

Where,

**S** is the surcharge

**T** is the Tariff payable by the relevant category of consumers;

**C** is the Weighted average cost of power purchase of top 5% at the margin excluding liquid fuel based generation and renewable power

**D** is the Wheeling charges

**L** is the System losses for the applicable voltage level, expressed as percentage.

The Computation of each item is given below.

**Table 67: Calculation of "T"**

Particular	Sales	Revenue from approved tariff	Average Tariff
Tariff HT-Mixed	289.86	107.59	3.71
Tariff HTI/Industrial	616	252.20	4.10
H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	506	187	3.70
EHTI/Industrial	144	60.07	4.18
H.T. Industrial (Steel Rolling)	49	19	3.93
Tariff HT-Industries (IT High Tech).	7	2.56	3.52

**Table 68: Calculation of "C"**

Station	Energy Procured	Average Rate	Total Power Purchase cost
GGPP	75.76	4.11	31.10
RSTPS	104.24	2.15	22.39

The Cross subsidy surcharge based on the above formula is worked out in the table below:

**Table 69: Approved Cross subsidy surcharge for FY 2013-14**

Particular	Sales	Revenue from approved tariff	Average Tariff	Cross Subsidy Surcharge
Tariff HT-Mixed	289.86	107.59	3.71	0.38
Tariff HTI/Industrial	616	252.20	4.10	0.76
H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	506	187	3.70	0.36
EHTI/Industrial	144	60.07	4.18	0.84
H.T. Industrial (Steel Rolling)	49	19	3.93	0.60
Tariff HT-Industries (IT High Tech).	7	2.56	3.52	0.19

**Additional Surcharge**

In order to promote competition through open access the Commission in line with the petitioner's submission approved "Nil" Additional Surcharge. This would be revisited at the time of next tariff order based on Open Access implementation.

## **10. Rationalization and Reform of Tariff Schedule and Terms & Conditions of Supply**

The Commission in pursuit of the rationalization and reform of the tariff schedule and terms & conditions of supply had floated a draft consultation paper titled 'Draft Consultation Paper - Seeks to provide a policy framework to address uniformity in consumer classification based on uses of electricity, voltage-wise contract load/demand limits and terms and condition of LT and HT supply to various consumer categories' in December 2012.

The Joint Electricity Regulatory Commission (JERC) for the State of Goa and UTs notified its "Joint Electricity Regulatory Commission (Electricity Supply Code) Regulations, 2010" which was applicable to all distribution licensees and its consumers. Presently, all the seven licensees have different supply voltage for different contract demand / load, different consumer categories and different terms & conditions. The supply voltage for different contract demand/load has not been specified in the JERC (Electricity Supply Code) Regulation, 2010. Until a common uniform supply voltage for different contract demand / load, consumer categories, Terms & Conditions for LT supply and HT supply are framed; there would always be dissimilarities in the above amongst all the seven utilities under JERC.

The objective of the draft paper was to bring about uniformity mainly in the following areas for the seven licensees under the jurisdiction of JERC.

1. Uniform categorization of consumers based on uses;
2. Uniform supply voltage for different contract demand/load;
3. Uniform terms & conditions for LT supply;
4. Uniform terms & conditions for HT supply

Further, there is dissimilarity in the terms and conditions for both LT and HT voltage level between the licensees on various parameters as listed below:

1. Power Factor;
2. Power Factor Incentive;
3. Power Factor Surcharge;
4. Disconnection;
5. Billing;
6. Excess Demand; and
7. Over drawl



The draft paper proposes to bring about uniformity in the above mentioned parameters through a common terms and conditions of supply for all the seven licensees.

The Commission had floated the draft paper for comments/suggestions/objections from the stakeholders for further consideration and implementation in the forthcoming tariff orders. However, the Commission did not receive adequate comments/suggestions from all the licensees and other stakeholders. There were no objections/suggestions from some of the licensees under the jurisdiction of JERC. In view of the lack of awareness and for greater participation from the public at large, the Commission has included a gist of the proposed tariff schedule and terms & conditions of supply in this tariff order which is reproduced below here. **The Commission wants the licensees and other stakeholders to be more participative and give their suggestions/comments/objections so that the proposed common tariff schedule and terms & conditions of supply can be made applicable in the future years with necessary changes.** From the below mentioned schedule, the Commission has already introduced the proviso of advance payment rebate, prompt payment rebate, power factor surcharge/rebate and TOD tariff in this year's tariff schedule for the benefit of the stakeholders. The Commission is inviting comments/suggestions from the stakeholders on other features of the draft tariff schedule which are yet to be implemented.

The complete draft consultation paper is available on the Commission's website [www.jercuts.gov.in](http://www.jercuts.gov.in).

### **Proposed Uniform Tariff Schedule and Terms & Conditions of Supply**

#### **PART - A: LOW TENSION (LT) SUPPLY**

System of supply: Low Tension – Alternating Current, 50 cycles per second

Single Phase supply at 230 Volts

Three Phase supply at 400 Volts

The tariffs are applicable for supply of electricity to LT consumers with a contracted load/demand upto 75 kW (100 HP) for Domestic, non-domestic, Public lighting, Industrial, Agricultural and Public water works categories.

Single Phase supply - contracted load upto 5.0 kW

Three Phase supply - contracted load above 5.0 kW

#### **CATEGORY OF SERVICE AND TARIFF RATES**

##### **1.0 DOMESTIC SERVICE**

###### **Applicability**

This tariff shall be applicable for supply of electricity for a contracted load/demand upto 75 KW for domestic purposes such as lights, fans, radios, televisions, heaters, air-conditioners, washing machines, air-coolers, geysers, refrigerators, ovens, mixers and other domestic appliances including motor-pumps for lifting water for domestic purposes in residential houses, bungalows, multi-storied

flats, farm houses, ashrams, mutts, housing colonies etc. This shall also be applicable to the common facilities in the multi-storied, purely residential apartments, buildings having contracted load/demand upto 75 kW.

### 1.1 DOMESTIC SERVICE-I (DS-I)

This tariff shall be applicable to all huts and dwelling houses of families below the poverty line (BPL) and houses, including pucca houses, built under Government schemes, including rehabilitation for BPL families, having contracted load of 100 Watts only. Consumption of consumers under this category shall be limited to 30 kwh per month.

**Note:** In case it is detected that load of consumers under this category exceeds 100 watt or monthly consumption exceeds 30 kwh for three consecutive months, it shall be considered under unauthorised use of electricity and shall be dealt as per JERC Electricity Supply Code Regulations, 2010 and the BPL Tariff shall immediately become inoperative and shall further be billed under DS-II category.

### 1.2 DOMESTIC SERVICE-II (DS-II)

This is applicable for domestic premises for single phase supply for contracted load/demand upto 5 kW and three phase supply for contracted load/demand above 5 kW upto 75 KW.

**Note** (i) If a portion of the domestic premises limited to only one room is used for running small household business having DS-II connection, such connection shall be billed under DS-II category provided that the total monthly consumption of the consumer does not exceed 150 KWH.

(ii) If either more than one room or only one room having monthly consumption exceeding 150 KWH for consecutive three months are detected in the domestic premises being used for mixed purposes having DS-II connection, it shall be considered under unauthorised use of electricity and shall be dealt as per JERC Electricity Supply Code Regulations, 2010 and such connection shall further be billed under NDS-I category until a separate connection of appropriate tariff is taken for that portion used for non-domestic purpose.

## TARIFF RATES

### 1.0 DOMESTIC SERVICE

#### 1.1 DOMESTIC SERVICE-I (DS-I)

Sl.	Category of consumers	Fixed charge (Rs/connection/ month or part thereof)	Energy charge (Paisa/kwh)
	Metered	x	
	unmetered		X

#### 1.2 DOMESTIC SERVICE-II (DS-II)

Sl.	Category of consumers	Fixed charge (Rs/KW/ month or part thereof)	Energy charge	
			Consumption/ month (Units)	Rate (Ps/unit)
	Single / Three Phases		Upto 100	

			101-300	
			301-500	
			Above 500	

**OPTIONAL****1.2.1 DOMESTIC SERVICE-II/D (DS-II/D)**

All those consumers under DS-II category with 3 phase supply opting for demand based tariff shall be required to pay at the rates indicated below:

**1.2.1 DOMESTIC SERVICE-II/D (DS-II/D)**

Sl.	Category of consumers	Demand charge (Rs/KW/ month or part thereof)	Energy charge	
			Consumption/ month (Units)	Rate (Ps/unit)
	All Three Phase		For all units	

**2.0 NON-DOMESTIC SERVICE****Applicability**

This shall be applicable for supply of electrical energy for non-domestic consumers having contracted load/demand upto 75 kW, using electrical energy for light, fan and power loads for non-domestic purposes like shops, offices, government and semi-government offices, show rooms, laundries, photo-studios, bakery shops, parlours, bars, coffee houses, advertisement hoardings, neon sign-boards, hospitals, nursing homes, clinics, dispensaries, diagnostic centres, X-ray plants, private schools, colleges, libraries, coaching institutes and research institutes, restaurants, hotels, clubs, gymnasium, sport institutions, stadiums, guest houses, boarding / lodging houses, marriage houses, public halls, auditorium, exhibitions, theatres, circus, cinemas, fuel/oil stations, service stations, printing presses, museums, banks, race-course, burial /crematorium grounds, bus-stations, railway stations, telephone exchanges, All India Radio / T.V. installations, shops having welding set, small lathe, electric drill etc, IT establishments, common facilities in multi-storied commercial office / buildings, commercial trusts, societies, shopping malls, multiplexes, commercial establishments and other installations not covered under any other tariff schedule.

This shall also be applicable to government educational institutions, their hostels and libraries, government hospitals, government research institutions, government sport institutions and non-profitable government aided educational institutions, their hostels and libraries, government run youth hostels, harijan hostels, rehabilitation centres, anganwadies, balwadies etc, non-profitable recognized charitable institutions, orphanage homes and old-age homes run by religious and charitable organisations recognised by government, etc.

Religious places such as temples, mosques, gurudwaras, churches etc, are also covered under this tariff.

**2.1 NON-DOMESTIC SERVICE-I (NDS-I)**

This shall be applicable for supply of electrical energy for non-domestic services such as shops, offices, government and semi-government offices, show rooms, laundries, photo-studios, bakery shops, parlours, bars, coffee houses, advertisement hoardings, neon sign-boards, hospitals, nursing homes, clinics, dispensaries, diagnostic centres, X-ray plants, private schools, colleges, libraries,

coaching institutes and research institutes, restaurants, hotels, clubs, gymnasium, sport institutions, stadiums, guest houses, boarding / lodging houses, marriage houses, public halls, auditorium, exhibitions, theatres, circus, cinemas, fuel/oil stations, service stations, printing presses, museums, banks, race-course, burial /crematorium grounds, bus-stations, railway stations, telephone exchanges, All India Radio / T.V. installations, shops having welding set, small lathe, electric drill etc, IT establishments, common facilities in multi-storied commercial office / buildings, commercial trusts, societies, shopping malls, multiplexes, commercial establishments and other installations not covered under any other tariff schedule for single phase supply for contracted load/demand upto 5 kW and three phase supply for contracted /demand above 5 KW upto 75 KW.

This shall also be applicable to government educational institutions, their laboratories, hostels and libraries, government hospitals, government research institutions, government sport institutions and government aided educational institutions, their laboratories, hostels and libraries, government run youth hostels, harijan hostels, rehabilitation centres, anganwadies, balwadies etc.

## 2.2 NON-DOMESTIC SERVICE-II (NDS-II)

This shall be applicable for supply of electrical energy for non-domestic services such as orphanage homes and old-age homes run by religious and charitable organisations recognised by the government for single phase supply for contracted load/demand upto 5 kW and three phase supply for contracted load/demand above 5 KW upto 75 KW

This shall be applicable for supply of electrical energy for non-domestic (Religious) service such as places of worship like temples, mosques, gurudwaras, churches.

## 2.3 NON-DOMESTIC SERVICE-III (NDS-III)

This shall be applicable for supply of electrical energy for advertisement hoardings and neon sign boards for single phase supply for contracted load/demand upto 5 kW and three phase supply for contracted load/demand above 5 KW upto 75 KW

### TARIFF RATES

#### 2.0 NON-DOMESTIC SERVICE

##### 2.1 NON-DOMESTIC SERVICE-I (NDS-I)

Sl.	Category of consumers	Fixed charge (Rs/KW/ month or part thereof)	Energy charge	
			Consumption/ month (Units)	Rate (Ps/unit)
	Single/Three Phases		Upto 100	
			Above 100	

### OPTIONAL

#### 2.1.1 NON-DOMESTIC SERVICE-I/D (NDS-I/D)

All those consumers under NDS-I category with 3 phase supply opting for demand based tariff shall be required to pay at the rates indicated below:

#### 2.1.1.1 NON-DOMESTIC SERVICE-I/D (NDS-I/D)

Sl.	Category of consumers	Demand charge	Energy charge
-----	-----------------------	---------------	---------------

		(Rs/KW/ month or part thereof)	Consumption/ month (Units)	Rate (Ps/unit)
	All Three Phase		For all units	

**2.2 NON-DOMESTIC SERVICE-II (NDS-II)**

Sl.	Category of consumers	Fixed charge (Rs/KW/ month or part thereof)	Energy charge	
			Consumption/ month (Units)	Rate (Ps/unit)
	Single/ Three Phases		For all units	

**OPTIONAL****2.2.1 NON-DOMESTIC SERVICE-II/D (NDS-II/D)**

All those consumers under NDS-II category with 3 phase supply opting for demand based tariff shall be required to pay at the rates indicated below:

**2.2.1 NON-DOMESTIC SERVICE-II/D (NDS-II/D)**

Sl.	Category of consumers	Demand charge (Rs/KW/ month or part thereof)	Energy charge	
			Consumption/ month (Units)	Rate (Ps/unit)
	All Three Phase		For all units	

**2.3 NON-DOMESTIC SERVICE-III (NDS-III)**

Sl.	Category of consumers	Fixed charge (Rs/KW/ month or part thereof)	Energy charge	
			Consumption/ month (Units)	Rate (Ps/unit)
	Single/ Three Phases		For all units	

**OPTIONAL****2.3.1 NON-DOMESTIC SERVICE-III/D (NDS-III/D)**

All those consumers under NDS-III category with 3 phase supply opting for demand based tariff shall be required to pay at the rates indicated below:

**2.3.1 NON-DOMESTIC SERVICE-III/D (NDS-III/D)**

Sl.	Category of consumers	Demand charge (Rs/KW/ month or part thereof)	Energy charge	
			Consumption/ month (Units)	Rate (Ps/unit)

	All Three Phase		For all units	
--	-----------------	--	---------------	--

### 3.0 IRRIGATION AND AGRICULTURAL SERVICE (IAS)

#### Applicability

This shall be applicable for supply of electrical energy for contracted load/demand upto 100 HP for bonafide use for irrigation pumping and agricultural purposes including processing of Agricultural Produce, confined to chaff - cutter, thrasher, cane crusher and rice Huller including lighting loads when operated by the agriculturist in the field or farm. This is also applicable to nurseries growing flowers/ plants/ saplings/ fruits, hatcheries, poultries (with more than 1000 birds) and fisheries (fish ponds), piggery, aquaculture, sericulture, cattle breeding farms, mushroom growing farms, and those dairy units where only extraction of milk and its processing such as chilling, pasteurisation, etc is done.

#### 3.1 IRRIGATION AND AGRICULTURAL SERVICE-I (IAS-I)

This shall be applicable for supply of electrical energy for contracted load/demand upto 25 HP for bonafide use for irrigation pumping and agricultural purposes including processing of Agricultural Produce

#### 3.2 IRRIGATION AND AGRICULTURAL SERVICE-II (IAS-II)

This shall be applicable for supply of electrical energy for contracted load/demand above 25 HP upto 100 HP for bonafide use for irrigation pumping and agricultural purposes including processing of Agricultural Produce

#### 3.3 IRRIGATION AND AGRICULTURAL SERVICE-III (IAS-III)

This shall be applicable for supply of electrical energy for contracted load/demand upto 100 HP for allied activities such as nurseries growing flowers/ plants/ saplings/ fruits, hatcheries, poultries (with more than 1000 birds) and fisheries (fish ponds), piggery, aquaculture, sericulture, cattle breeding farms, mushroom growing farms, and those dairy units where only extraction of milk and its processing such as chilling, pasteurisation, etc is done.

#### Tariff Rates

### 3.0 IRRIGATION AND AGRICULTURAL SERVICE (IAS)

#### 3.1 IRRIGATION AND AGRICULTURAL SERVICE-I (IAS-I)

Sl.	Category of consumers	Fixed charge (Rs/HP/ month or part thereof)	Energy charge (Paisa/kwh)
	Metered		
	Unmetered		X

#### 3.2 IRRIGATION AND AGRICULTURAL SERVICE-II (IAS-II)

Sl.	Category of consumers	Fixed charge (Rs/HP/ month or part thereof)	Energy charge (Paisa/kwh)

### 3.3 IRRIGATION AND AGRICULTURAL SERVICE-III (IAS-III)

Sl.	Category of consumers	Fixed charge (Rs/HP/ month or part thereof)	Energy charge (Paisa/kwh)
	Metered		

### 4.0 LOW TENSION INDUSTRIAL SERVICE (LTIS)

#### Applicability

This shall be applicable for supply of electricity to low tension industrial consumers with a contracted load/demand upto 100 HP for industrial processing or agro-industries purposes, cold storage, arc welding sets, workshops, flour mills, wet grinding, oil mills, rice mills, dal mills, atta chakki, Huller, expellers, saw mills, milk dairies (where milk is processed other than chilling, pasteurisation etc to produce other milk products), ice cream manufacturing units, power-looms, garment manufacturing units, tyre retreading units, bakery manufacturing units, etc including lighting loads.

#### 4.1 LOW TENSION INDUSTRIAL SERVICE-I (LTIS-I)

This shall be applicable for supply of electricity to low tension industrial consumers with a contracted load/demand upto 25 HP

#### 4.2 LOW TENSION INDUSTRIAL SERVICE-II (LTIS-II)

This shall be applicable for supply of electricity to low tension industrial consumers with a contracted load/demand above 25 HP upto 100 HP

#### Tariff Rates

### 4.0 LOW TENSION INDUSTRIAL SERVICE (LTIS)

#### 4.1 LOW TENSION INDUSTRIAL SERVICE-I (LTIS-I)

Sl.	Category of consumers	Fixed charge (Rs/HP/ month or part thereof)	Energy charge
			Rate (Ps/unit)

### OPTIONAL

#### 4.1.1 LOW TENSION INDUSTRIAL SERVICE-I/D (LTIS-I/D)

All those consumers under LTIS-I category with 3 phase supply and with contract demand upto 25 HP opting for demand based tariff shall be required to pay at the rates indicated below:

#### 4.1.1 LOW TENSION INDUSTRIAL SERVICE-I/D (LTIS-I/D)

Sl.	Category of consumers	Demand charge (Rs/HP/ month or part thereof)	Energy charge	
			Consumption/ months(Units)	Rate (Ps/unit)
	All Three Phase upto 25 HP			

#### 4.2 LOW TENSION INDUSTRIAL SERVICE-II (LTIS-II)

Sl.	Category of consumers	Fixed charge (Rs/HP/ month or part thereof)	Energy charge
			Rate (Ps/unit)

### OPTIONAL

#### 4.2.1 LOW TENSION INDUSTRIAL SERVICE-II/D (LTIS-II/D)

All those consumers under LTIS-II category with 3 phase supply and with contract demand above 25 HP upto upto 100 HP opting for demand based tariff shall be required to pay at the rates indicated below:

#### 4.2.1 LOW TENSION INDUSTRIAL SERVICE-II/D (LTIS-II/D)

Sl.	Category of consumers	Demand charge (Rs/HP/ month or part thereof)	Energy charge	
			Consumption/ months(Units)	Rate (Ps/unit)
	All Three Phase			

### 5.0 PUBLIC WATER WORKS & PUBLIC LIGHTING

#### Applicability

This shall be applicable to public water works, sewerage treatment plant and sewerage pumping stations including lighting loads functioning under state government and state government undertakings and local bodies for contracted load/demand upto 100 HP.

This shall also be applicable for supply of electricity for contracted load/demand upto 75 KW to street light system including signal system belonging to state / central government / local bodies. Also applicable to traffic lights, mast lights / blinkers etc.

#### 5.1 PUBLIC WATER WORKS (PWW)

This shall be applicable to public water works, sewerage treatment plant and sewerage pumping stations including lighting loads functioning under state government and state government undertakings and local bodies for contracted load/demand upto 100 HP.



**5.2 PUBLIC LIGHTING (PL)**

This shall be applicable for supply of electricity for contracted load/demand upto 75 KW to street light system including signal system belonging to state / central government / local bodies. Also applicable to traffic lights, mast lights / blinkers etc.

**Tariff Rates****5.0 PUBLIC WATER WORKS (PWW)****5.1 PUBLIC WATER WORKS-I (PWW-I)**

Sl.	Category of consumers	Fixed charge (Rs/HP/ month or part thereof)	Energy charge
			Rate (Ps/unit)

**OPTIONAL****5.1.1 PUBLIC WATER WORKS/D (PWW/D)**

All those consumers under PWW category with 3 phase supply and with contract demand upto 100 HP opting for demand based tariff shall be required to pay at the rates indicated below:

**5.1.1 PUBLIC WATER WORKS/D (PWW/D)**

Sl.	Category of consumers	Demand charge (Rs/HP/ month or part thereof)	Energy charge	
			Consumption/ months(Units)	Rate (Ps/unit)
	All Three Phase			

**5.2 PUBLIC LIGHTING (PL)**

Sl.	Category of consumers	Fixed charge (Rs/KW/ month or part thereof)	Energy charge (Paisa/kwh)
	Metered		
	Unmetered		X

**6.0 BULK SUPPLY SERVICES (BS)****Applicability**

This tariff shall be applicable to supply of electrical energy for contracted load/demand above 30 KW upto 75 KW at three phase low tension at single point where onward distribution lines / service lines are owned and maintained by the consumers for domestic purpose or non-domestic purpose as specified in the respective tariff category.

**6.1 BULK SUPPLY SERVICES-I (BS-I)**

This tariff shall be applicable to supply of electrical energy for domestic services for contracted load/demand above 30 KW upto 75 KW at three phase low tension at single point where onward distribution lines / service lines are owned and maintained by the consumers as specified in the domestic service category above.

## 6.2 BULK SUPPLY SERVICES-II (BS-II)

This tariff shall be applicable to supply of electrical energy for non-domestic services for contracted load/demand above 30 KW upto 75 KW at three phase low tension at single point where onward distribution lines / service lines are owned and maintained by the consumers as specified in the non-domestic services category above.

### Tariff Rates

#### 6.1 BULK SUPPLY SERVICES-I (BS-I)

Sl.	Category of consumers	Fixed charge (Rs/KW/ month or part thereof)	Energy charge (Paisa/kwh)

### OPTIONAL

#### 6.1.1 BULK SUPPLY SERVICES-I/D (BS-I/D)

All those consumers under BS-I category with 3 phase supply opting for demand based tariff shall be required to pay at the rates indicated below:

#### 6.1.1 BULK SUPPLY SERVICES-I/D (BS-I/D)

Sl.	Category of consumers	Demand charge (Rs/KW/ month or part thereof)	Energy charge	
			Consumption (Units)	Rate (Ps/unit)
	All Three Phase			

#### 6.2 BULK SUPPLY SERVICES-II (BS-II)

Sl.	Category of consumers	Fixed charge (Rs/KW/ month or part thereof)	Energy charge (Paisa/kwh)

### OPTIONAL

#### 6.2.1 BULK SUPPLY SERVICES-II/D (BS-II/D)

All those consumers under BS-II category with 3 phase supply opting for demand based tariff shall be required to pay at the rates indicated below:

### 6.2.1 BULK SUPPLY SERVICES-II (BS-II/D)

Sl.	Category of consumers	Demand charge (Rs/KW/ month or part thereof)	Energy charge	
			Consumption/ MONTHS(Units)	Rate (Ps/unit)
	All Three Phase			

### TERMS AND CONDITIONS OF LOW TENSION (LT) TARIFF

1. Unless otherwise agreed to, these tariffs are applicable for power supply at one point only.
2. Unless otherwise specifically stated to the contrary, the figures of energy charges relates to paise per unit (kwh) for energy consumed during the month.
3. These tariffs are exclusive of statutory levies like electricity duty/cess or any other taxes, duties/cess etc, imposed by the State Government / Central Government or any other competent authority and shall be charged extra.
4. In case payment is made through cheque and the cheque is dishonoured, an amount of Rs.200/- shall be levied as cheque return charges. The licensee may initiate action u/s 138 of the Negotiable Instrument Act, 1981 in addition to disconnection of the service.
5. Fixed/Demand charges, wherever applicable, shall be charged on pro-rata basis from the date of release of connection. Fixed/Demand charges, wherever applicable, shall be double as and when bi-monthly billing is done. Similarly, slabs of energy consumption shall also be doubled in case of bi-monthly billing.
6. The electricity bill shall be rounded off in whole rupees. Amount less than 50 paise shall be ignored and amount of 50 paise and above shall be considered as one rupee.
7. **Advance Payment Rebate:** If payment is made in advance well before commencement of consumption period for which bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding security deposit) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.
8. **Prompt Payment Rebate:** If payment is made at least 7 days in advance of the due date of payment a rebate for prompt payment @ 0.25 % of the bill amount shall be given. Those consumers having arrears shall not be entitled for such rebate.
9. **Delayed payment surcharge:** In case a consumer does not pay energy bills in full by the due date specified in the bill, a delayed payment surcharge of one and half (1.5) percent per month or part thereof on the outstanding arrears shall be levied from the due date for payment until the payment is made in full without prejudice to right of the licensee to disconnect the supply in accordance with Section 56 of the Electricity Act, 2003.
10. **Shunt Capacitor Installation**

a) Every LT consumer including irrigation pump set consumers whose connected load includes induction motor (s) of capacity 3 HP and above and other low power factor consuming appliances shall arrange to install low tension shunt capacitors of appropriate capacity at his cost across terminals of his motor (s). The consumer shall ensure that the capacitors installed by him are properly matched with the actual rating of the motor so as to ensure power factor of 90% (0.9 lagging).

b) All LT consumers having welding transformers will be required to install suitable shunt capacitor(s) of adequate capacity so as to ensure power factor of not less than 90% (0.9 lagging).

c) The capacitors shall be of standard manufacture and meet the Bureau of Indian Standards specification.

d) Consumers not complying to above shall be liable to pay a power factor surcharge at the following rates:

(i) For the LT consumers whose meter is capable of recording average monthly power factor and if the monthly average power factor of a consumer falls below 90% (0.9 lagging), such consumer shall pay a surcharge in addition to his normal tariff @ 0.5% on billed demand and energy charges for each fall of 0.01 in power factor upto 0.7(lagging). If such consumers maintains power factor more than 95% (0.95 lagging), a power factor incentive @ 0.25% on demand and energy charges shall be given for each increase of 0.01 in power factor above 0.95 (lagging)

(ii) For the LT consumers whose meter is not capable of recording average monthly power factor and such LT Consumers not complying to conditions a to c above shall be liable to pay a power factor surcharge of 10% (ten percent) of the billed fixed/demand and energy charges till the capacitors in healthy condition are installed.

e) If the average power factor falls below 0.70 (lagging) consecutively for 3 months, the licensee reserves the right to disconnect the consumer's service connection without prejudice for the levy of the surcharge.

f) No new supply to LT installations having low power factor consuming equipment such as induction motor of 3 HP and above or welding transformers etc., will be released unless shunt capacitors are installed to the satisfaction of the Board.

**11. Maximum Demand:** The maximum demand of supply of electricity during a month shall be twice the largest number of Kilo-Volt Ampere Hours (KVAH) delivered at the point of supply to the consumers during any consecutive 30 minutes in the month.

**12. Billing Demand:** Any LT consumer who has opted for demand based tariff, the billing of such consumer shall be on the maximum demand recorded during the month or contracted demand, whichever is higher. Such billing demand shall be rounded off to next higher digit for the purpose of billing.

**13. Excess Demand:** If in any month, the recorded maximum demand of the consumer exceeds 105% of its contracted demand, the normal tariff shall be applicable upto the 105% of the contract demand and that portion of demand which is in excess of 105% of the contracted demand shall be billed at double the normal rate. If the actual recorded demand of a consumer exceeds 105% of the contracted demand consecutively for three months, the licensee may issue a notice and inform the consumer to get additional contract demand sanctioned or to limit their drawl as per their contract. Otherwise the licensee shall take action as per provisions of the Act/Rules/Regulations.

**Illustration:** If contract demand is 60 kw whereas maximum demand recorded during the month is 70 kw, then demand for 63 kw (105% of 60 kw) shall be billed at normal rate and demand for 7 kw (70 kva-63 kw) shall be billed at twice the normal rate.

**14. Defective / Damaged / Burnt Meter:** In case of meter being defective / damaged / burnt the Licensee or the consumer as the case may be shall replace the same within the period specified in “Standards of Performance” Regulations issued by the Commission. Till defective meter is replaced the consumption shall be assessed and billed on an average consumption of last six meter reading cycles or average monthly consumption of corresponding six meter reading cycles of the preceding year whichever is higher from the date of meter being out of order. Such consumption shall be treated as actual consumption for all practical purposes until the meter is replaced/ rectified.

In case a functional check-meter is available then the readings of the check meter shall be used for billing purposes when main meter becomes defective/damaged/burnt.

In case the meter becomes defective within three meter reading cycles after its installation and prior consumption is not available, then billing shall be done provisionally on the basis of following load factor subject to adjustment on the average consumption of three meter reading cycles of the replaced meter:

Sl	Category of consumers	Load Factor	Average Unit
1.	Domestic	0.15	100 units/kW
2.	Non-domestic	0.20	150 units/kW
3.	Public Water Works	0.20	100 units/HP for water works 125 unit/kW for street light
4.	Irrigation & Agicultural	0.15	80 units/HP
5.	LT Industrial	0.25	135 units/HP
6.	HT Industrial (at P.F.=0.0.90 lag)	0.40	260 units/kVA

**15. Contracted/Connected load/Demand exceeding LT load limit:** In case of existing LT consumers whose contracted/connected load or demand exceeds the upper limit of LT supply, such consumers may either shift to HT supply or optionally continue to remain as LT consumers subject to payment of 10% surcharge on fixed and energy charges. The licensee shall not release any new connection or enhance load of existing consumers whose contracted load/demand exceeds LT limits.

**16. Usage of electricity for other purpose than authorized:** If either more than one room or only one room having monthly consumption exceeding 150 KWH for consecutive three months are detected in the domestic premises being used for mixed purposes having DS-II connection or any other premises which is used for a purpose other than for which it was authorized and the tariff applicable for which is higher, it shall be considered under unauthorised use of electricity and shall be dealt as per JERC Electricity Supply Code Regulations, 2010 and such connection shall further be billed on appropriate higher tariff category until a separate connection of appropriate tariff is taken for that portion.

**17. FPPCA:** The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with FPPCA formula notified by the Commission. The value of K-factor shall be applicable to the different consumer categories as per the values approved in this tariff order. Such

charges shall be recovered / refunded in accordance with terms & conditions specified in the FPPCA formula.

### 18. Temporary Supply (LT)

(i) Temporary Supply is for connection temporary in nature for a maximum period of two year. The applicability shall be as given in the respective tariff category. Temporary supply cannot be claimed by a prospective consumer as a matter of right but will normally be arranged by the licensee when a requisition is made giving due notice subject to technical feasibility and in accordance with electricity supply code issued by the Commission.

(ii) The tariff shall be chargeable as applicable to the corresponding appropriate tariff category at the following rates subject to minimum Rs .....:

Sl	Period of Supply	Tariff Rate
1.	Upto 12 months	150% of normal rate of appropriate tariff category
2.	More than 12 months and upto 18 months	175% of normal rate of appropriate tariff category
3.	More than 18 months and upto 24 months	200% of normal rate of appropriate tariff category

Fixed/Demand charges, wherever applicable, shall be charged on pro-rata basis from the date of release of connection.

(iii) Terms of Supply of Temporary Supply shall be as below:

a) Temporary supply may be given for a period not exceeding 3 months in the first instance, the duration of which, may be extended on quarter to quarter basis subject to maximum total duration of two year.

b) In addition to the tariff charges, the consumer shall have to deposit the following charges before commencement of the temporary supply:

(i) Estimated cost of erection of temporary service line and dismantling.

(ii) Cost of irretrievable materials which cannot be taken back to service.

(iii) Meter rent for the full period of temporary connection as per appropriate tariff schedule and other miscellaneous charges.

(iv) Rental on the cost of materials of the licensee as per estimate at the rate of Rs. 15/- per month on every Rs. 100/- or part thereof.

(v) Ten per cent on the total cost of the estimate for the temporary service connection to cover as security for loss of materials and contingencies. In case such loss is not noticed, the amount will be refunded.

c) The applicants for temporary supply shall be required to make a deposit in advance of the cost as detailed above including fixed/demand charges and the energy consumption charges estimated for full period on the basis of contracted load/demand. This will however, be adjusted against the final bill that will be rendered on disconnection of supply.

d) If the consumer intends to extend the temporary supply beyond the period originally applied for, he will have to deposit in advance all applicable charges as detailed above including the estimated

electricity consumption charges, for the period to be extended and final bill as well, for the previous period, if any.

### **19. Seasonal Supply (LT)**

(i) Seasonal supply shall be given to any consumer on written request to the licensee subject to the following conditions.

<b>Sl</b>	<b>Period of Supply</b>	<b>Tariff Rate</b>
1.	Upto 3 consecutive months in a year	Appropriate tariff plus 40 percent
2.	More than 3 consecutive months and upto 6 consecutive months in a year	Appropriate tariff plus 30 percent
3.	More than 6 consecutive months and upto 9 consecutive months in a year	Appropriate tariff plus 20 percent
4.	More than 9 consecutive months but less than one year	Appropriate tariff plus 10 percent.

(ii) The meter rent and other charges as provided in the appropriate tariff are applicable to seasonal loads and would be charged extra for the entire period of supply.

(iii) The supply would be disconnected after the end of the period unless the consumer wants the supply to be continued. Any reconnection charges have to be borne by the consumer.

(iv) Consumer proposing to avail seasonal supply shall sign an agreement with the licensee to avail power supply for a minimum period of 2 years in the case of LT category of supply.

(v) The consumers must avail supply in terms of whole calendar month continuously.

(vi) The consumer is required to apply for seasonal supply and pay initial cost and security deposit as an applicant for normal electricity supply.

(vii) The consumer shall ensure payment of monthly energy bills within 7 days of its receipt. The supply will be disconnected if payment is not made on due date.

**20.** Schedule of Tariff and Other charges approved in this Tariff Order shall remain in force until it is amended by the Commission.

### **PART - B: HIGH TENSION (HT) SUPPLY**

System of supply: High Tension – Alternating Current, 50 cycles per second, 3 phase at 11 KV / 22 KV / 33 KV

The tariffs shall be applicable for supply of electricity for use in installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA depending upon the supply voltage for different contract demand as specified below:

Sl	Supply Voltage	Contract Demand	
		Minimum	maximum
1	11 kV or 22 kV	80 kVA	1500kVA
2	33 kV	1501 kVA	5000 kVA

## CATEGORY OF SERVICE AND TARIFF RATES

### 8.0 HIGH TENSION SERVICE-HTS

#### Applicability

The tariffs shall be applicable for supply of electricity for use in installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

#### Note:

- (i) A surcharge @ 10% shall be levied on fixed/demand charge and energy charge if supply is availed at LT voltage by the existing consumers against specified 11 kV.
- (ii) A surcharge @ 5% shall be levied on fixed/demand charge and energy charge if supply is availed at 11 kV or 22 kV by the existing consumers against specified 33 kV.
- (iii) An incentive @ 3% shall be given on demand charge and energy charge if supply voltage is at 33 kV against specified 11 kV.
- (iv) An incentive @ 3% shall be given on demand charge and energy charge if supply voltage is at 66 kV EHT voltage against specified 33 kV HT voltage.

### 8.1 HIGH TENSION/DS (HT/DS)

The tariffs shall be applicable for supply of electricity for domestic use defined under 1.0 above in installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

### 8.2 HIGH TENSION/NDS (HT/NDS)

#### 8.2.1 HIGH TENSION/NDS-I (HT/NDS-I)

The tariffs shall be applicable for supply of electricity for non-domestic use defined under 2.0 above including shopping malls, multiplexes and other commercial installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

#### 8.2.2 HIGH TENSION/NDS-II (HT/NDS-II)

The tariffs shall be applicable for supply of electricity for non-domestic (religious and charitable) use defined under 2.0 above with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

### 8.3 HIGH TENSION/IAS (HT/IAS)



The tariffs shall be applicable for supply of electricity for irrigation and agricultural use defined under 3.0 above in installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

#### **8.4 HIGH TENSION/INDUSTRIAL (HTIS-I)**

The tariffs shall be applicable for supply of electricity for industrial use defined under 4.0 above other than power intensive covered under HTS-IV tariff in installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

#### **8.5 HIGH TENSION/POWER INCENTIVE (HTIS-II)**

The tariffs shall be applicable for supply of electricity for power intensive, metal alloy, steel melting, ferro-alloy, ferro-metallurgical use in installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

#### **8.6 HIGH TENSION/PWW (HT/PWW)**

The tariffs shall be applicable for supply of electricity for public water works use defined under 5.0 above in installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

### **Tariff Rates**

#### **8.0 HIGH TENSION SERVICE-HTS**

##### **8.1 HIGH TENSION/DS (HT/DS)**

Sl.	Category of consumers	Fixed charge (Rs/KVA/ month or part thereof)	Energy charge
			Rate (Ps/unit)

##### **8.2.1 HIGH TENSION/NDS (HT/NDS-I)**

Sl.	Category of consumers	Fixed charge (Rs/KVA/ month or part thereof)	Energy charge
			Rate (Ps/unit)

##### **8.2.2 HIGH TENSION/NDS (HT/NDS-II)**

Sl.	Category of consumers	Fixed charge	Energy charge

		(Rs/KVA/ month or part thereof)	Rate (Ps/unit)

**8.3 HIGH TENSION/IAS (HT/IAS)**

Sl.	Category of consumers	Fixed charge (Rs/KVA/ month or part thereof)	Energy charge
			Rate (Ps/unit)

**8.4 HIGH TENSION/INDUSRIAL (HTIS-I)**

Sl.	Category of consumers	Fixed charge (Rs/KVA/ month or part thereof)	Energy charge
			Rate (Ps/unit)

**8.5 HIGH TENSION/POWER INCENTIVE (HTIS-II)**

Sl.	Category of consumers	Fixed charge (Rs/KVA/ month or part thereof)	Energy charge
			Rate (Ps/unit)

**8.6 HIGH TENSION/PWW (HT/PWW)**

Sl.	Category of consumers	Fixed charge (Rs/KVA/ month or part thereof)	Energy charge
			Rate (Ps/unit)

**PART - C: EXTRA HIGH TENSION (EHT) SUPPLY**

System of supply: Extra High Tension – Alternating Current, 50 cycles per second, 3 phase at 66 KV / 110 KV / 132 KV / 220 KV

The tariffs shall be applicable for supply of electricity for use in installations with contract demand more than 5000 KVA depending upon the supply voltage for different contract demand as specified below:

Sl	Supply Voltage	Contract Demand	
		minimum	Maximum
1	66 kV	5001 kVA	25000 kVA
2	110 kV or 132 kV or 220 kV	Above 25000 kVA	

## CATEGORY OF SERVICE AND TARIFF RATES

### 9.0 EXTRA HIGH TENSION

#### Applicability

The tariffs shall be applicable for supply of electricity for use in installations with a minimum contract demand of 5001 KVA on extra high tension voltage at 66 KV / 110 KV / 132 KV / 220 KV as per the specified voltage wise contract demand.

#### Note:

- (i) A surcharge @ 5% shall be levied on fixed/demand charge and energy charge if supply is availed at 33 kV HT voltage by existing consumers against specified 66 kV EHT voltage.
- (ii) A surcharge @ 5% shall be levied on fixed/demand charge and energy charge if supply is availed at 66 kV EHT voltage by existing consumers against specified 110 KV / 132 KV / 220 KV EHT voltage.
- (iii) An incentive @ 3% shall be given on demand charge and energy charge if supply voltage is at 110 kV or 132 kV or 220 kV against specified 66 kV.

#### Tariff Rates

### 9.0 EXTRA HIGH TENSION SERVICES (EHTS)

Sl.	Category of consumers	Fixed charge (Rs/KVA/month or part thereof)	Energy charge
			Rate (Ps/unit)

## TERMS AND CONDITIONS OF HT and EHT TARIFF

1. Unless otherwise agreed to, these tariffs are applicable for power supply at one point only.
2. Unless otherwise specifically stated to the contrary, the figures of energy charges relates to paisa per unit for energy consumed during the month.
3. These tariffs are exclusive of statutory levies like electricity duty/cess or any other taxes, duties/cess etc., imposed by the State Government / Central Government or any other competent authority and shall be charged extra.
4. In case, payment is made through cheque and the cheque is dishonoured, an amount of Rs.200/- shall be levied as cheque return charges. The licensee may initiate action u/s 138 of the Negotiable Instrument Act, 1981 in addition to disconnection of the service.

5. The supply voltage for different contract demand as specified below:

Sl	Supply Voltage	Contract Demand	
		minimum	maximum
1	11 kV or 22 kV	80 kVA	1500kVA
2	33 kV	1501 kVA	5000 kVA
3	66 kV	5001 kVA	25000 kVA
4	110 kV or 132 kV or 220 kV	Above 25000 kVA	

6. Demand charges, wherever applicable, shall be charged on pro-rata basis from the date of release of connection. Demand charges, wherever applicable, shall be double as and when bi-monthly billing is done. Similarly, slabs of energy consumption shall also be doubled in case of bi-monthly billing.

7. The electricity bill shall be rounded off in whole rupees. Amount less than 50 paise shall be ignored and amount of 50 paise and above shall be considered as one rupee.

**8. Advance Payment Rebate:** If payment is made in advance well before commencement of consumption period for which bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding security deposit) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

**9. Prompt Payment Rebate:** If payment is made at least 7 days in advance of the due date of payment a rebate for prompt payment @ 0.25 % of the bill amount shall be given. Those consumers having arrears shall not be entitled for such rebate.

**10. Delayed payment surcharge:** In case a consumer does not pay energy bills in full by the due date specified in the bill, a delayed payment surcharge of one and half (1.5) percent per month or part thereof on the outstanding arrears shall be levied from the due date for payment until the payment is made in full without prejudice to right of the licensee to disconnect the supply in accordance with Section 56 of the Electricity Act, 2003.

**11. Power Factor Surcharge / Incentive**

(a) The monthly average power factor of the supply shall be maintained by the consumer not less than 0.90 (lagging). If the monthly average power factor of a consumer falls below 90% (0.9 lagging), such consumer shall pay a surcharge in addition to his normal tariff @ 1% on billed demand and energy charges for each fall of 0.01 in power factor upto 0.7(lagging)

(b) In case the monthly average power factor of the consumer is more than 95% (0.95 lagging), a power factor incentive @ 0.5% on demand and energy charges shall be given for each increase of 0.01 in power factor above 0.95 (lagging)

(c) If the average power factor falls below 0.70 (lagging) consecutively for 3 months, the licensee reserves the right to disconnect the consumer's service connection without prejudice for the levy of the surcharge.

(d) The power factor shall be rounded off to two decimal places. For example, 0.944 shall be treated as 0.94 and 0.946 shall be treated as 0.95

**12. Maximum Demand:** The maximum demand of supply of electricity during a month shall be twice the largest number of Kilo-Volt Ampere Hours (KVAH) delivered at the point of supply to the consumers during any consecutive 30 minutes in the month.

**13. Billing Demand:** The billing shall be on the maximum demand recorded during the month or 75% of contracted demand, whichever is higher. Such billing demand shall be rounded off to next higher digit for the purpose of billing.

**14. Excess Demand:** If in any month, the recorded maximum demand of the consumer exceeds 105% of its contracted demand, the normal tariff shall be applicable upto the 105% of the contract demand and that portion of demand which is in excess of 105% of the contracted demand shall be billed at double the normal rate. If the actual recorded demand of a consumer exceeds 105% of the contracted demand consecutively for three months, the licensee may issue a notice and inform the consumer to get additional contract demand sanctioned or to limit their drawl as per their contract. Otherwise the licensee shall take action as per provisions of the Act/Rules/Regulations.

**Illustration:** If contract demand is 100 kva whereas maximum demand recorded during the month is 115 kva, then demand for 105 kva (105% of 100 kva) shall be billed at normal rate and demand for 15 kva (120 kva-105 kva) shall be billed at twice the normal rate.

**15. Defective / Damaged / Burnt Meter:** In case of meter being defective / damaged / burnt, the licensee or the consumer as the case may be shall replace the same within the period specified in "Standards of Performance" Regulations issued by the Commission. Till defective meter is replaced the consumption shall be assessed and billed on an average consumption of last six meter reading cycles or average monthly consumption of corresponding six meter reading cycles of the preceding year whichever is higher from the date of meter being out of order. Such consumption shall be treated as actual consumption for all practical purposes until the meter is replaced/ rectified.

In case a functional check-meter is available then the readings of the check meter shall be used for billing purposes when main meter becomes defective/damaged/burnt.

In case the meter becomes defective immediately after its installation and prior consumption is available, then billing shall be done provisionally on the basis of following load factor subject to adjustment on the average consumption of three meter reading cycles of the replaced meter.

**16. FPPCA:** The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with FPPCA formula notified by the Commission. The value of K-factor shall be applicable to the different consumer categories as per the values approved in this tariff order. Such charges shall be recovered / refunded in accordance with terms & conditions specified in the FPPCA formula.

**17. Temporary Supply (HT & EHT)**

(i) Temporary Supply is for connection temporary in nature for a maximum period of two year. The applicability shall be as given in the respective tariff category. Temporary supply cannot be claimed by a prospective consumer as a matter of right but will normally be arranged by the licensee when a requisition is made giving due notice subject to technical feasibility and in accordance with electricity supply code issued by the Commission.

(ii) The tariff shall be chargeable as applicable to the corresponding appropriate tariff category at the following rates subject to minimum Rs .....:

Sl	Period of Supply	Tariff Rate
----	------------------	-------------

1.	Upto 12 months	150% of normal rate of appropriate tariff category
2.	More than 12 months and upto 18 months	175% of normal rate of appropriate tariff category
3.	More than 18 months and upto 24 months	200% of normal rate of appropriate tariff category

Demand charges, wherever applicable, shall be charged on pro-rata basis from the date of release of connection.

(iii) Terms of Supply of Temporary Supply shall be as below:

a) Temporary supply may be given for a period not exceeding 3 months in the first instance, the duration of which may be extended on quarter to quarter basis subject to maximum total duration of two year.

b) In addition to the tariff charges, the consumer shall have to deposit the following charges before commencement of the temporary supply:

(i) Estimated cost of erection of temporary service line and dismantling.

(ii) Cost of irretrievable materials which cannot be taken back to service.

(iii) Meter rent for the full period of temporary connection as per appropriate tariff schedule and other miscellaneous charges.

(iv) Rental on the cost of materials of the licensee as per estimate at the rate of Rs. 15/- per month on every Rs. 100/- or part thereof.

(v) Ten per cent on the total cost of the estimate for the temporary service connection to cover as security for loss of materials and contingencies. In case such loss is not noticed, the amount will be refunded.

c) The applicants for temporary supply shall be required to make a deposit in advance of the cost as detailed above including demand charges and the energy consumption charges estimated for full period on the basis of contracted demand. This will however, be adjusted against the final bill that will be rendered on disconnection of supply.

d) If the consumer intends to extend the temporary supply beyond the period originally applied for, he will have to deposit in advance all applicable charges as detailed above including the estimated electricity consumption charges, for the period to be extended and final bill as well, for the previous period, if any.

### **18. Seasonal Supply (HT & EHT)**

(i) Seasonal supply shall be given to any consumer on written request to the Board subject to the following conditions.

Sl	Period of Supply	Tariff Rate
1.	Upto 3 consecutive months in a year	Appropriate tariff plus 40 percent
2.	More than 3 consecutive months and upto 6 consecutive months in a year	Appropriate tariff plus 30 percent
3.	More than 6 consecutive months	Appropriate tariff plus 20 percent

	and upto 9 consecutive months in a year	
4.	More than 9 consecutive months but less than one year	Appropriate tariff plus 10 percent.

(ii) The meter rent and other charges as provided in the appropriate tariff are applicable to seasonal loads and would be charged extra for the entire period of supply.

(iii) The supply would be disconnected after the end of the period unless the consumer wants the supply to be continued. Any reconnection charges have to be borne by the consumer.

(iv) Consumer proposing to avail seasonal supply shall sign an agreement with the licensee to avail power supply for a minimum period of 3 years in the case of HT category of supply.

(v) The consumers must avail supply in terms of whole calendar month continuously.

(vi) The consumer is required to apply for seasonal supply and pay initial cost and security deposit as an applicant for normal electricity supply.

(vii) The consumer shall ensure payment of monthly energy bills within 7 days of its receipt. The supply will be disconnected if payment is not made on due date.

#### **19. Time of Day tariff (ToD)**

(i) Under the Time of Day (ToD) Tariff, electricity consumption and maximum demand in respect of HT/EHT consumers for different periods of the day, i.e. normal period, peak load period and off-peak load period, shall be recorded by installing a ToD meter.

(ii) The maximum demand and consumption recorded in different periods shall be billed at the following rates on the tariff applicable to the consumer.

<b>Time of use</b>	<b>Demand Charges</b>	<b>Energy Charges</b>
Normal period (6:00 a.m. to 6:00 p.m)	Normal Rate	Normal rate of energy charges
Evening peak load period (6:00 p.m to 10.00 p.m)	Normal Rate	120% of normal rate of energy charges
Off-peak load period (10:00 p.m to 6:00 a.m)	Normal Rate	90% of normal rate of energy charges

(iii) Applicability and Terms and Conditions of TOD tariff:

(a) TOD tariff shall be optional unless otherwise specifically stated to the contrary in the tariff order.

(b) The facility of aforesaid TOD tariff shall not be available to HT/EHT consumers having captive power plants and/or availing supply from other sources through wheeling of power.

(c) The HT/EHT industrial consumers who have installed standby generating plants shall also be eligible for the aforesaid TOD tariff.

(d) In the event of applicability of TOD tariff to a consumer, all other terms and conditions of the applicable tariff shall continue to apply.

**20.** Schedule of Tariff and Other charges approved in this Tariff Order shall be as approved in the tariff order.

#### **PART - D: MISCELLANEOUS AND GENERAL CHARGES (FOR ALL CATEGORIES OF CONSUMERS)**

##### **1 METER RENT:**

i) BPL
ii) LT Single Phase except BPL
iii) LT Three Phase Upto 100 Amps
iv) LT meter with CT
v) HT meter with CTPT combined unit
vi) EHT meter with CTPT combined unit

##### **2 APPLICATION FEE FOR NEW CONNECTION / REDUCTION OF CONTRACTED LOAD OR DEMAND / ENHANCEMENT OF CONTRACTED LOAD OR DEMAND/REQUEST FOR PERMANENT DISCONNECTION:**

(i) BPL
(ii) LT Single phase except BPL
(iii) LT Three phase
(iv) HTS
(v) EHTS

##### **3 TESTING / INSPECTION OF CONSUMER'S INSTALLATION:**

(i) Initial Test / Inspection Free of cost
(ii) Subsequent test and inspection Rs. 100.00 for single phase necessitated by fault in installation or by not complying with terms and conditions of supply connection
a) for three phase LT connection
b) for HT connection.

##### **4 METER TESTING FEE:**

(i) LT Single Phase meter
(ii) LT Three Phase meter
(iii) LT Three Phase meter with CT
(iv) LT Tri-vector meter
(v) HT Tri-vector meter
(vi) EHT Tri-vector meter
(vii) LT CT set
(viii) HT metering equipment



(ix) EHT metering equipment
-----------------------------

Note: If the meter is tested at third party testing laboratory at the request of the consumer then the fees charged by the testing laboratory will be payable by the consumer.

**5 REMOVING / RE-FIXING / CHANGING OF METER / METER BOARD AT CONSUMER'S REQUEST:**

(i) BPL
---------

(ii) LT Single Phase meter
----------------------------

(iii) LT Three Phase meter
----------------------------

(iv) LT Three Phase meter with CT
-----------------------------------

(v) LT Tri-vector meter with CT
---------------------------------

(vi) HT Tri-vector meter with metering equipment
--

(vii) EHT Tri-vector meter with metering equipment
--

Note: Cost of material, as required, will be borne by the consumer

**6 RECONNECTION CHARGE:**

(i) BPL
---------

(ii) LT Single Phase supply
-----------------------------

(iii) LT Three Phase supply
-----------------------------

(iv) HT supply
----------------

(v) EHT supply
----------------

**7 SUPERVISION, LABOUR AND ESTABLISHMENT CHARGE FOR SERVICE CONNECTION:**

(i) BPL
---------

(ii) LT Single Phase
----------------------

(iii) LT Three Phase
----------------------

(iv) HT As per approved estimate
----------------------------------

(v) EHT As per approved estimate
----------------------------------

## 11. Conclusion of Commission's Order

Having considered the Petitions of Electricity Department – Goa for approval of Review for FY 2012-13 and determination of ARR for 2013-14, the Commission approves the Aggregate Revenue Requirement (ARR) and the retains the tariff schedule approved vide order dated June 27, 2012 for ED- Goa.

1. The break-up of the Aggregate Revenue Requirement approved for ED Goa for FY 2013-14 is given below.

Sr. No.	Particulars (In Rs Cr)	FY 2013-14	
		Estimated	Approved
1	Cost of power purchase	867.95	909.86
2	Employee costs	149.40	148.64
3	R&M expenses	25.07	20.21
4	Administration and general expenses	9.36	9.36
5	Depreciation	16.03	16.03
6	Int and Finance Charges	7.60	16.70
7	Interest on Working Capital	1.60	1.68
8	Interest on Security Deposit	6.52	6.15
9	Return on NFA	5.86	5.86
10	Provision for Bad Debts	-	
11	Other Expenses	1.02	1.02
<b>12</b>	<b>Total Revenue Requirement</b>	<b>1,090.40</b>	<b>1,135.52</b>
13	Less: Non Tariff Income	22.53	22.53
14	Less: Revenue from Sale of Power - UI Pool		
15	Less: Revenue from Sale of Power- Exchanges	6.85	
16	Less: Revenue from Sale / Banking of Power		
<b>17</b>	<b>Aggregate Revenue Requirement</b>	<b>1,061.03</b>	<b>1,112.99</b>
18	Revenue from Retail Sales at Existing Tariff	944.93	981.11
19	FPPCA Charge		
20	<b>Revenue Gap/ (Surplus) at existing tariff</b>	<b>116.10</b>	<b>131.88</b>
21	Budgetary Support from Government	116.10	131.88
22	<b>Net Final Revenue Gap/ (Surplus) at existing tariff</b>	<b>-</b>	<b>-</b>

2. The break-up of the Aggregate Revenue Requirement approved under the review for ED Goa for FY 2012-13 is given below:

Sr. No.	Particulars (In Rs Cr)	FY 2012-13
		Approved
1	Cost of power purchase	866.01
2	Employee costs	136.44
3	R&M expenses	18.55
4	Administration and general expenses	8.59
5	Depreciation	8.80
6	Int and Finance Charges	10.33
7	Interest on Working Capital	2.22
8	Interest on Security Deposit	5.94
9	Return on NFA	3.68
10	Provision for Bad Debts	-
11	Other Expenses	0.60
<b>12</b>	<b>Total Revenue Requirement</b>	<b>1,061.18</b>
13	Less: Non Tariff Income	23.06
14	Less: Revenue from Sale of Power - UI Pool	-
15	Less: Revenue from Sale of Power-Exchanges	6.11
16	Less: Revenue from Sale / Banking of Power	
<b>17</b>	<b>Aggregate Revenue Requirement</b>	<b>1,032.01</b>
18	Revenue from Retail Sales at Existing Tariff	937.91
19	FPPCA Charge	33.02
20	<b>Revenue Gap/ (Surplus) at existing tariff</b>	<b>61.08</b>
21	Budgetary Support from Government	61.08
22	<b>Net Final Revenue Gap/ (Surplus) at existing tariff</b>	<b>-</b>

3. The approved retail tariff for FY 2013-14 shall be the same as approved in the Tariff order for FY 2012-13 dated June 27, 2012 which is shown in the table below:

S. No.	Category/Consumption Slab	Approved Tariff-FY 2013-14		K factor (applicable for FY 2013-14)
		Fixed Charges <sup>8</sup>	Variable Charges <sup>9</sup>	
<b>A</b>	<b>Low Tension Supply</b>			
<b>1(a)</b>	<b>Tariff LTD/Domestic and Non-Commercial</b>			
	First 60 Units	5.00	1.20	0.34
	61 to 250 Units	10.00	1.60	0.45
	251 to 500 Units	20.00	2.60	0.74
	Above 500 Units	30.00	3.00	0.87
<b>1(b)</b>	<b>Tariff LTD/Low Income Group</b>	25.00	-	NA
<b>1(c)</b>	<b>Tariff LTD/Domestic Mixed</b>			
	First 400 Units	20.00	2.70	0.74
	Above 400 Units	30.00	3.70	1.01
<b>2</b>	<b>Tariff-LTC/Commercial</b>			
	First 100 Units	20.00	3.00	0.85
	From 101 to 1000 Units	30.00	3.80	1.08
	All Consumption above 1000 Units	50.00	4.10	1.20
<b>3(a)</b>	<b>Tariff-LTP/Motive Power</b>			
	Connected Load upto 50 HP	20.00	2.50	1.01
	Connected Load above 50 HP	20.00	3.00	1.17
<b>3(b)</b>	<b>Tariff-LTP/ Ice Manufacturing</b>			
	Connected Load upto 100 HP	20.00	3.00	1.17
<b>3(c)</b>	<b>Tariff-LTP/Mixed (Hotel Industries)</b>	25.00	4.00	1.12
<b>4</b>	<b>Tariff-LTAG/Agriculture</b>	5.00	1.20	NA
<b>5</b>	<b>Tariff-LTPL/Public Lighting</b>	25.00	3.00	0.89
<b>6</b>	<b>Tariff-LT PWW/Public Water Works</b>	20.00	2.50	1.16
<b>B</b>	<b>High Tension Supply</b>			
<b>7</b>	<b>Tariff HT-Mixed</b>	175.00	3.15	1.01
<b>8 (a)</b>	<b>Tariff HTI/Industrial</b>	175.00	3.30	1.12
<b>8 (b)</b>	<b>Tariff HTI/ Hotel Industries</b>	175.00	3.30	1.12
<b>8 (c)</b>	<b>Tariff HTI/ Ice Manufacturing</b>	175.00	3.00	0.96
<b>9</b>	<b>H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)</b>			
	First 300 Units/kVA	450.00	2.50	0.97
	Next 200 Units/kVA	450.00	2.75	1.04
	Above 500 Units/kVA	450.00	3.00	1.11
<b>10</b>	<b>Tariff-HTAG/Agriculture</b>	25.00	1.25	NA
<b>11</b>	<b>EHTI/Industrial</b>	175.00	3.30	1.14
<b>12</b>	<b>H.T. PW/Public Water Supply and Sewage</b>	175.00	3.00	0.96
<b>13</b>	<b>H.T. MES/Defence Establishments</b>	125.00	3.30	0.98
<b>14</b>	<b>H.T. Industrial (Steel Rolling)</b>			
	First 200 Units/kVA	400.00	1.80	1.02
	Next 100 Units/kVA	400.00	2.25	1.17

<sup>8</sup> Rs. per connection or KW or HP or KVA on monthly basis as applicable and detailed in the attached tariff schedule<sup>9</sup> Rs. per KWh

S. No.	Category/Consumption Slab	Approved Tariff-FY 2013-14		K factor (applicable for FY 2013-14)
		Fixed Charges <sup>8</sup>	Variable Charges <sup>9</sup>	
	Above 300 Units/kVA	400.00	3.00	1.35
15	<b>Tariff HT-Industries (IT High Tech).</b>	175.00	2.60	0.96
C	<b>Temporary Supply</b>			
16	<b>Tariff-LT/Temporary</b>	-	7.50	-
17	<b>Tariff-HT/Temporary</b>	-	7.50	-

4. The approved tariff shall come in force with effect from 1<sup>st</sup> April 2013 and shall remain valid till 31<sup>st</sup> March 2014. All existing provisions which are not modified by this order shall continue to be in force. The licensee shall publish the revised tariff structure and the salient features of tariff within one week in three daily newspapers in the respective local languages of the region, besides English, having wide circulation in their respective areas of supply.
5. The licensee will compute fuel and power procurement cost variations and adjustments shall be made in the consumer bills based on the Fuel & Power Purchase Cost Adjustment (FPPCA) formula/regulations being separately notified by the Commission. For the purpose of calculation using FPPCA formula to be notified by the Commission separately, **the approved per unit cost of power purchase ( $R_{\text{approved}}$ ) for use in the FPPCA formula (paise per unit) is 268 paise per unit for FY 2013-14.**
6. Copy of this order may be sent to Petitioner, CEA and Administration of UT of Goa. It shall be placed on the website of the Commission.

(Sh. S K Chaturvedi)  
Member

(Dr. V K Garg)  
Chairman

Place: Gurgaon

Date: March 31 ' 2013

**Certified Copy**

(R. K. Malik)  
Secretary

## 12. General Conditions and Tariff Schedule

### General Conditions and Definitions

- 1) These tariffs are applicable from 1<sup>st</sup> April 2013 and shall remain valid till 31<sup>st</sup> March 2014.
- 2) The tariffs are exclusive of electricity duty and taxes levied by the Government or other competent authority from time to time which are payable by the consumers in addition to the charges levied as per the tariffs.
- 3) Unless otherwise agreed to, these tariffs for power supply are applicable for supply at one point only.
- 4) Unless specifically stated to the contrary the figures of energy charges relate to paise per unit (kWh) charge for energy consumed for the month.
- 5) If energy supplied for a specific purpose under a particular tariff is used for a different purpose, not contemplated in the contract for supply and / or for which higher tariff is applicable, it will be deemed as unauthorized use of electricity and shall be dealt with for assessment under the provisions of section 126 of the Electricity Act, 2003 & Supply Code Regulation notified by JERC.  
Provided that (a) if a portion of the domestic premises limited to only one room is used for running small household business having connection under domestic category, such connection shall be billed under domestic category provided that the total monthly consumption of the consumer (including consumption for above mentioned small household business) does not exceed 150 kWh.  
  
(b) If either more than one room or only one room having monthly consumption exceeding 150 kWh for consecutive three months is detected in the domestic premises being used for mixed purposes having domestic connection, such connection shall further be billed under commercial category until a separate connection of appropriate tariff is taken for that portion used for non-domestic purpose.
- 6) If connected load of a domestic category is found to be at variance from the sanctioned/contracted load as a result of replacement of appliances such as lamps, fans, fuses, switches, low voltage domestic appliances, fittings, it shall not fall under Section 126 and Section 135 of the EA 2003.

- 7) Fixed charges, wherever applicable, will be charged on pro-rata basis from the date of release of connection. Fixed charges, wherever applicable, will be double as and when bi-monthly billing is carried out, Similarly slabs of energy consumption will also be considered accordingly in case of bi-monthly billing.
- 8) If the consumer fails to pay the energy bill presented to him by the due date the department shall have the right to disconnect the supply after giving 15 days notice as per provision of the Act and Supply Code Regulations.
- 9) Late payment surcharge of 2% per month or part thereof shall be levied on all delayed payments of bills. Such surcharge shall be rounded off to the nearest multiple of one rupee. Amount less than 50 paise shall be ignored and amount of 50 paise or more shall be rounded off to next rupee.

**10) Power Factor Charges for HT and EHT**

(a) The monthly average power factor of the supply shall be maintained by the consumer not less than 0.90 (lagging). If the monthly average power factor of a consumer falls below 90% (0.9 lagging), such consumer shall pay a surcharge in addition to his normal tariff @ 1% on billed demand and energy charges for each fall of 0.01 in power factor upto 0.7(lagging)

(b) In case the monthly average power factor of the consumer is more than 95% (0.95 lagging), a power factor incentive @ 0.5% on demand and energy charges shall be given for each increase of 0.01 in power factor above 0.95 (lagging)

(c) If the average power factor falls below 0.70 (lagging) consecutively for 3 months, the licensee reserves the right to disconnect the consumer's service connection without prejudice for the levy of the surcharge.

(d) The power factor shall be rounded off to two decimal places. For example, 0.944 shall be treated as 0.94 and 0.946 shall be treated as 0.95

**This clause shall be applicable to 7, 8(a), 8(b), 8(c), 9, 10, 11, 12, 13, 14 & 15.**

- 11) "Seasonal Consumers" mean all consumers who work only during a part of the year up to a maximum of nine months such as cotton, corning, agriculture and pressing factories. It

shall also include Ice Factories, Oil Mills, Sugar Factories etc which may work throughout the year but intermittently and any other consumers which may be classified by the Department from time to time and approved by the Commission as seasonal consumers.

- 12) The consumption for factory lighting/pump house lighting will be billed as per respective main tariff category. A separate energy meter for recording energy consumed towards factory lighting for new installation need not be provided. For the existing installations, till the factory lighting meter's mains are shifted to main meter, the total energy consumption shall be arrived by adding the energy consumption of main energy meter and factory lighting meter.
- 13) For staff quarters, rest/guest houses, street lighting in the colony of a factory which is situated separately from the main factory and when distribution lines, service lines, etc. are permitted to be owned and maintained by the HT consumer owning the factory, there shall be a separate connection and all energy consumed shall be charged under "Tariff LTD/Domestic Mixed".
- 14) LT Connection is applicable with Sanctioned Load of less than 100 KVA or 90 KW or 120 HP as the case may be and HT Connection is applicable with Contract Demand of 100kVA and above.
- 15) Supply of power in all cases shall be subject to the execution of Agreement between Electricity Department, Goa and consumers and as per JERC (Electricity Supply Code) Regulation 2010. The Other Conditions, Definitions etc shall be applicable as per Provisions of Electricity Act 2003 and various JERC Regulations issued from time to time such as Standards of performance, Supply Code, Distribution Code etc.
- 16) Billing Demand and Billing of extra Demand :  
The billing shall be on the maximum demand recorded during the month or 75% of contracted demand whichever is higher. If in any month, the recorded maximum demand of the consumer exceeds its contracted demand, that portion of the demand in excess of the contracted demand shall be billed at double the normal rate. Similarly, energy consumption corresponding to excess demand shall also be billed at double the normal energy rate.  
The definition of the Maximum demand would be in accordance with the provisions of the JERC (Electricity Supply Code) Regulations, 2010.



If such over draw is more than 20% of the contracted demand then the connection shall be disconnected immediately.

**Explanation:**

Assuming the contract demand as 100 kVA, maximum demand at 120 kVA and total energy consumption as 12000 units, then the consumption corresponding to the contract demand will be 10,000 units ( $12000 \times 100 / 120$ ) and consumption corresponding to the excess demand will be 2000 units. This excess demand of 20 kVA and excess consumption of 2000 units will be billed at twice the respective normal rate. e.g. in case of HTI/Industrial category, excess demand and consumption will be billed at the rate of Rs 350 per kVA per month and Rs 6.60/kWh respectively. Such connection drawing more than 120 kVA shall be disconnected immediately.

17) Advance Payment Rebate: If payment is made in advance well before commencement of consumption period for which bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding security deposit) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

18) Prompt Payment Rebate: If payment is made at least 7 days in advance of the due date of payment a rebate for prompt payment @ 0.25 % of the bill amount shall be given. Those consumers having arrears shall not be entitled for such rebate.

19) The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with FPPCA formula separately notified by the Commission under the Regulation. Such charges shall be recovered / refunded in accordance with the terms and conditions specified in the FPPCA formula.

20) The values of the 'K' factor applicable for the different consumer categories for use in the FPPCA formula shall be as specified in this Tariff Order for FY 2013-14.

**21) Time of Day tariff (ToD)**

(i) Under the Time of Day (ToD) Tariff, electricity consumption and maximum demand in respect of HT/EHT consumers for different periods of the day, i.e. normal period, peak load period and off-peak load period, shall be recorded by installing a ToD meter.

(ii) The maximum demand and consumption recorded in different periods shall be billed at the following rates on the tariff applicable to the consumer.

<b>Time of use</b>	<b>Demand Charges</b>	<b>Energy Charges</b>
Normal period (6:00 a.m. to 6:00 p.m)	Normal Rate	Normal rate of energy charges
Evening peak load period (6:00 p.m to 10.00 p.m)	Normal Rate	120% of normal rate of energy charges
Off-peak load period (10:00 p.m to 6:00 a.m)	Normal Rate	90% of normal rate of energy charges

(iii) Applicability and Terms and Conditions of TOD tariff:

(a) TOD tariff shall be optional unless otherwise specifically stated to the contrary in the tariff order.

(b) The facility of aforesaid TOD tariff shall not be available to HT/EHT consumers having captive power plants and/or availing supply from other sources through wheeling of power.

(c) The HT/EHT industrial consumers who have installed standby generating plants shall also be eligible for the aforesaid TOD tariff.

(d) In the event of applicability of TOD tariff to a consumer, all other terms and conditions of the applicable tariff shall continue to apply.

22) Schedule of other charges would be as approved by the Commission in its order date 30.01.2013 on the review petition filed by ED Goa under Petition No. 95/2013 which is annexed as **Annexure 5**.

## Tariff Schedule

### Tariff Schedule -LT Consumers

#### **1 (a) TARIFF LTD/ DOMESTIC AND NON-COMMERCIAL**

##### **APPLICABILITY**

This schedule shall apply to private house, bungalows, charitable or educational institutions approved by Goa Board/ Central Board, colleges approved by Goa University and religious institutions etc. for consumption of energy on lights, fans, radios, domestic heating and other household appliances with Sanctioned Load less than 100 KVA or 90 KW or 120 HP as the case may be.

##### **TARIFF**

<b>Consumption Slab</b>	<b>Fixed Charges (Rs/connection/month)</b>	<b>Energy Charges (Paise/kWh)</b>
(a) First 60 Unit	5.00	120
(b) 61 to 250 units	10.00	160
(c) 251 to 500 units	20.00	260
(d) Above 500 units	30.00	300

The method of billing of charges shall be as explained below

(a) Say units billed in a month are 80 units. Then, the fixed charges will be Rs 10/month and energy charges Rs 104 ( $60 \times 1.2 + 20 \times 1.6$ )

(b) In case the units billed are 275, then the fixed charges will be Rs 20/month and energy charges Rs 441/- ( $60 \text{ units} \times \text{Rs } 1.2/\text{kWh} + 190 \text{ units} \times \text{Rs } 1.6/\text{kWh} + 25 \text{ units} \times \text{Rs } 2.6/\text{kWh}$ )

#### **1 (b) TARIFF LTD/LOW INCOME GROUP**

##### **APPLICABILITY**

This schedule shall apply to consumers of low Income Group with a Sanctioned Load 2 x 40 watts only.

##### **TARIFF**

<b>Description</b>	<b>Rs/connection/ Month</b>
Upto 2 Point	25.00

**Note:-**

For any unauthorised increase in load beyond 2 x 40 watts, penal charges at the rate of Rs. 25/- per month per point shall be levied and the installation shall be liable for disconnection.

**1 (c) TARIFF LTD/DOMESTIC MIXED****APPLICABILITY**

This schedule shall apply to Houses with the rent back facilities, clubs, hospitals, staff quarters, rest/guest houses, street lighting in the colony of a factory which is situated separately from the main factory and when distribution lines, service lines etc. are permitted to be owned and maintained by HT consumers with Sanctioned Load less than 100 KVA or 90 KW or 120 HP as the case may be.

**TARIFF**

<b>Consumption Slab</b>	<b>Fixed Charges (Rs/connection/month)</b>	<b>Energy Charges (Paise/kWh)</b>
First 400 units	20.00	270
Above 400 units	30.00	370

**2) TARIFF-LTC/COMMERCIAL****APPLICABILITY**

This schedule shall apply to shops, offices, railway stations, race course, computer training schools, photo studio, photo copier, colour laboratories, private guest house, messes, bus stand of KTC, private agriculture nurseries, dry cleaners, film studio, X ray installations, cinema theatres, AIR and TV station and studios, telephone exchanges, petrol pumps, battery charging units, tyre vulcanizing centres, ice parlours, bars and cold drink houses, commercial complexes, petrol, diesel and oil storage plants, for lights, fans, TV, radio, heating and other appliances with Sanctioned Load less than 100 KVA or 90 KW or 120 HP as the case may be.

**TARIFF**

<b>Consumption Slab</b>	<b>Fixed Charges (Rs/connection/month)</b>	<b>Energy Charges (Paise/kWh)</b>
First 100 units	20.00	300
101 units- 1000 units	30.00	380
Above 1000 units	50.00	410

**3 (a) TARIFF-LTP/MOTIVE POWER****APPLICABILITY**

This schedule shall apply to consumers such as industrial units, workshops, flour mills, wet grinding, rice mills, milk dairies, ice cream manufacturing units, dairy testing process, garment manufacturing, tyre retreading units, ice manufacturing plants, bakery, motive power load, industrial units engaged in manufacturing process or project activities with Sanctioned Load less than 100 KVA or 90 KW or 120 HP as the case may be.

**TARIFF**

Description	Fixed Charges (Rs/HP/month)	Energy Charges (Paise/kWh)
(a) Upto 50 HP	20.00	250
(b) Above 50 HP	20.00	300

**3 (b) TARIFF-LTP/ICE MANUFACTURING****APPLICABILITY**

This schedule shall apply to industrial units engaged in ice manufacturing where the total sanctioned load of the installation is less than 100 kVA or 90 kW or 120 HP as the case may be.

**TARIFF**

Fixed Charges (Rs/HP/month)	Energy Charges (Paise/kWh)
20.00	300

**3 (c) TARIFF-LTP/MIXED (HOTEL INDUSTRIES)****APPLICABILITY**

This schedule shall apply to Hotels, restaurants, lodging and boarding where the total Sanctioned Load is less than 100 KVA or 90 KW or 120 HP as the case may be.

**TARIFF**

Fixed Charges Rs/kW/month	Energy Charges (Paise/kWh)
25.00	400

**Note:-**

Consumer intend to avail the facility of this tariff should produce the certificate from Tourism Department stating that the intending applicant is registered under Goa Registration of Tourist Trade Act, 1982 and in Hotel business on regular basis. Such tariff shall be made applicable only from the date of receipt of such certificate.

**4) TARIFF-LTAG/AGRICULTURE****APPLICABILITY**

This schedule shall apply to irrigation pumping and agricultural purposes, poultry, piggery, pisciculture etc for consumption of energy on pump motors, lights, fans, heating and other appliances with sanctioned load less than 100 KVA or 90 KW or 120 HP as the case may be .

**TARIFF**

<b>Fixed Charges Rs/HP/month</b>	<b>Energy Charges (Paise/kWh)</b>
5.00	120

**Note:-**

This tariff shall be applicable from the date of production of a certificate from the Directorate of Animal Husbandry or Fisheries Department of Government of Goa to the effect that the consumer carried on the said activity on regular basis.

**5) TARIFF-LTPL/PUBLIC LIGHTING****APPLICABILITY**

This schedule shall apply to public lighting systems including signal systems, road and parking lighting belonging to local authorities such as Municipality/ Panchayat etc. with sanctioned load less than 100 kVA or 90 kW or 120 HP as the case may be. This shall also be applicable to public lighting of Government/ Semi-Government Establishments but shall not be applicable in case of private establishment.

**TARIFF**

<b>Fixed Charges Rs/kW/month</b>	<b>Energy Charges (Paise/kWh)</b>
25.00	300

**6) TARIFF-LT PWW/PUBLIC WATER WORKS****APPLICABILITY**

This schedule shall apply to public water supply and sewage pumping stations and treatment plants where Sanctioned Load is less than 100 KVA or 90 KW or 120 HP as the case may be.

**TARIFF**

<b>Fixed Charges Rs/HP/month</b>	<b>Energy Charges (Paise/kWh)</b>
20.00	250

**Tariff Schedule – HT Consumers****7) TARIFF HT-MIXED****APPLICABILITY**

This schedule shall apply to bulk supply of power at 11 KV and above for a Contract Demand 100kVA and above such as railway, educational institutions, non-industrial establishment etc. having mixed load with predominantly lighting or non-industrial load of more than 50% of connected load.

**TARIFF**

<b>Fixed Charges Rs/kVA/month</b>	<b>Energy Charges (Paise/kWh)</b>
175	315

**8 (a) TARIFF HTI/INDUSTRIAL****APPLICABILITY**

This schedule shall apply to supply of power at 11 KV and above for a Contract Demand of 100 KVA and above for industries, factories and other industrial purpose as may be decided by the Chief Electrical Engineer.

**TARIFF**

<b>Fixed Charges Rs/kVA/month</b>	<b>Energy Charges (Paise/kWh)</b>
175	330

**8 (b) TARIFF-HTI/HOTEL INDUSTRIES****APPLICABILITY**

This schedule shall apply to Hotels, restaurants, lodging and boarding where the total Contract Demand of such installation is 100 kVA & above.

**TARIFF**

<b>Fixed Charges Rs/kVA/month</b>	<b>Energy Charges (Paise/kWh)</b>
175	330

**8 (c) TARIFF-HTI/ ICE MANUFACTURING****APPLICABILITY**

This schedule shall apply to industrial units engaged in ice manufacturing where supply of power is made at 11 kV and above for a Contract Demand of 100 kVA and above.

**TARIFF**

<b>Fixed Charges Rs/kVA/month</b>	<b>Energy Charges (Paise/kWh)</b>
175	300

**9) H.T. INDUSTRIAL (FERRO METALLURGICAL/STEEL MELTING/POWER INTENSIVE)****APPLICABILITY**

This schedule shall apply to supply of power having a Contract Demand from 100 KVA upto 1000 KVA at 11 KV and above 1000 KVA at 33 KV for Metal Alloy, Steel Melting, Ferro Alloy and Ferro metallurgical industries all types of Ferro alloy units where melting is involved using electric power.



**TARIFF**

Particulars	Fixed Charges Rs/kVA/month	Energy Charges (Paise/kWh)
First 300 units per kVA	450	250
Next 200 units per kVA		275
Above 500 units per kVA		300

**10) TARIFF HT-AG/AGRICULTURE****APPLICABILITY**

This schedule shall apply to supply of power at 11 KV and above to agricultural consumer, lift irrigation schemes, agricultural farms etc with Contract Demand of 100 KVA and above.

**TARIFF**

Fixed Charges Rs/kVA/month	Energy Charges Paise/kWh
25.00	125

**11) EHTI/INDUSTRIAL****APPLICABILITY**

This schedule shall apply to bulk supply of power at 110 KV and above for industries, factories and other industrial purpose as may be decided by the Chief Electrical Engineer.

**TARIFF**

Fixed Charges Rs/kVA/month	Energy Charges (Paise/kWh)
175	330

**12) H.T. PW/PUBLIC WATER SUPPLY AND SEWAGE****APPLICABILITY**

This schedule shall apply to supply of power at 11 KV and above for a Contract Demand of 100 KVA and above for public water supply and sewage pumping stations and public water treatment plant.

#### TARIFF

Fixed Charges Rs/kVA/month	Energy Charges (Paise/kWh)
175	300

### 13) H.T. MES/DEFENCE ESTABLISHMENTS

#### APPLICABILITY

This schedule shall apply to supply of power at 11 KV and above for a Contract Demand of 100 KVA and above for defence installation establishments, having mixed load with predominantly lighting or non industrial load of more than 50% of connected load.

#### TARIFF

Fixed Charges Rs/kVA/month	Energy Charges (Paise/kWh)
125	330

### 14) H.T. INDUSTRIAL (STEEL ROLLING)

#### APPLICABILITY

This schedule shall apply to supply of power at 11 KV and 33 KV, having a Contract Demand of 100 KVA and above for Steel Rolling Industries.

#### TARIFF

Particulars	Fixed Charges Rs/kVA/month	Energy Charges (Paise/kWh)
First 200 units per kVA	400	180
Next 100 units per kVA		225
Above 300 units per kVA		300

### 15) TARIFF HT- INDUSTRIES (IT HIGH TECH)

**APPLICABILITY**

This schedule shall apply to bulk supply of power at 11 kV and above for a Contract Demand of 100 kVA and above for industries such as Information Technology Industries and information Technology Parks, etc

**TARIFF**

<b>Fixed Charges Rs/kVA/month</b>	<b>Energy Charges (Paise/kWh)</b>
175	260

**Tariff Schedule – Temporary Supply****17) TARIFF-LT/TEMPORARY****APPLICABILITY**

This schedule shall apply to lights, fans and small appliances for all purposes at low voltage for sanctioned load less than 100 kVA or 90 kW or 120 HP as the case may be.

**TARIFF**

<b>Energy Charges Paise/unit</b>	<b>Minimum Charges</b>
750	Rs 50 per kW per day or part thereof subject to a minimum of Rs 300/-

**Note:-**

- The above temporary connection shall be released through a proper meter
- The above temporary tariffs are applicable for temporary supply at low voltage for Sanctioned Load less than 100 kVA or 90 KW or 120 HP for a period not exceeding three month which may be extended beyond that period only with the prior permission of the Electricity Department, upto a maximum period of six months
- Security deposit shall be collected for an assessed 3 months billing

**18) Tariff HT/Temporary****APPLICABILITY**

This schedule shall apply to lights, fans and small appliances for all purposes at high voltage for Contract Demand of 100 kVA and above.

**TARIFF**

<b>Energy Charges Paise/unit</b>	<b>Minimum Charges</b>
750	Rs 100 per kVA per day or part thereof

**Note:-**

- a) The above temporary connection shall be released through a proper meter
- b) The above temporary tariffs are applicable for temporary supply at high voltage for a period not exceeding six months which may be extended with prior permission of the Electricity Department, upto a maximum period of one year
- c) Security deposit shall be collected for an assessed 3 months billing