TARIFF ORDER

Determination of
Aggregate Revenue Requirement & Retail Tariff
For
FY 2012-13
&
ARR for FY 2011-12
For
Electricity Department, Goa

JOINT ELECTRICITY REGULATORY COMMISSION

For the State of Goa and Union Territories

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27th June 2012

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List of Abbreviations

Abbreviation		Full Form
A&G	:	Administration & General Expenses
Act	:	The Electricity Act, 2003
ARR	:	Aggregate Revenue Requirement
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
NFA	:	Net Fixed Assets

Abbreviation		Full Form
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[1]
Dr. V. K. Garg (Chairperson)

Petition No. 40/2011
Petition No. 70/2012

In the matter of

Petition filed by Electricity Department, Goa for approval of Aggregate Revenue Requirement and Tariff for FY 2011-12 ……………………………………………………………………………………Petition No. 40/2011

And

In the matter of

Petition filed by Electricity Department, Goa for approval of Aggregate Revenue Requirement and Tariff for FY 2012-13………………………………………………………………………………….. Petition No. 70/2012

And in the matter of

Electricity Department,
Goa……….……Petitioner

[1] As per section 93 of Electricity Act, 2003; no act or proceedings of the Appropriate Commission shall be questioned or shall be invalidated merely on the ground of existence of any vacancy or defect in the constitution of the Appropriate Commission. Therefore due to vacancy of the position of Hon'ble Member in the Joint Electricity Regulatory Commission for the state of Goa and the UTs, the Hon'ble Chairperson is completing the Coram.

ORDER

Date: 27th June 2012

The petitions - no. 40/2011 and no. 70/2012 have been dealt with simultaneously and are being disposed of through this common order.

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

Electricity Department – Goa,the deemed licensee has submitted its ARR and Tariff Petition for the FY 2011-12 on 21st October 2011.

The Electricity Department- Goa filed its petition for the Determination of Aggregate Revenue Requirement (ARR) & Retail Tariff for distribution and retail sale of electricity for FY 2012-13 on 31st December 2011 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

- **FY 2011-12**

  ED-Goa filed its first ARR & Tariff Petition for FY 2011-12 on July 14, 2011 before the Commission. The hearing for the same was held on September19, 2011 wherein ED-Goa was directed to file revised petition considering latest CERC orders for generation tariff MYT 2009-14 and transmission tariff for MYT 2009-14 and computing transmission charges as per the new POC regime. These huge arrears would have a significant impact on the power purchase costs and accordingly the Petitioner was directed to file a revised petition.

  ED- Goa submitted its revised ARR and tariff Petition for determination of tariff for FY 2011-12 on 21st October 2011 (Petition No. 40/2011). The Commission admitted the petition vide its order dated 1st November 2011. The Public hearing for the same was scheduled on 5th January 2012, but could not be held due to the enforcement of the Code of Conduct on 24th December 2011 on account of the Assembly Election in the State of Goa on 3rd March 2012 This further put back the tariff order for FY 2011-12 by 4 months.

- **FY 2012-13**

ED-Goa submitted its ARR Petition for FY 2012-13 (Petition No.70/2012) based on the principles outlined in the JERC Tariff Regulations before the Commission on December 31, 2012.

The Commission ascertained from the petitioner if the petition could be taken up jointly as FY 2011-12 was already coming to an end. The petitioner agreed and thus the Commission took up the petition for FY 2011-12 and FY 2012-13 jointly. The Commission then scheduled a combined hearing for Petition No.40/2011 and Petition No.70/2012 on March 12, 2012. During the process of hearing the petitioner submitted that the tariff proposal had not been cleared by the competent authority and requested for one month’s time for the same. The Commission vide its order dated March 12, 2012 on the above petitions accepted the request of the Petitioner and further directed the Petitioner to file the Tariff Proposal by April 9, 2012 along with combined ARR and Tariff petition for FY 2011-12 and FY 2012-13. In accordance with the directions given by the Commission, ED Goa submitted the tariff proposal for FY 2012-13 as per affidavit dated April 5, 2012.

A pre-admission hearing of the petition was conducted on April 13, 2012. The Petitioner presented the salient features of the Petition. After initial scrutiny and analysis of petition dated April 5, 2012 for FY 2011-12 & FY 2012-13, the petitions were admitted on April 13, 2012 subject to removal of infirmities to the extent possible. The Commission has taken up jointly the petition bearing no. 40/2011 and 70/2012 on record on April 13, 2012. A copy of the Admission Order dated April 13, 2012 is annexed 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 letter dated 31st May 2012. The extract of the communication is presented below:

"

I. **Power Purchase Cost**

1. Submit supporting documents for the tendering process followed for short term/ bilateral purchase in FY 2011-12 along with a supplier wise summary indicating per unit rate, hours of supply, and date of contract. This should include all the bids received against the tenders that were floated.
2. Submit the break-up of fixed and variable charges for power procured from IPP for FY 11-12
3. ED Goa has submitted that in terms of clause 6.4, Schedule 7 of the PPA with IPP, generation schedule should not result in shut down of the Plant. It needs to be clarified what is the minimum power to be scheduled to satisfy this condition. As the IPP is also selling to other persons, not scheduling any power by ED Goa may not result in shut down of the plant. ED-Goa to clarify. What would be the implications in case JERC decides not to consider purchase from IPP to the extent power is available from alternate cheaper sources?
4. Submit the sample calculations for IPP billing amount, also refer to the relevant clause of the PPA signed in support of the calculations.
5. The petitioner for FY 2012-13 has considered PoC charges for Part B applicable for short term purchases. Submit the basis for consideration of the quantum of energy considered under these charges.
6. Submit the basis for consideration of wheeling charges for FY 2012-13 of 2.5 per unit payable to KPTCL.
7. Submit the basis for consideration of arrears amount considered in FY 2012-13.
8. Submit the actual bills for FY 2011-12 for Transmission charges.

II. **Sales and T&D Losses**

1. Submit the actual category wise sales and revenue as per the prevalent tariff schedule for FY 2011-12.
2. Submit the actual T&D losses for FY 2011-12.
3. Submit the basis of treatment of Hotels as industry. Normally such establishments are categorised as commercial and not industrial.
4. Submit the notification with respect to prevailing tariff in the state of Goa.

5. As per the prevalent tariff H.T. Industrial category is charged fixed charges at Rs 700 per kVA per month. The petitioner is requested to submit the rationale for such high fixed charges.

III. Miscellaneous Issues

1. Submit the amount received as Consumer Deposit Work and its methodology of accounting. Is it treated as Capital receipt or Revenue receipt?
2. Submit whether assets formed from consumer deposit works form part of the utility's Gross Block.
3. It is seen that there had been sudden jump in Employee cost and A&G expenses from FY 2009-10 onwards compared to earlier years. The petitioner to provide elaborate reasons
4. ED Goa has indicated Govt. subsidy to the tune of Rs. 83 crs. Whether this subsidy is to be considered across all the consumer categories including the subsidising categories such as industry, commercial, etc. or it is intended to cover only subsidised categories e.g. domestic, agriculture. Specific clarification is required to appropriately deal in the tariff determination.
5. The petitioner to submit the amount of arrears for 6th pay Commission included in the FY 2010-11 and FY 2011-12.
6. Petitioner to submit if any interest on consumer security deposit has been paid.

IV. Time of Day Tariff

1. Submit the load flow study for the category of consumer to justify the peak and non-peak time slots.
2. Submit the analysis on impact on imposition of ToD tariff in their ARR petition with respect to various consumer categories.
3. The Petitioner submitted its replies, as shown below, in response to the queries raised by the Commission, which have been considered while arriving at the ARR & the resultant tariff thereof of the Petitioner.

"

In its reply, the petitioner submitted the information vide email dated 5th June 2012. Further , with an objective to have a better clarity and removal of inconsistency in the data submitted in the petition and the additional information provided , the Commission further sought clarification vide email dated 13th June 2012:

The extract of the communication is reproduced below:

"

1. Actual VC for the month of March 2012 – CGS as well as IPP – may be furnished. -
2. Actual energy purchased from Kawas and Gandhar in 2011-12 was appr. 88 MU and 86 MU at average VC of Rs 2.88 and Rs 2.75 respectively. The petitioner had indicated to procure 57 MU each from Kawas and Gandhar in the petition, which has been revised to 13 MU each in the latest submission. What is the reason for such downward revision from those CGS?
3. Capacity Allocation from AFC Kawas and Gandhar remain 1.89% and 1.92% respectively. AFC indicated in original petition was Rs 9.07 and Rs 10.51 Crs. respectively which now has been revised to 1.73 and 1.84 Crs at the same level of capacity allocation. This needs clarification.
4. Actual average VC paid to IPP in 2011-12 was Rs 10.7033/unit whereas for 2012-13 projected as Rs 8.193. While there has generally been increase in VC in respect of CGS, the same shows reduction for IPP. Please justify.
5. On perusal of the letters dated 1st June and 4th June of the IPP, it is seen that procurement of 16 MW power has been justified on some technical grounds. The petitioner has merely enclosed the letters without giving their views. The petitioner should categorically state whether they agree or disagree. Further, the IPP needs to furnish proper technical back up such as document from the OEM mentioning the operating parameters, constraints, etc. The petitioner could provide justification either quoting from the Contract documents or could get the submission vetted from the OEM namely BHEL. Either of the above mentioned needs to be complied with.
6. List of Industrial consumers to whom power is being directly supplied by the IPP indicating the date of commencement, quantum of agreed power, quantum of actual power being supplied and whether it is RTC or during certain specific hours of the day/week (give specific details).
7. It is seen that entire O&M expenses being charged to revenue (P&L) account. Why no part of O&M related to capital works being capitalised? What is the accounting policy in this regard?
8. We have provided a format for submission of some data regarding power procurement from IPP, UI charges, etc. The same has not been submitted. The petitioner needs to comply.
9. Petitioner indicated only variable charge and no fixed charge for Ratanagiri. Please clarify the same.

‘’

The reply to the same have been provided by the petitioner vide email dated 15th June 2012.

The correspondence of the Commission with the petitioner is tabulated below:

Table 1: List of Correspondence with the Petitioner

S.No.	Date	Subject
1.	25.05.2012	Reply to data gaps raised during Public hearing held on 22nd May 2012. Clarifications on costly power purchase
2.	26.05.2012	Reply to data gaps.
3.	05.06.2012	Reply to further data gaps
4.	15.06.2012	Reply to further data gaps

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 2: Details of public notice published by the Petitioner

S.No.	Date	Language	Name of Newspaper
1.	15.04.2011	English	Times of India
2.	15.04.2011	Konkani	Sunaparanta
3.	15.04.2011	Marathi	Gomantak

The Petitioner also uploaded the petition on its website (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).

Interested parties / stakeholders were requested to file their objections / suggestions on the petition on or before 7th May 2012. The copies of paper cutting of public notice are annexed as **Annexure 2** to this order.

Commission received two written objections / suggestions on the petition, by the last date for filing objections/suggestion i.e. May 7'2012. The Commission forwarded them to the Petitioner for communicating their reply to the objections, raised by the objectors. It was confirmed by the Commission at the beginning of the hearing that the objectors have received the replies to their objections, even though some objectors did mention that they received the reply on the day of hearing but they were satisfied. 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 May 22, 2012.

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 22nd May 2012 at Auditorium Hall of the Directorate of Museum, Govt. of Goa, EDC Complex, Patto, Panaji, for all consumers on Tariff Petition FY 2011-12 and FY 2012-13 and FPPCA formula. The details of the newspapers are as given below:

Table 3: Details of public notice published by the Commission

S.No.	Date	Language	Name of Newspaper
1.	26.04.2012	English	O'Heraldo
2.	27.04.2012	Konkani	Sunaparant
3.	27.04.2012	Marathi	Gomantak
4.	27.04.2012	Marathi	Tarun Bharat
5.	27.04.2012	English	Times of India
Repeated on			
6.	21.05.2012	Konkani	Sunaparant
7.	21.05.2012	Marathi	Tarun Bharat
8.	21.05.2012	English	Times of India
9.	21.05.2012	English	O'Heraldo

The Commission published public notice for the public hearing in the above newspapers on April 26, 2012 & April 27, 2012 and again on May 21, 2012 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.

During the public hearing, the Commission sought confirmation that the stakeholders had received reply to their objections. Even though, the objectors did mention that they have received the reply but they wanted to be heard again by the Commission. Each stakeholder was provided an opportunity to present his views on the petition filed by the Petitioner. All those present in the hearing, irrespective of whether they had given a written objection or not, were given an equal opportunity to express their views. The officers of the utility replied orally on the spot to stakeholders who raised their concerns.. Those who gave their prior written objections and suggestions were provided replies by the licensee. It was ascertained by the Commission before the public hearing that the concerned stakeholders got the replies to their objections/suggestions. 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 ARR & Tariff Petition for FY 2011-12 and FY 2012-13

2.1 Introduction

The Commission has dealt with the combined petition for ARR & tariff for FY 2011-12 and FY 2012-13 simultaneously in this order. The petition for ARR of FY 2011-12 submitted on October 21, 2011 consists of 5 months actuals and 7 months estimated figures. The Petitioner had filed the petition for ARR & tariff for FY 2012-13 on 31st December 2011. As directed by the Commission, the combined petition alongwith the tariff proposal was filed before the Commission as per affidavit dated 5th April 2012. The submission dated 5th April'12 consists of additional information for FY 2011-12 as regards to the recovery of the revenue gap for FY 2011-12 alongwith the tariff proposal for FY 2012-13.

The Commission during the technical validation sessions held with the Petitioner asked for the provisional actuals of FY 2011-12 particularly the sales, revenue and the power purchase costs as the year was over by that time. In response to the queries of the Commission, the Petitioner submitted the provisional actuals of sales, power purchase costs and revenue figures for FY 2011-12 as per submission dated April 30, 2012 and further updated vide submission dated June 5, 2012. The tariff formats for FY 2012-13 were also revised and updated vide submissions dated April 30, 2012 and further updated vide June 5, 2012.

The Commission, therefore, in its analysis of the ARR for FY 2011-12 to the extent actual provided, has considered the submission of the Petitioner as per 5th June 2012. Also, the analysis of the ARR & tariff for FY 2012-13 has been done as per the latest submission of the Petitioner dated 5th June 2012.

The brief summary of the ARR and tariff petitions as per the submissions is tabulated below.

2.2 Summary of the ARR & Tariff Petition for FY 2011-12 and FY 2012-13

The Summary of ARR petition for FY 2012-13 as per petition/information dated 31st December 2011, 5th April 2012 and 5th June 2012 and for FY 2011-12 as per petition/information dated 21st October 2011 & 5th June 2012 is as provided below:

Table 4: Summary of the petition for ARR & tariff for FY 2012-13

S.No.	Particulars	Petitioner Submission (FY 2012-13) 31st December 2011	Petitioner Submission (FY 2012-13) 5th April 2012	Petitioner Submission (FY 2012-13) 5th June 2012
1	Cost of fuel			-
2	Cost of power purchase	1,006.61	985.58	959.41
3	Employee costs	175.05	155.05	155.05
4	R&M expenses	22.84	22.84	22.84
5	Administration and general expenses	26.91	26.91	26.91
6	Depreciation	4.71	4.71	4.71
7	Interest charges (incl interest on working capital & Interest on Security Deposit)	12.95	12.95	12.95
8	Return on NFA /Equity	-	-	-
9	Provision for Bad Debt	-	-	-
10	Other Expenses	-	-	-
11	**Total Revenue Requirement**	**1,249.08**	**1208.05**	**1,181.88**
12	Less: Non-Tariff Income	22.53	22.53	22.53
13	Less: Revenue from Sale of Power - UI Pool	13.70	13.70	13.70
14	Less: Revenue from Sale of Power- Exchanges	103.35	103.35	92.16
15	**Net Revenue Requirement (11-12-13-14-15)**	**1,109.50**	**1068.48**	**1,053.49**
16	Revenue from Retail Sales at Existing Tariff	884.70	884.70	884.70
17	**Net Gap (15-16)**	**224.80**	**183.77**	**168.79**
18	**Energy sales (MU)**	**2,940**	**2940**	**2,940**

The summary of the petition of ARR & tariff for FY 2011-12 is shown on the following page.

Table 5: Summary of the petition for ARR & tariff for FY 2011-12

Sr. No.	Particulars	Petitioner Submission (FY 2011-12) 21st October 2011	Petitioner Submission (FY 2011-12) 5th June 2012
1	Cost of fuel	-	-
2	Cost of power purchase	957.68	1,064.61
3	Employee costs	125.89	125.89
4	R&M expenses	17.03	17.03
5	Administration and general expenses	19.31	19.31
6	Depreciation	3.32	2.82
7	Interest charges (incl interest on working capital & Interest on Security Deposit)	14.48	14.48
8	Return on NFA /Equity	-	-
9	Provision for Bad Debt	-	-
10	Other Expenses	0.21	0.21
11	**Total Revenue Requirement**	**1137.91**	**1,244.35**
12	Less: Non Tariff Income	21.06	21.06
13	Less: Revenue from Sale of Power - UI Pool	23.61	52.00
14	Less: Revenue from Sale of Power-Exchanges	89.33	57.70
15	Less: Revenue from Sale / Banking of Power	8.71	8.71
16	**Net Revenue Requirement (11-12-13-14-15)**	**995.20**	**1,104.88**
17	Revenue from Retail Sales at Existing Tariff	842.92	813.65
18	Any Borrowings	-	-
19	**Net Gap (16-17-18)**	**152.28**	**291.23**
20	Gap for the previous year	-	-
21	**Total gap (19+20)**	**152.28**	**291.23**
22	Additional revenue from proposed tariff	-	-
23	**Revenue Gap/ (Surplus), if any, after proposed tariffs (21-22)**	**152.28**	**291.23**
24	Electricity Duty Fund account	115.87	
25	Budgetary Support from Government	36.42	291.23
26	**Net Final Revenue Gap/ (Surplus) (23-24-25)**	**-**	**-**
27	**Energy sales (MU)**	**2,800**	**2,746**

2.3 Summary of the Tariff Proposal for FY 2012-13

ED-Goa has submitted that the tariff in the State of Goa has been constant since 2002 despite of periodic inflationary increases, fuel cost increases and revision in pay commissions. Further, the revenue gap is higher due to facts that CERC has been revising (truing-up) the costs pertaining to FY 2004-09 of central sector generating stations and for PGCIL transmission charges as well which has resulted into huge payments towards Arrears. The coal prices have also increased substantially during last 3-4 years resulting into higher FAC/ FSA charges by central generating stations.

Prior to the 5th June 2012 submissions as brought out above, the petitioner had filed revised petitions on 5th April 2012. The proposal contained in that submission entailed an average tariff increase of 11.38% over the existing tariff, which covers the gap of Rs. 100.72 Cr and an uncovered gap of Rs. 83.05 Cr to be met by budgetary support by Government of Goa for FY 2012-13.

The summary of the Existing Vs Proposed Tariff for FY 2012-13 as per the latest submission dated 5th June'12 is presented in the table below:

Table 6: Tariff Proposal by the Petitioner for FY 2012-13

S. No.	Category/Consumption Slab	Existing Tariff-FY 11-12		Proposed Tariff-FY 13	
		Fixed Charges[2]	Variable Charges[3]	Fixed Charges[4]	Variable Charges[5]
A	Low Tension Supply				
1(a)	Tariff LTD/Domestic and Non-Commercial				
	First 60 Units	-	1.00	-	1.00/1.50*
	61 to 250 Units	-	1.50	-	1.50
	251 to 500 Units	-	2.20	-	2.80
	Above 500 Units	-	2.50	-	3.00
1(b)	Tariff LTD/Low Income Group	20.00	-	20.00	-
1(c)	Tariff LTD/Domestic Mixed				
	First 400 Units	-	2.30	-	2.70
	Above 400 Units	-	3.00	-	3.70
2	Tariff-LTC/Commercial				
	First 100 Units	-	2.75	-	2.75
	From 101 to 1000 Units	-	3.50	-	3.80
	All Consumption above 1000	-	3.80	-	

[2] Rs. per connection/KVA charged on monthly basis
[3] Rs. per KWh
[4] Rs. per connection/KVA charged on monthly basis
[5] Rs. per KWh

S. No.	Category/Consumption Slab	Existing Tariff-FY 11-12		Proposed Tariff-FY 13	
		Fixed Charges[2]	Variable Charges[3]	Fixed Charges[4]	Variable Charges[5]
	Units				
3 (a)	Tariff-LTP/Motive Power	-	-		
	Connected Load upto 50 HP	-	2.55	-	2.55
	Connected Load above 50 HP	-	2.95	-	3.50
3 (b)	Tariff-LTP/ Ice Manufacturing				
	Connected Load upto 100 HP	-	2.95	-	3.25
3 c)	Tariff-LTP/Mixed (Hotel Industries)	-	3.50	-	4.50
4	Tariff-LTAG/Agriculture	-	1.00	-	1.00
5	Tariff-LTPL/Public Lighting	-	2.00	-	2.00
6	Tariff-LT PWW/Public Water Works	-	3.00	-	3.00
B	High Tension Supply				
7	Tariff HT-Mixed	150.00	3.25	150.00	3.75
8 (a)	Tariff HTI/Industrial	150.00	3.00	150.00	3.30
8 (b)	Tariff HTI/ Hotel Industries	Not existing		150.00	3.30
8 c)	Tariff HTI/ Ice Manufacturing	-	2.80	-	3.30
9	H.T. Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)				
	First 300 Units/kVA	700.00	1.00	700.00	2.00
	Next 200 Units/kVA	700.00	2.00	700.00	2.50
	Above 500 Units/kVA	700.00	2.50	700.00	3.00
	TOTAL				
10	Tariff-HTAG/Agriculture	-	1.25	-	1.25
11	EHTI/Industrial	150.00	3.00	150.00	3.30
12	H.T. PW/Public Water Supply and Sewage	150.00	3.00	150.00	3.00
13	H.T. MES/Defence Establishments	-	3.00	-	3.50
14	H.T. Industrial (Steel Rolling)				
	First 200 Units/kVA	450.00	1.00	450.00	2.00
	Next 100 Units/kVA	450.00	2.00	450.00	2.50
	Above 300 Units/kVA	450.00	3.00	450.00	3.30
	TOTAL				
15	Tariff HT-Industries (IT High Tech).	150.00	2.25	150.00	2.25
	Tariff HT-Industries (ICE)				
C	Temporary Supply				
16	Tariff-LT/Temporary	-	7.00	-	7.00
17	Tariff-HT/Temporary	-	-		

**This is for 3 phase consumers with connected load greater than 3 kW.*

2.4 Prayer to the Commission

ED Goa as per the submission dated 5th April 2012, has requested the Commission to:

- Accept the Tariff Proposal for FY 2012-13 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 and National Tariff Policy 2006

- Approve the Fuel & Power Purchase Price adjustment formula submitted by ED-Goa in the ARR petition of FY 2011-12 and allow implementation of the same wef 1st April 2012

- Condone the delay in filing the Tariff Proposal for FY 2012-13 to meet the revenue gap arising from the ARR for FY 2012-13. Further the Hon'ble Commission may also allow the revision in tariffs for FY 2012-13 effective from 1st April 2012

- Examine the tariff proposal submitted by the Petitioner as detailed in the submission dated 5th April'12 for a favorable dispensation

- ED – Goa 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 the Petitioner to add/change/modify/alter the 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 ARR & Tariff for FY 2011-12 and FY 2012-13

3.1 Introduction

The Commission has dealt both the petitions (petition no 40/2011 and petition no 70/2012) simultaneously in this Tariff Order. The combined hearing on both the petitions was held on 12th March 2012 and the Commission, thereby, has considered the determination of the ARR & tariff for FY 2011-12 along with the ARR & tariff determination for FY 2012-13 in this tariff order.

The Commission observes that the utility has not prepared its audited accounts since FY 2007-08. The Commission following a pragmatic approach has entertained the petitions with un-audited data of FY 2009-10 and FY 2010-11. The Commission in its analysis of the ARR for FY 2011-12 and FY 2012-13, has taken the unaudited actuals of FY 2009-10 and FY 2010-11 into consideration and the provisional-actuals of FY 2011-12 to the extent available. The outcome of the actual audited data for FY 2010-11 will firm up data for FY 2011-12 and actual audited data for FY 2010-11 will form the base of true up of FY 2011-12 in FY 2012-13.

3.2 Approach for Determination of ARR & Retail Tariff for FY 2011-12 and FY 2012-13

The Commission has considered the petitions (petition no 40/2011 and petition no 70/2012) 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, while determining the tariff was 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;

j) Obligations for the Procurement of Renewable Energy

The Commission has considered the actual unaudited figures of income & expenditure submitted by the Petitioner for FY 2009-10 and FY 2010-11, pre-actuals of FY 2011-12, revised figures of certain components based on the provisional actuals of FY 2011-12 submitted to the Commission vide affidavit dated 30th April 2012 and further updated on 5th June 2012 formed the basis of projection for income and expenditure for FY 2012-13. The revised tariff filing formats for FY 2011-12 and FY 2012-13 provided to the Commission vide affidavit dated 5th June 2012 have been considered by the Commission in its analysis of the ARR for FY 2011-12 and FY 2012-13. The detailed analysis & treatment of each component is provided in Chapter 5 and Chapter 6 (ARR for FY 2011-12 and ARR for FY 2012-13) respectively of this Tariff Order.

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

4.1 General Comments

4.1.1 General Issues

Stakeholders Objections/Comments:

The points raised by the Kundaim Industrial Estate Industries Association and Alloy & Steel Manufacturers Association of Goa in brief, are as under:

1. The objector stated that it is an association duly registered under Societies Registration Act 1860. The members of the objector are electricity consumers from practically all categories. The society takes various steps to provide legal and technical assistance to its members.
2. The objector objects that data and figures appearing in the petition do not reflect correct picture but appears to have been tailor made to support the tariff hike.
3. The objector objects that the Petitioner is determined to raise tariff anyhow to collect additional revenue under the pretext of revenue gap, which infact does not exist.

Petitioner's submission:

1. The Petitioner denies that the Members of the Objector are electricity consumers from practically all categories. Infact, the members represent a very limited number of categories of consumers.
2. It is denied, that the Petitioner is not serious about drafting of the Petition and that the data and figures appearing in the Petition do not reflect the correct picture. It is denied that the data and figures are tailor-made to support the proposed Tariff – hike. The Objector has failed to produce valid documentary evidence in support of his claim.
3. The Objector has not supported his claim by any valid documentary proof. The Petitioner has genuinely filed the Petition before the Hon'ble JERC in accordance with the statutory requirements and as per the requirements/guidelines laid down in the relevant Regulations/Polices.

Commission's views:

The Commission has taken note of the objection of the stakeholders and the Petitioner's response. The Commission has carried out the technical validation sessions with the Petitioner to validate the information submitted in the petition. The Commission has obtained data gaps and additional supporting information/documents required to validate the facts in the Petition, wherever required. Further, the ARR and tariff for FY 2012-13 has been determined in accordance with the JERC Tariff Regulations. The Commission has appropriately dealt with the issue of tariff hike in the respective sections of this Order.

4.1.2 Quality of Supply

Stakeholders Objections/Comments:

The point raised by the Kundaim Industrial Estate Industries Association and Alloy & Steel Manufacturers Association of Goa in brief, are as under:

Although the Petitioner is recovering huge amounts by way of electricity duty from the consumers but they are not able to maintain efficient and economical distribution system. The objector prays the Hon'ble Commission to issue appropriate direction to the Petitioner for development and maintenance of distribution network and improve its quality of supply.

Petitioner's submission:

The Petitioner submitted that, it is totally incorrect that the quality of supply in the state is worst. The Objector has not supported his claim with any documentary evidence, and is only trying to mis-lead the Hon'ble Commission in an effort to stall the tariff hike.

The Government is levying Electricity Duty for investing the same for building up and strengthening of the transmission & distribution system. Schemes worth Rs.350 Cr for this purpose have already been sanctioned. These include schemes for augmenting of the transformation capacity of EHV Sub-Stations. Also schemes for interlinking of sub-stations through underground cabling have been sanctioned to improve the reliability of power supply and augment the transmission capacity / provide better flexibility. Major works are in the final stage of completion, and other works are at various stages of progress/execution.

Commission's views:

The Commission had notified the JERC (Standards of Performance) Regulation, 2009, wherein the Guaranteed and overall standard of performance to assure quality of supply as enshrined. 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 the year 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.**

As regard to the Capital investment, the Commission hereby directs the Petitioner to submit the capital investment plan before the start of the financial year in contention. The capital investment plan should clearly highlight the cost benefit analysis of each of the schemes envisaged for implementation during the year/years to come.

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

4.1.3 MYT Principle

Stakeholders Objections/Comments:

The point raised by the Kundaim Industrial Estate Industries Association and Alloy & Steel Manufacturers Association of Goa in brief, are as under:

The objector states that the proposal is not maintainable as it against the MYT principles. The stakeholder request the Hon'ble Commission to draw attention to Section 61(f) that provides a guideline for appropriate Commission to adopt MYT principles while framing the tariff and also to Clause 11 of the JERC, Tariff Regulations 2009. The reason behind MYT is to determine tariff in order to stabilize the tariff for proper planning and industrial stability.

Therefore, it is submitted to reject the tariff proposal and direct Petitioner to submit new tariff proposal as per MYT Principles.

Petitioner's submission:

The Petitioner submitted that the MYT has not yet been notified by the Hon'ble Commission.

Commission's views:

The Commission has so far not notified the Multi-Year Tariff Regulations. The Petitioner would be required to file the ARR & Tariff petition in accordance with the MYT principles as and when the Commission notifies the same.

4.2 ARR Related

4.2.1 Power Purchase

Stakeholders Objections/Comments:

The point raised by the Kundaim Industrial Estate Industries Association and Alloy & Steel Manufacturers Association of Goa in brief, are as under:

The licensee proposes to buy 108 MUs at a cost of Rs.10.03 per kwh, that the rate is almost 4 times the rate of power purchased from other sources. The stakeholder requests the Hon'ble Commission to ensure that the licensee procures the power at reasonable price as per Section 62 of the Electricity Act.

Petitioner's submission:

The Petitioner submitted that the power purchase from IPP at high cost is as per a long term PPA executed by the Government with the IPP in the year 1999, and hence binding on the Government.

Similarly the Petitioner had also executed long term PPAs with Central Sector Generators at very cheap rates like those of Korba, Ramagundam & Vindyachal, benefits of which being passed on to the consumers.

Commission's views:

The Commission has carefully analyzed the power procurement of the Petitioner. Further data and information in this regard have been solicited during the technical validation sessions with the licensee. The Commission has dealt with this issue in the chapter on ARR determination for FY 2012-13 as FY 2011-12 is already over & power purchased is fait accompli.

4.2.2 Revenue Gap

Stakeholders Objections/Comments:

The point raised by the Kundaim Industrial Estate Industries Association and Alloy & Steel Manufacturers Association of Goa in brief, are as under:

1. The stakeholder has requested the Hon'ble Commission to scrutinize the revenue gap of Rs. 183.77 cr. as projected by the Petitioner which is the sole reason of Tariff hike.
2. The stakeholder has objected that the Petitioner has submitted the distribution losses as 12.5% and the transmission losses as 3.95% at page 3-17 and 3-18 of the petition for FY 2011-12, which means the overall losses are about 15.5%.

   The stakeholder has shown the revenue gap calculation as given below:

Particulars	FY 2011-12	FY 2012-13
Power Purchase	3698 MUs	3772 MUs
Losses 16.5%	610 MUs	698 MUs
Power available for sale	3088 MUs	3074 MUs
Revenue from existing tariff	929 Cr	986 Cr
ARR as per petition	995.20 Cr	1068.48 Cr
Difference	66.2 Cr	82.48 Cr

3. The stakeholder has objected that the average rate of sale at Rs. 3.09, which is below the average cost of supply, which cannot be true, because no entity can earn profit by selling its commodity at a rate less than cost of procurement. Since as per the information Goa

is earning revenue from power sector since year 1995 (barring the year 2000-2001, in which there was marginal loss of Rs.2.29 Cr), and the net revenue earned is around Rs.363 Cr.

4. Similarly, the average cost of supply on the basis of the figures given in Table 2-4 at page 10 of the petition comes to Rs.3.20 per kwh, however the Petitioner has quoted the average cost of supply at Rs. 3.63 in Table 4-1 on page 19 of the petition. Thus, on one side the Petitioner states that it has earned the profit to the tune of Rs.363 Cr and on the other side there will be revenue gap of Rs. 183.77 Cr.
5. Thus the stakeholder concludes that the there is no revenue gap at all with the existing tariff and hence there is no basis of increase in tariff

Petitioner's submission:

1. The Petitioner has submitted that the Petitions are based on factual data and have been filed in accordance with the prescribed guidelines / Regulations.
2. The Petitioner has submitted that the objector's calculation Table is incorrect and not acceptable at all. The transmission loss of 3.95% represents the interstate losses of the Central Transmission utility, which is beyond our control. The loss of 12.5% indicated in the Petition represents the total Transmission and Distribution (T & D) loss of the entire State, and is reasonable.
3. ED – Goa respectfully submits that it has consulted the Finance Department, Government of Goa on the clarification and modalities of Non Tax Revenue from power. It has been clarified that the "Non Tax Revenue from power is the difference of total revenue from power for State Government less power purchase costs". It is further clarified that for the State Government amount of duties, taxes etc. collected from sale of power is also accounted as "Revenue". Further, the State Government deducts only power purchase cost paid to the Central Generating Stations and other power purchase agencies/suppliers. The State Government does not take the cost towards the Employee Expenses, Administration & General Expenses, Repairs and Maintenance Expenses, Interest on Loans etc. into Non Tax Revenue Head of Account. Hence, the difference appears to be the surplus / profit from sale of power which is not the case. Further, the figure of Rs.363 Cr is arrived at considering the Electricity Duty Collection as a Revenue, which is not so as this amount is utilized through a fund for Power Infrastructure Development.

4. The Petitioner has submitted that the contents of this para are totally denied. The working out of the Average Cost of Supply at Rs.3.63 is correct. The Objector has not explained how it has arrived at a figure of Rs.3.20.
5. The Petitioner submits that the objector is trying to mislead the Hon'ble Commission with false observations and figures, not supported by any valid documentary proof.

Commission's views:

The Commission has taken note of the stakeholder's objections and the submission of the Petitioner. The Commission has analyzed each component of the revenue and the expenditure head to arrive at the revenue gap for each of the years. The analysis of the same is presented in Chapter 5 and Chapter 6 of this Order.

4.3 <u>Tariff Related</u>

4.3.1 Cross Subsidy

Stakeholders Objections/Comments:

The point raised by the Alloy & Steel Manufacturers Association of Goa in brief, are as under:

The stakeholder submits that HT consumers are always the subsidizing group and are charges at a rate higher than the average cost of supply.
As per 61(g) of the Electricity Act 2003 that *"the tariff progressively reflects the cost of supply of electricity and also reduces cross subsidies in the manner specified by the appropriate Commission"*
Also as per Clause 6(2) of the Terms and Conditions for Determination of Tariff Regulations, 2009, *"The Commission shall determine the tariff to progressively reflect the cost of supply of electricity and also reduce cross subsidies within a reasonable period. To this purpose in the first phase the Commission shall determine tariff so that it progressively reflects combined average unit cost of supply in accordance with National Tariff Policy. In the second phase, the Commission shall consider moving towards the category wise cost of supply as the basis for determination of tariff".*

The average cost of supply given by the Petitioner at page No.19 of the petition is Rs.3.05 for FY 2011-12 and Rs.3.65 for FY 2012-13, whereas average rate applicable to this category is Rs. 4.18 per kWh. Thus, the existing tariff is much higher than the average cost of supply for FY 2012-13.

Therefore, the objector requests the Hon'ble Commission to flatten the curve of cross subsidy by not increasing the tariff further, keeping in view the above mentioned regulation and clause.

Petitioner's submission:

As regard to the objection of respondent on tariff increase or tariff hike, it is submitted by the Petitioner that ED-Goa is under the control of State Government. Also, it is now under the Regulatory Regime of JERC. With regards to tariff increase, it is submitted that ED-Goa needs to prepare and project ARR & Tariff Petition as per Tariff Regulations 2009 notified by Hon'ble Commission. ED-Goa has submitted its proposal considering scenario prevailing in FY 2012-13 for full cost recovery. Further, the Regulation 12 of JERC Tariff Regulations 2009 provides for tariff proposal to cover the gap between expected ARR at prevalent tariff and expected cost of services. The relevant portion from Regulation 12 (1) is extracted herewith for reference.

"The Tariff Application shall also contain tariff proposals so as to fully cover the gap between the expected aggregate revenue at the prevalent tariff and the expected cost of services including schemes for reduction in loss levels and other efficiency gains to be achieved".

Further the provisions of the Section 61 (g) of the Electricity Act, 2003 state that the Appropriate Commission should be guided by the objective that the tariff progressively reflects the efficient and prudent cost of supply of electricity. In line with the above provision, the National Tariff Policy also states that the tariffs should be within ± 20% of the average cost of supply. ED-Goa has provided details of Average Cost of Supply, Category-wise tariffs and Cross subsidization % for FY 2012-13 with the Proposed Tariffs in Table 4-1 of the Tariff Proposal Petition at page 19. As can be seen from the same, the average rate of Rs.4.18/KWH is within the permissible variation of (+) 20%.

ED-Goa has formulated the tariff proposal with an endeavor to progressively approach towards the average cost of supply for majority of consumer categories, with minimum impact on lower income domestic and agriculture consumers. Further, the tariffs for the consumers including HT consumers proposed by the Petitioner are comparable with the neighboring States.

Further ED-Goa would also like to mention that coal prices have increased in last 3-4 years and the impact of the same is that FAC charges paid to NTPC stations & power grid have increased. Also Central Electricity Regulatory Commission (CERC) has been approving arrears of NTPC stations for the period from FY 2004-09 in the true up which are being paid by all utilities. Similarly central transmission charges have also increased due to change in methodology of computation to Point of Connection (POC) Regime w.e.f. 1st July 2011. These factors contribute to increased power purchase and transmission charges, which are around 80-85% of the total ARR cost. The same has been discussed in Industry Outlook also.

It is also submitted that retail tariffs for the State of Goa have been constant since last 5 years despite of normal inflationary increases every year to the tune of 7-8%. It is only in this financial year, ED-Goa has proposed an Average Tariff Increase of around 11% for recovery of all costs.

Hence the allegations of tariff not being tenable or unwarranted or excessive high etc are incorrect and are denied.

Commission's views:

Regarding cross-subsidy, Clause 8.3 of National Tariff Policy states, "Direct subsidy is a better way to support the poorer categories of consumers than the mechanism of cross subsidizing the tariff across the board. Subsidies should be targeted effectively and in a transparent manner. As a substitute of cross subsidies, the State Govt. has the option of raising resources through mechanism of electricity duty and giving that subsidy to only needy consumers. This is a better way of targeting subsidies effectively".

Further the provisions of the Section 61 (g) of the Electricity Act, 2003 state that the Appropriate Commission should be guided by the objective that the tariff progressively reflects the efficient and prudent cost of supply of electricity. In line with the above provision, the National Tariff Policy also states that progressively the tariffs should be brought within ± 20% of the average cost of supply.

The Commission is of the view that it would be ideal to fix electricity tariff for all consumers on average cost of supply basis. However, considering that historically, there has been extensive cross subsidization in electricity sector, it would take time to bring about a regime with no cross subsidy. Efforts are being made by the Commission to reduce cross subsides.

The Commission has noted the concern of the stakeholders and submissions made by the Petitioner. The Commission has taken a prudent view to assess the reasonableness of cost projected for ARR of FY 2012-13 as per the tariff regulations and thereafter decided the Tariff which has been discussed in detail in relevant section of this order.

4.3.2 Tariff Hike

Stakeholders Objections/Comments:

The point raised by the Kundaim Industrial Estate Industries Association and Alloy & Steel Manufacturers Association of Goa in brief, are as under:

1. The stakeholders have objected that the proposed Tariff Hike is unwarranted, arbitrary and unjust and will adversely affect all electricity consumers in the state of Goa.
2. The stakeholder have objected that overall tariff hike is 11.38%, whereas for some categories such as HT Industrial (Ferro Metallurgical/Steel Melting/Power intensive) is 22.6% and for HT Industrial (Steel rolling) is 39.5%.
3. The stakeholder objected that the Petitioner has submitted in the petition that the Tariff is constant for last 5 years in the state of Goa. However, the statement seems to be partially true as the Government has increased the electricity duty from 5 paise per kWh to 58 paise per kWh on 28th May 2008 & then to 70 paise per kWh from the 1st April 2012, which has finally resulted in the increase of the electricity bill of the consumer.
4. The Stakeholder finally concluded that the proposed tariff hike will give Tariff shock to the consumers which is against the National Tariff Policy and also against Section 61(d) which mandates “Safeguarding consumer interests” and “Reasonable of cost in reasonable manner”.

Petitioner’s submission:

1. The Petitioner submitted that the tariff hike proposed for Financial Year, 2012 – 13 is fully warranted as the Petition has been prepared based on factual data and in accordance with the Tariff Regulations, 2009 notified by the Hon’ble Commission.
2. The Petitioner submitted that the tariff hike proposed for Financial Year, 2012 – 13 is fully warranted as the Petition has been prepared based on factual data and in accordance with the Tariff Regulations, 2009 notified by the Hon’ble Commission.

3. The Petitioner further submitted that the Electricity Duty has not been hiked to 70 paise per unit from 1st April, 2012.

4. The Petitioner has submitted that it is denied that the proposed tariff hike is against the principles laid down in the National Tariff Policy. The proposed hike in tariff is reasonable and necessary.

Commission's views:

The Commission has noted the concern of the stakeholders and submissions made by the Petitioner. The Commission has taken a prudent view to assess the reasonableness of cost projected for ARR of FY 2012-13 as per the tariff regulations and thereafter decided the Tariff which has been discussed in detail in the relevant section of this order.

5. AGGREGATE REVENUE REQUIREMENT (ARR) FOR FY 2011-12

5.1 Background

ED-Goa filed its first ARR and Tariff Petition for FY 2011-12 on 14th July 2011. Subsequent to filing, a technical validation session was held on 19th September 2011. In the technical validation sessions, the Commission directed ED-Goa to file a revised petition considering change in tariff for central sector stations and change in transmission charges mechanism. In compliance of the Commission's directions, the Petitioner filed the revised petition on 21st October 2011 (Petition no. 40/2011). The Commission admitted this petition vide its order dated 1st November 2011. The Public hearing for the same scheduled on 5th January 2012 could not be held due to the enforcement of the Code of Conduct on account of the Assembly Election in the State of Goa.

ED-Goa submitted the ARR petition for FY 2012-13 (Petition No. 70/2012) on 31st December 2011. The Commission scheduled a combined hearing for Petition No.40/2011 and Petition No.70/2012 on 12th March 2012. The Commission vide its order dated 12th March 2012 on the above petitions directed the Petitioner to file the Tariff Proposal by 9th April 2012. The petitioner submitted combined ARR & Tariff proposal for FY 2011-12 and FY 2012-13 on 5th, April 2012.

The petitions were admitted on April 13, 2012 subject to the removal of infirmities to the extent possible. The Commission, thereby, has considered the determination of the ARR for FY 2011-12 along with the ARR & tariff determination for FY 2012-13 in this tariff order.

The petition filed on 21st October 2011 contained five months actual figures and seven months estimated figures for FY 2011-12. The Petitioner in response to the queries raised by the Commission during the technical sessions, submitted the provisional actuals of certain elements of the ARR particularly the sales, power purchase cost and the revenue figures for the FY 2011-12 to the Commission vide affidavit dated 30th April 2012 and further revised and updated on 5th June 2012. The Commission in its analysis has considered the provisional actuals for full year of FY 2011-12, wherever available for determination of the ARR for FY 2011-12 as they depict nearly the true performance of the utility. The revised tariff filing formats for FY 2011-12 submitted vide affidavit dated 5th June 2012 have been considered by the Commission in its analysis of the ARR for FY 2011-12.

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

i. Actual Performance in FY 2009-10 and FY 2010-11 (Actual Un-audited Figures) as the base.

ii. Estimates submitted by the Petitioner for FY 2011-12 in the petition dated 21st October 2011

iii. Data as submitted by the Petitioner for FY 2011-12 alongwith the tariff proposal for FY 2012-13 filed before the Commission on 5th April 2012

iv. Provisional figures for FY 2011-12 based on the actual data / information furnished vide affidavit dated 30th April 2012 and further revised and updated vide affidavit dated 5th June 2012.

5.2 Analysis of Aggregate Revenue Requirement of FY 2011-12

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 and depreciation etc. Revised estimates/pre-actuals submitted by the Petitioner as regards to various components of ARR of FY 2011-12 , the Commission's analysis thereon and decision in respect of items given below as 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.

As per the regulation no. 13 of JERC Tariff regulations 2009,
"

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. "

5.3 Consumers, Connected Load and Energy Sales

Petitioner's Submission

The Petitioner has submitted that 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 65 percent and Domestic category contributes to around 26 percent of total sales. The balance sales are contributed by other categories of consumers.

The petitioner has submitted that the sales forecast is based on the trends observed in the sales pattern of various categories over the past years, new developments on account of Government Policies, Socio economic changes, industrial growth, etc. that would affect consumption across various categories of consumers. In addition to this, the growth trend in number of consumers and connected load approvals given have been taken as guiding factors in arriving at the requirement of demand and energy.

The actual data for 2009-10 & 2010-11 was available & based on that data the forecasting has been done for 2011-12. The figures of five months actual from April 2011 to August 2011 were considered by the Petitioner while projecting figures for FY 2011-12 in the petition dated 21st October 2011.

In response to the queries raised by the Commission on submission of actual sales for FY 2011-12, the Petitioner submitted the provisional actuals of consumers, connected load and the energy sales for FY 2011-12 vide submission dated 30th April 2012 and further updated as per submission on 5th June 2012. The Petitioner has submitted the provisional actuals of energy sales as 2746 MU and the consumer base of 579,913 consumers for FY 2011-12. The Petitioner submits that the provisional actuals of energy sales for FY 2009-10 and FY 2010-11 have been 2537 MU and 2727 MU respectively.

Table 7: Energy Sales projected by the Petitioner for FY 2011-12 (MU)

Sr.No.	Category of Consumer	As per petition dated 21st October 2011	As per submission dated 5th June 2012
A	**Low Tension Supply**		
1(a)	LTD/Domestic and Non – Commercial	698	696
1(b)	LTD/Low Income Group	5	4
1(c)	LTD/Domestic Mixed	2	2
2	LTC/Commercial	315	305
3	LTP/Motive Power	98	92
3(a)	LTP/Mixed (Hotel Industries)	7	6
3 c	LTP/Ice Manufacturing	-	-
4	LTAG/Agriculture	14	10
5	LTPL/Public Lighting	33	31
6	LT PWW/Public Water Works	2	2
B	**High Tension Supply**		
7	HT-Mixed	138	145
8	HTI/Industrial	503	577
9	H.T.Industrial (Ferro Mettallurgical/ Steel Melting/ Power Intensive)	529	480
10	HTAG/Agriculture	5	4

11	EHTI/Industrial	180	169
12	H.T. PW/Public Water Supply and Sewage	119	117
13	H.T. MES/Defence Establishments	80	40
14	H.T. Industrial (Steel Rolling)	52	47
15	HT-Industries (IT High Tech).	6	5
16	HT-Industries (ICE).		1
C	**Temporary Supply**	16	14
17	LT/Temporary	16	14
18	HT/Temporary	-	-
19	**Total Demand/ Sale Within State/UT**	**2800**	**2,746**

Commission's analysis

The petitioner vide its submission dated 5th June, 2012, has submitted the actual sales for the FY 2011-12. The Commission has noted the provisional actuals of energy sales for FY 2011-12 submitted by ED-Goa and has observed the past trends of the energy sales of the various consumer categories from FY 2004-05 to FY 2010-11. The Commission has found the submission of the Petitioner to be reasonable except LTD/LIG category, which is unmetered and permissible load is 2 x 40 Watts per consumer. The sale per consumer per year comes to 175.2 kwh and total sales to this category comes to 2.49 MU. As the FY 2011-12 is already over and this being the first order for the petitioner under the regulatory regime, the normative sales targets for this category for the FY 2011-12 were not in place for the petitioner. Therefore, the Commission provisionally approves the energy sales same as provisional actual for FY 2011-12 submitted by the Petitioner subject to further consideration at the time of true-up.

The number of consumers and connected load for the various consumer categories as per the provisional actuals for FY 2011-12 has been found to be reasonable observing the provisional actuals of FY 2009-10 and FY 2010-11 as submitted by the Petitioner in its analysis and has found the submission of the Petitioner to be reasonable except LTD/LIG Category which is unmetered and permissible load is 2 x 40 Watts per consumer. The total load to this category comes to 1136 KW. As the FY 2011-12 is already over and this being the first order for the petitioner under the regulatory regime, the targets for this category for the FY 2011-12 were not in place for the petitioner. Therefore, the Commission provisionally approves the number of consumers and connected load same as provisional actuals for FY 2011-12 submitted by the Petitioner subject to further consideration at the time of true-up.

Table 8: Energy Sales approved by the Commission for FY 2011-12 (MU)

Sr.No.	Category of Consumer	FY 11-12 (Actuals)	FY 11-12 (Approved)
A	**Low Tension Supply**		
1(a)	LTD/Domestic and Non - Commercial	696	696
1(b)	LTD/Low Income Group	4	4
1(c)	LTD/Domestic Mixed	2	2
2	LTC/Commercial	305	305
3	LTP/Motive Power	92	92
3(a)	LTP/Mixed (Hotel Industries)	6	6
3 c	LTP/Ice Manufacturing	-	-
4	LTAG/Agriculture	10	10
5	LTPL/Public Lighting	31	31
6	LT PWW/Public Water Works	2	2
B	**High Tension Supply**		
7	HT-Mixed	145	145
8	HTI/Industrial	577	577
9	H.T.Industrial (Ferro Mettallurgical/ Steel Melting/ Power Intensive)	480	480
10	HTAG/Agriculture	4	4
11	EHTI/Industrial	169	169
12	H.T. PW/Public Water Supply and Sewage	117	117
13	H.T. MES/Defence Establishments	40	40
14	H.T. Industrial (Steel Rolling)	47	47
15	HT-Industries (IT High Tech).	5	5
16	HT-Industries (ICE).	1	1
C	**Temporary Supply**	14	14
17	LT/Temporary	14	14
18	HT/Temporary	-	-
19	**Total Demand/ Sale Within State/UT**	**2,746**	**2,746**

The Commission therefore approves the Energy sales of 2746 MU for FY 2011-12.

5.4 Intra-state Transmission & Distribution Loss

Petitioner's submission

The Petitioner has submitted that the distribution losses in the Goa distribution network for FY 2009-10 & FY 2010-11 have been 14.34% & 13.63% respectively. The provisional losses for the period from April 2011 to August 2011 have been less than 13% and hence for the purpose of FY 2011-12 ARR, the losses have been at a median figure i.e. 12.50%. ED-Goa expects that after completion of R-APDRP activities; it would be in a better position to reduce losses further.

Further, the revised submissions made by the Petitioner vide affidavit dated 5th June 2012, the distribution losses have been assessed at 13.48% for FY 2011-12 based on the provisional actuals.

Commission's analysis

The petitioner has submitted the provisional actual distribution loss levels for the FY 2011-12 at 13.48%. The petitioner in its petition has projected a loss level of 12.50% for the FY 2011-12, however it has been able to achieve 13.48% on the basis of actual figures submitted by the petitioner. The Commission feels that there is further scope of improvement for reduction of losses in the petitioner's area of distribution. However, as the FY 2011-12 has already elapsed and this being the first order for the petitioner under the regulatory regime the targets for the FY 2011-12 were not in place for the petitioner. Therefore, the Commission finds merit in provisionally allowing the distribution loss levels at 13.48% for FY 2011-12 subject to variations based on audited accounts in the truing up exercise.

As per the JERC (Terms and Condition for determination of Tariff), 2009, the petitioner has to base its T&D losses on the energy audit studies conducted and the field studies in this regard. Further, the Commission would like to consider the transmission and distribution losses separately in the subsequent orders. **The Commission therefore directs the petitioner to furnish segregation of losses into transmission and distribution losses and further segregating the distribution losses into technical and commercial heads in their next ARR & Tariff petition along with a status report on energy accounting and T&D losses.**

Table 9: Intra state transmission & distribution losses approved by the Commission for FY 2011-12

Particulars	FY 2009-10 Provisional Actuals	FY 2010-11 Provisional Actuals	FY 2011-12 Provisional Actuals	FY 2011-12 Approved
Energy Losses	14.34%	13.63%	13.48%	13.48%

The Commission therefore approves the intra-state transmission and distribution losses at 13.48% for FY 2011-12.

5.5 Inter-State Transmission Loss

Petitioner's submission

The Petitioner has submitted that the actual transmission losses for FY 2009-10 & FY 2010-11 have been 3.36% and 4.07% respectively for the State of Goa. The petitioner vide its affidavit dated 5th June 2012, submitted the external losses as 4.31% for FY 2011-12 based on the provisional actuals.

Commission's analysis

The inter-state transmission losses are considered uncontrollable at the hands of the petitioner. The petitioner has submitted the actual interstate transmission losses at 4.31% for FY 2011-12. As the FY 2011-12 is already over the Commission approves the actual external losses at 4.31% subject to further consideration at the time of true-up.

Table 10: Inter-state transmission losses approved by the Commission for FY 2011-12

Particulars	FY 2009-10 Provisional Actuals	FY 2010-11 Provisional Actuals	FY 2011-12 Provisional Actuals	FY 2011-12 Approved
Inter-state Transmission Losses	3.36%	4.07%	4.31%	4.31%

The Commission therefore approves the inter-state transmission losses at 4.31% for FY 2011-12.

5.6 Power Purchase Quantum and Cost

Petitioner's submission

The Petitioner in the petition dated 21st October 2011 (petition 40/2011) had submitted the power purchase quantum and cost based on the estimates of 7 months and actuals of 5 months. In response to the queries raised by the Commission, the Petitioner vide affidavit dated 30th April 2012, submitted the actual power purchase cost and quantum for the whole year FY 2011-12. This was further revised vide the submission dated 5th June 2012. Based on the revised and the latest submission, the Petitioner requests the Commission to approve the power purchase quantum and cost at 3740.19 MU and Rs 1064.61 Cr respectively. The power purchase cost is inclusive of the transmission charges of Rs 99.24 Cr incurred by the licensee.

Table 11: Power purchase quantum projected for FY 2011-12-submission dated 21st October 2011

Sr. No.	Source	Capacity (MW)	Firm Allocation to Licensee		Purchase (MU)
			%	MW	
A	**Central Sector Power Stations**				
I	NTPC	10,934		416	2,993.88
	KSTPS	2,100	10.04%	211	1,561.14
	VSTPS - I	1,260	2.82%	36	258.33
	VSTPS - II	1,000	1.25%	12	93.84
	VSTPS -III	1,000	1.05%	10	82.50
	KGPP	656	1.89%	12	71.67
	GGPP	657	1.92%	13	72.73
	SIPAT	1,000	1.05%	10	80.17
	RSTPS	2,100	4.76%	100	725.01
	KORBA - III	500	0.96%	5	23.32
	SIPAT - Stage I	660	1.07%	7	25.17
II	**NPCIL**	1,520		27	150.35
	KAPS	440	3.44%	15	90.05
	TAPS	1,080	1.06%	11	60.30
III	**POOL PURCHASE/OVERDRAWAL**				31.76
B	**Within State Generations**				
	CO- GENERATION	12		3	116.60
	Goa Energy Private Limited	-	-	-	107.33
	Goa Sponge & Power Limited	12	25%	3	9.27
C	**IPP**				
	Reliance Infra	48	29%	14	107.95
D	**Traders**				
	NVVNL - as per PPA	-	-	37	297.48

E	**OTHER CHARGES**	-		-	-
	PGCIL Transmission Charges				
	KPTCL Wheeling Charges				
	NVVN Swapping / Banking Charges				
	Reactive Energy Charges				
	Open Access & Misc Charges				
F	**Total**	**12,513.59**		**460.10**	**3,698.01**

Table 12: Power purchase cost projected for FY 2011-12-submission dated 21st October 2011

Sr. No.	Source	Energy recd. by Licensee (MU)	VC (Ps/ Unit)	FC (Rs. Cr)	VC (Rs.Cr)	Others (Rs.Cr)	Supplementary (Rs. Cr)	Total (Rs.Cr)
A	**Central Sector Power Stations**							
I	**NTPC**	**3,038.79**		**163.79**	**343.84**	**63.90**	**(7.16)**	**564.37**
	KSTPS	3,038.79	88.95	68.84	138.86	23.52	(20.77)	210.45
	VSTPS - I		152.38	14.11	39.37	6.38	8.11	67.98
	VSTPS - II		142.50	6.26	13.37	2.74	(1.29)	21.09
	VSTPS -III		128.75	8.00	10.62	1.71	0.02	20.35
	KGPP		130.72	6.92	9.37	7.57	1.06	24.92
	GGPP		258.52	9.68	18.80	5.16	1.71	35.36
	SIPAT		85.54	8.75	6.86	0.52	3.64	19.78
	RSTPS		141.05	36.70	102.26	16.27	0.36	155.59
	KORBA - III		87.49	1.56	2.04	0.03	(0.00)	3.63
	SIPAT - Stage I		90.71	2.94	2.28	-	-	5.23
II	**NPCIL**		**497.21**	**-**	**36.28**	**-**	**-**	**36.28**
	KAPS		211.61		19.06	-	-	19.06
	TAPS		285.60		17.22	-	-	17.22
III	**POOL PURCHASE/OVERDRAWAL**		298.59		9.48			**9.48**
B	**Within State Generations**							
I	**CO- GENERATION**	**116.60**	**480.00**	**-**	**27.98**	**-**	**-**	**27.98**
	Goa Energy Private Limited	107.33	240.00	-	25.76	-	-	25.76
	Goa Sponge & Power Limited	9.27	240.00	-	2.22	-	-	2.22
C	**IPP**							
	Reliance Infra	**107.95**	**819.30**	**19.83**	**88.44**	**-**	**-**	**108.27**
D	**Traders**							
	NVVNL - as per PPA	297.48	385.00	-	114.53	-	-	**114.53**

E	**OTHER CHARGES**	**-**	**-**	**-**	**-**	**-**	**96.77**	**96.77**
	PGCIL Transmission Charges						93.90	93.90
	KPTCL Wheeling Charges						1.79	1.79
	NVVN Swapping / Banking Charges						0.99	0.99
	Reactive Energy Charges						0.04	0.04
	Open Access & Misc Charges						0.05	0.05
F	**Total**	**3,560.81**		**183.62**	**620.55**	**63.90**	**89.61**	**957.68**

Table 13: Power purchase quantum projected for FY 2011-12-Submission dated 5th June 2012

Sr. No.	Source	Capacity (MW)	Firm Allocation to Licensee		Generation Availability (MU)	Licensee share (%)	Purchase (MU)
			%	MW			
A	**Central Sector Power Stations**						
I	**NTPC**	**12,254**		**431**	**72,465**		**2,932.80**
	KSTPS	2,100.00	10.04%	211	14,993	10.04%	1,381.97
	VSTPS – I	1,260.00	2.82%	36	8,863	2.82%	267.71
	VSTPS – II	1,000.00	1.25%	12	7,150	1.25%	99.39
	VSTPS –III	1,000.00	1.05%	10	7,150	1.05%	91.82
	KGPP	656.20	1.89%	12	3,941	1.89%	87.70
	GGPP	657.39	1.92%	13	3,940	1.92%	85.92
	SIPAT	1,000.00	1.05%	10	7,135	1.05%	85.88
	RSTPS	2,100.00	4.76%	100	14,616	4.76%	768.66
	KORBA - III	500.00	0.96%	5	2,315	0.96%	32.46
	SIPAT - Stage I	1,980.00	1.07%	21	2,362	1.07%	31.29
	Eastern Region						
II	**NPCIL**	**1,520**		**27**	**6,955**		**195.83**
	KAPS	440	3.44%	15	2,024	3.44%	120.29
	TAPS	1,080	1.06%	11	4,931	1.06%	75.54
III	**POOL PURCHASE/OVERDRAWAL**						**57.23**
B	**Within State Generations**						
I	**CO- GENERATION**	**12**		**3**	**101.94**	**0.25**	**119.12**
	Goa Energy Private Limited	-	-	-	-	-	105.99

	Goa Sponge & Power Limited	12	25%	3	101.94	25%	13.13
C	**IPP**						
	Reliance Infra	**48**	29%	**14**	**-**	**-**	**120.00**
D	**Traders**			**37**			**315.21**
	NVVNL - as per PPA	-	-	37	-	-	315.21
	Total	**13,833.59**		**511.17**			**3,740.19**

Table 14: Power purchase cost projected for FY 2011-12 – Submission dated 5th June 2012

Sr. No	Source	Purchase (MU)	Energy recd. by Licensee (MU)	FC (Rs. Cr)	VC (Rs.Cr)	Others (Rs.Cr)	Supplementary (Rs. Cr)	Total (Rs.Cr)
A	**Central Sector Power Stations**							
I	**NTPC**	**2,932.80**	**3,047.57**	**159.13**	**332.63**	**67.44**	**30.81**	**589.90**
	KSTPS	1,381.97		57.55	103.02	25.33	(3.39)	182.51
	VSTPS – I	267.71		14.21	36.39	7.25	15.52	73.36
	VSTPS – II	99.39		6.60	12.53	3.06	0.88	23.08
	VSTPS –III	91.82		8.99	12.37	2.00	1.48	24.85
	KGPP	87.70		7.03	24.38	7.57	2.70	41.67
	GGPP	85.92		9.69	23.60	5.16	2.27	40.71
	SIPAT	85.88		9.85	8.46	0.66	5.22	24.20
	RSTPS	768.66		36.39	107.28	16.27	6.06	165.99
	KORBA - III	32.46		5.35	2.53	0.08	(0.13)	7.83
	SIPAT - Stage I	31.29		3.47	2.08	0.06	0.10	5.71
	Eastern Region		3,047.57				0.11	0.11
								-
	Less: Rebate on CGS bills						(11.14)	(11.14)
II	**NPCIL**	**195.83**		**-**	**51.51**	**-**	**-**	**50.49**
	KAPS	120.29			28.72	-	-	28.72
	TAPS	75.54			22.79	-		21.77
	Less: Rebate						(1.02)	(1.02)
III	**POOL PURCHASE/OVER DRAWAL**	**57.23**			36.52			**36.52**
B	**Within State Generations**							
I	**CO-GENERATION**	**119.12**	**119.12**	**-**	**28.42**	**-**	**-**	**28.42**
	Goa Energy Private Limited	105.99	105.99	-	25.27	-	-	25.27
	Goa Sponge &	13.13	13.13	-	3.15	-	-	3.15

Sr. No	Source	Purchase (MU)	Energy recd. by Licensee (MU)	FC (Rs. Cr)	VC (Rs.Cr)	Others (Rs.Cr)	Supplementary (Rs. Cr)	Total (Rs.Cr)
	Power Limited							
C	IPP							
	Reliance Infra	**120.00**	**120.00**	**21.56**	**128.44**	**-**	**-**	**150.00**
D	**Traders**	**315.21**	**315.21**	**-**	**123.01**	**-**	**-**	**123.01**
	NVVNL - as per PPA	315.21	315.21	-	123.01	-	-	123.01
	Less: Rebate	-	-	-	-	-	(1.93)	**(1.93)**
	(0.30% for Solar)	-	-	-	-	-	-	**-**
F	**OTHER CHARGES**	**-**	**-**	**-**	**-**	**-**	**99.24**	**99.24**
	PGCIL Transmission Charges						92.60	92.60
	KPTCL Wheeling Charges						1.90	1.90
	NVVN Swapping / Banking Charges						1.89	1.89
	Other Charges (WR & SR Fees, Scada Charges, Open Access, Reactive, WRTMPL, WRTGPL etc)						2.86	2.86
	Total	**3,740.19**	**3,601.90**	**180.69**	**700.53**	**67.44**	**115.96**	**1064.61**

Commission's Analysis

While estimating the energy availability and cost for FY 2011-12, the Commission has considered the actual Power purchased and cost incurred by the petitioner for FY 2011-12 of NHPC, NTPC, IPP, Co-gen, & other sources. In response to the queries raised by the Commission, the Petitioner has submitted the actual power purchase for FY 2011-12. 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. The Commission has randomly verified the station wise Power purchase bills submitted by the Petitioner for FY 2011-12. 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. Accordingly, the Commission has considered the Power purchase cost for the FY 2011-12 on actual basis.

As per the submission made by the petitioner vide their letter dated 5th June 2012 the petitioner has incurred an expense of Rs 4.14 Cr as additional charges payable for over-drawl below allowed frequency. Therefore as per the CERC (Unscheduled Interchange charges and related matters) Principle Regulations and its amendments thereof applicable for FY 2011-12 and Press Notification issued by Ministry of Power on 23rd July 2009 and after verification of the data submitted by the Petitioner, Commission has disallowed the additional UI charges of Rs. 4.14 Cr against the UI overdrawl at frequency lower than 49.5 Hz frequency for FY 2011-12, imposed on the utility under the UI regulations of CERC(as amended from time to time) for overdrawl during the period when the frequency was below 49.5 (amended to 49.7 w.e.f. 5th March 2012) and it will not be a pass through in the aggregate revenue requirement of the Petitioner for FY 2011-12. As such penal rate which have been imposed as Unscheduled Interchange charges should be stated separately and very clearly and those payments which are in the nature of damages should not be shown as purchase of Power because it is due to poor management of load by distribution licensee. The distribution licensee is now required to forecast their demand more precisely and plan the power purchase.

Table 15: Power purchase quantum approved by the Commission for FY 2011-12

Sr. No.	Source	Capacity (MW)	Firm Allocation to Licensee		Generation Availability (MU)	Licensee share (%)	Purchase (MU)
			%	MW			
A	**Central Sector Power Stations**						
I	**NTPC**	**12,254**		**431**	**72,465**		**2,932.80**
	KSTPS	2,100.00	10.04%	211	14,993	10.04%	1,381.97
	VSTPS - I	1,260.00	2.82%	36	8,863	2.82%	267.71
	VSTPS - II	1,000.00	1.25%	12	7,150	1.25%	99.39
	VSTPS -III	1,000.00	1.05%	10	7,150	1.05%	91.82
	KGPP	656.20	1.89%	12	3,941	1.89%	87.70
	GGPP	657.39	1.92%	13	3,940	1.92%	85.92
	SIPAT	1,000.00	1.05%	10	7,135	1.05%	85.88
	RSTPS	2,100.00	4.76%	100	14,616	4.76%	768.66
	KORBA - III	500.00	0.96%	5	2,315	0.96%	32.46
	SIPAT - Stage I	1,980.00	1.07%	21	2,362	1.07%	31.29
	Eastern Region						
II	**NPCIL**	**1,520**		**27**	**6,955**		**195.83**
	KAPS	440	3.44%	15	2,024	3.44%	120.29
	TAPS	1,080	1.06%	11	4,931	1.06%	75.54
III	**POOL PURCHASE/OVERDRA**						**57.23**

	WAL						
B	**Within State Generations**						
I	**CO- GENERATION**	**12**		**3**	**101.94**	**0.25**	**119.12**
	Goa Energy Private Limited	-	-	-	-	-	105.99
	Goa Sponge & Power Limited	12	25%	3	101.94	25%	13.13
C	**IPP**						
	Reliance Infra	**48**	29%	**14**	**-**	**-**	**120.00**
D	**Traders**			**37**			**315.21**
	NVVNL - as per PPA	-	-	**37**	-	-	315.21
	Total	**13,833.59**		**511.17**			**3,740.19**

After verification of Power purchase bills for FY 2011-12 an amount of Rs. 1060.47 Cr as shown in the table below for purchase of 3740.19 MU of Energy including Transmission Charges & other associated Charges has been considered:

Table 16: Power purchase cost approved by the Commission for FY 2011-12

Sr. No	Source	Purchase (MU)	Energy recd. by Licensee (MU)	FC (Rs. Cr)	VC (Rs.Cr)	Others (Rs.Cr)	Supplementary (Rs. Cr)	Total (Rs.Cr)
A	**Central Sector Power Stations**							
I	**NTPC**	**2,932.80**	**3,047.57**	**159.13**	**332.63**	**67.44**	**30.81**	**589.90**
	KSTPS	1,381.97		*57.55*	*103.02*	*25.33*	*(3.39)*	*182.51*
	VSTPS - I	267.71		*14.21*	*36.39*	*7.25*	*15.52*	*73.36*
	VSTPS - II	99.39		*6.60*	*12.53*	*3.06*	*0.88*	*23.08*
	VSTPS -III	91.82		*8.99*	*12.37*	*2.00*	*1.48*	*24.85*
	KGPP	87.70		*7.03*	*24.38*	*7.57*	*2.70*	*41.67*
	GGPP	85.92		*9.69*	*23.60*	*5.16*	*2.27*	*40.71*
	SIPAT	85.88		*9.85*	*8.46*	*0.66*	*5.22*	*24.20*
	RSTPS	768.66		*36.39*	*107.28*	*16.27*	*6.06*	*165.99*
	KORBA - III	32.46		*5.35*	*2.53*	*0.08*	*(0.13)*	*7.83*
	SIPAT - Stage I	31.29		*3.47*	*2.08*	*0.06*	*0.10*	*5.71*
	Eastern Region		*3,047.57*				*0.11*	*0.11*
								-
	Less: Rebate on CGS bills						*(11.14)*	*(11.14)*
II	**NPCIL**	**195.83**		**-**	**51.51**	**-**	**-**	**50.49**
	KAPS	120.29			*28.72*	-	-	*28.72*
	TAPS	75.54			*22.79*	-		*21.77*
	Less: Rebate						(1.02)	*(1.02)*
III	**POOL PURCHASE/OVERDRAWAL**	**57.23**			*36.52*			***36.52***
B	**Within State Generations**							

Sr. No	Source	Purchase (MU)	Energy recd. by Licensee (MU)	FC (Rs. Cr)	VC (Rs.Cr)	Others (Rs.Cr)	Supplementary (Rs. Cr)	Total (Rs.Cr)
I	**CO- GENERATION**	**119.12**	**119.12**	**-**	**28.42**	**-**	**-**	**28.42**
	Goa Energy Private Limited	105.99	105.99	-	*25.27*	-	-	*25.27*
	Goa Sponge & Power Limited	13.13	13.13	-	*3.15*	-	-	*3.15*
C	**IPP**							
	Reliance Infra	**120.00**	**120.00**	**21.56**	**128.44**	**-**	**-**	**150.00**
D	**Traders**	**315.21**	**315.21**	**-**	**123.01**	**-**	**-**	**123.01**
	NVVNL - as per PPA	315.21	315.21	-	123.01	-	-	123.01
	Less: Rebate	-	-	-	-	-	(1.93)	**(1.93)**
	(0.30% for Solar)	-	-	-	-	-	-	**-**
F	**OTHER CHARGES**	**-**	**-**	**-**	**-**	**-**	**99.24**	**99.24**
	PGCIL Transmission Charges						*92.60*	*92.60*
	KPTCL Wheeling Charges						*1.90*	*1.90*
	NVVN Swapping / Banking Charges						*1.89*	*1.89*
	Other Charges (WR & SR Fees, Scada Charges, Open Access, Reactive, WRTMPL, WRTGPL etc)						*2.86*	*2.86*
								-
G	**Less: Penal UI Charges**							**4.14**
	Total	**3,740.19**	**3,601.90**	**180.69**	**700.53**	**67.44**	**115.96**	**1060.47**

Accordingly, the Commission approves the power purchase quantum and cost at 3740.19 MU and Rs 1060.47 Cr respectively for FY 2011-12 subject to further consideration at the time of true-up. The approval vis-à-vis the submission is shown on the following page.

Table 17: Approved Power purchase cost and Quantum for FY 2011-12

Particulars	FY 2011-12 Provisional Actuals	FY 2011-12 Approved
Power Purchase Quantum (MU)	3740.19	3740.19
Power Purchase Cost (Rs Cr)	1064.61	1060.47

5.7 Energy Balance

Petitioner's Submission

The Petitioner has submitted the energy requirement and availability for FY 2011-12 based on the provisional actuals as per the submission vide affidavit dated 5th June 2012 and requests the Commission to approve the same.

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 has analyzed the submission of the Petitioner and has found the submission to be reasonable. The Commission approves the energy balance as submitted by the Petitioner based on the provisional actuals subject to further consideration at the time of true up for FY 2011-12.

Table 18: Energy Balance approved by the Commission for FY 2011-12

Sr. No.	Item	FY 2011-12 Provisional Actuals (MU)	FY 2011-12 Approved (MU)
A)	**ENERGY REQUIREMENT**		
1	Energy sales within the State/UT	2,746.32	2,746.32
2	Energy sales to Agriculture consumers	-	-
3	Total sales within the State/UT	**2,746.32**	**2,746.32**
4	Distribution losses (Sr.5 - Sr.2)		
i)	%	**13.48%**	**13.48%**
ii)	MU	428.00	428.00
5	Energy required at State Periphery for Sale to Retail Consumers - Form 2 (Sr.2)	**3,174.32**	**3,174.32**
6	Add: Sales to common pool consumers/ UI	**422.95**	**422.95**
7	Sales outside state/UT : UI/Under drawal	210.45	210.45
8	Sales		
	a) To electricity traders	-	-

Sr. No.	Item	FY 2011-12 Provisional Actuals (MU)	FY 2011-12 Approved (MU)
	b) Through PX	188.89	188.89
9	Sales to other distribution licensees		
	a) Bilateral Trade	-	-
	b) Banking Arrangement (NVVN)	23.61	23.61
10	Total Energy Requirement for State (5+6)	**3,597.27**	**3,597.27**
11	Transmission losses ('B' - Sr.10)		
i)	%	**4.31%**	**4.31%**
ii)	MU	142.92	142.92
B)	**ENERGY AVAILABILITY / PURCHASED**	**3,740.19**	**3,740.19**
1	Net thermal generation (Own+ IPP + Share from Central Stations)	**3,367.75**	**3,367.75**
a	Share from Central Sector (NTPC + NPCIL)	3,128.63	3,128.63
b	IPPs	120.00	120.00
c	Co-generation within State (GEP - Direct & GSPL)	119.12	119.12
2	Net hydel generation (own+shared)		
3	Power Purchased from	**372.45**	**372.45**
	a) Common Pool/UI/ OD	57.23	57.23
	b) Traders - NVVN	315.21	315.21
	c) Renewable Energy Sources	-	-
	d) Banking Arrangement (NVVN)	-	-
4	Net power purchase (Sr.B =1 +2 +3)	**3,740.19**	**3,740.19**

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

The petitioner submits that it maintains its accounts on cash basis and 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 Petitioner has submitted that the expense head of employee cost consists of salary and allowance, bonus, Leave Travel Concession (LTC) & Honorarium etc. It is submitted that apart from Leave encashment benefits others terminal benefits including pension, gratuity etc are paid by Directorate of Accounts, Government of Goa. The Petitioner has projected the employee cost for FY 2011-12 taking into consideration increase in the basic salary and related other remunerations on account of implementations of recommendations of Sixth Pay Commission and also corresponding increase due to additions during the year.

The Petitioner has submitted that the employee expenses for FY 2009-10 and FY 2010-11 based on the provisional actuals have been Rs 124.29 Cr and Rs 123.51 Cr respectively. The Petitioner has submitted the employee expenses for FY 2011-12 at Rs 125.89 Cr. This employee expense comprises of Rs 112.44 Cr towards normal employee expenses, Rs 0.64 Cr towards Sixth Pay Commission arrears, Rs 6.37 Cr for expenses of employees on contract and Rs 6.44 Cr towards terminal benefits.

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 first year in the instant petition would be FY 2011-12, however as the actuals audited information for FY 2011-12 is not available, the Commission has considered the FY 2010-11 as the base for projecting the O&M expenses. However the Commission would consider variations if any in the base at the time of truing up for FY 2011-12 in line with the JERC Tariff Regulations.

Further, Commission has observed that the actuals for the year 2009-10 and 2010-11 have been Rs 124.29 Cr and Rs 123.51 Cr respectively. The Commission has noted that a large part of the arrears of the Sixth Pay Commission were paid in the year 2009-10 and has therefore, considered FY 2010-11 as the base year of the employee expenses.

The Commission has applied the escalation factor of 8.76%[6] per annum for estimation of the increase in the employee expenses from FY 2010-11 to FY 2011-12. The arrears of 6th Pay Commission has been excluded while escalating the year FY 2010-11.This results in the employee expenses of Rs 131.69 Cr (the sixth pay commission arrears have been taken as per the submission for FY 2011-12) The petitioner has claimed an expense of Rs 125.89 Cr against the Employee expenses for FY 2011-12. The Commission has noted the submission of the Petitioner and has limited the approval of the employee expenses to Rs 125.89 Cr considering them as reasonable and hence approved.

Table 19: Employee costs approved by the Commission for FY 2011-12 (Rs Cr)

Sr.No	Particulars	FY 2009-10 Provisional Actuals	FY 2010-11 Provisional Actuals	FY 2011-12 as per 5th June'12 submission	FY 2011-12 Approved
A	**Salaries& Allowances**				
1	Pay in Band	45.02	46.26	49.66	49.66
2	Grade Pay	11.07	12.05	12.62	12.62
3	Dearness allowance	21.78	36.57	32.00	32.00
4	House rent allowance	10.26	10.63	11.41	11.41
5	Field Duty Allowance	0.77	0.77	0.85	0.85
6	Washing Allowance	0.28	0.23	0.26	0.26
7	Special Allowance	0.01	0.01	0.02	0.02
8	Personal Pay	0.08	0.10	0.08	0.08
9	Travelling Allowance	4.46	5.47	5.38	5.38
10	Conveyance Allowance	0.15	0.13	0.19	0.19
11	Any other allowances	-	-	-	-
	Sub-Total - A	**93.87**	**112.24**	**112.44**	**112.44**
B	**Terminal Benefits**				
12	Leave encashment	1.08	4.19	6.44	6.44
	Sub-Total - B	**1.08**	**4.19**	**6.44**	**6.44**
C	**Other Salary payments**				
13	Arrears on account of VIth Pay Commission	25.29	3.01	0.64	0.64
14	Contractual basis	4.05	4.08	6.37	6.37
	Sub-Total- C	**29.34**	**7.09**	**7.01**	**7.01**
	Total (A+B+C)	**124.29**	**123.51**	**125.89**	**125.89**

[6] As per the latest WPI index upto March 2012 as available on the website of Economic Advisor, Ministry of Commerce and Industry

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

The Petitioner has submitted the A&G expenses for FY 2009-10 and FY 2010-11 at Rs 20.18 Cr and Rs 17.84 Cr respectively based on the provisional actuals. The Petitioner has submitted the A&G expenses of Rs 19.31 Cr, net of the capitalisation of Rs 0.23 Cr for FY 2011-12 as per the latest submission dated 5th June 2012.

Commission's analysis

The Commission has considered the year 2010-11 as the base year of the A&G expenses based on the provisional actuals submitted by the Petitioner.

The Commission has applied the escalation factor of 8.76%[7] per annum for estimation of the increase in the employee expenses from FY 2010-11 to FY 2011-12. This results in the A&G expenses of Rs 19.62 Cr (the total A&G expenses of FY 2010-11 have been escalated and the capitalization of the A&G expenses has been taken in the same proportion of the provisional actuals of FY 2010-11). However, the petitioner has claimed net A&G expense of Rs 19.31 Cr. The Commission therefore acknowledges the submission of the petitioner and accordingly approves the A&G expenses as submitted by the petitioner.

The A&G expenses approved for FY 2011-12 are Rs 19.31 Cr.

[7] As per the latest WPI index upto March 2012 as available on the website of Economic Advisor, Ministry of Commerce and Industry

Table 20: A&G expenses approved by the Commission for FY 2011-12 (Rs Cr)

Particulars	FY 2009-10 Provisional Actuals	FY 2010-11 Provisional Actuals	FY 2011-12 as per 5th June'12 submission	FY 2011-12 Approved
Rent, rates & taxes	0.20	0.22	0.32	0.32
Domestic Travel Allowances	0.33	0.23	0.62	0.62
Office Expenses	18.40	16.44	16.44	16.44
Regulatory Expenses (License + Petition Fees)	0.37	0.38	0.65	0.65
Advertisement & Publicity	0.02	0.21	0.20	0.20
Legal, Professional & Special Service Charges	0.09	0.04	0.47	0.47
Other A&G Charges	0.36	0.22	0.51	0.51
Registration Charges - PGCIL (WR & SR) & EMS Charges	0.55	0.32	0.33	0.33
Other material related expenses	-	-	-	-
Total	**20.33**	**18.05**	**19.53**	**19.53**
Add/Deduct share of others (to be specified)	-	-	-	-
Total expenses	**20.33**	**18.05**	**19.53**	**19.53**
Less: Capitalized	0.15	0.21	0.23	0.23
Net expenses	**20.18**	**17.84**	**19.31**	**19.31**
Add: Prior period	-	-	-	-
Total A&G Expenses	**20.18**	**17.84**	**19.31**	**19.31**

The Commission therefore, approves the A&G expenses for FY 2011-12 are Rs 19.31 Cr.

R&M Expenses

Petitioner's submission

The Petitioner has submitted that it 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.

The Petitioner has submitted the R&M expenses for FY 2009-10 and FY 2010-11 at Rs 16.69 Cr and Rs 16.55 Cr respectively. The Petitioner has submitted the R&M expenses of Rs 17.03 Cr for FY 2011-12 as per the latest submission dated 5th June 2012.

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 the year 2010-11 as the base year of the R&M expenses based on the provisional actuals submitted by the Petitioner.

The Commission has applied the escalation factor of 8.76%[8] per annum for estimation of the increase in the employee expenses from FY 2010-11 to FY 2011-12. This results in the R&M expenses of Rs 17.99 Cr. The Commission has noted the submission of the Petitioner and has limited the approval of the R&M expenses to Rs 17.03 Cr as proposed by the petitioner.

Table 21: R&M expenses approved by the Commission for FY 2011-12 (Rs Cr)

S No.	Particulars	FY 2009-10 Provisional Actuals	FY 2010-11 Provisional Actuals	FY 2011-12 as per 5th June'12 submission	FY 2011-12 Approved
1	Plant & machinery *				
	-Plant & Apparatus				
	-EHV substations				
	- 33kV substation	0.03	0.04	0.11	0.11
	- 11kV substation				
	- Switchgear and cable connections				
	- Others	-	-		-
	Total	**0.03**	**0.04**	**0.11**	**0.11**
2	Buildings (Electricity Residential & Non-Residential)	1.52	1.80	1.80	1.80
3	Hydraulic works & civil works	-	-	-	-
4	Line cable & network *				
	-EHV Lines			11.00	
	- 33kV lines	11.66	10.57		11.00
	- 11kV lines				
	- LT lines				
	- Meters and metering equipment	0.04	0.12	0.10	0.10
	- Others	-	-	-	-
	Total	**11.69**	**10.68**	**11.10**	**11.10**
5	Vehicles	-	-	-	-

[8] As per the latest WPI index upto March 2012 as available on the website of Economic Advisor, Ministry of Commerce and Industry

6	Furniture & fixtures	-	-	-	-
7	Office equipments	-	-	-	-
8	Minor R&M Works	3.45	4.02	4.02	4.02
9	**Total**	**16.69**	**16.55**	**17.03**	**17.03**
10	Add/Deduct share of others (To be specified)	-	-	-	-
11	**Total expenses**	16.69	16.55	17.03	17.03
12	Less : Capitalized	-	-	-	-
13	**Net expenses**	16.69	16.55	17.03	17.03
14	Add: prior period	-	-	-	-
15	**Total R&M expenses**	**16.69**	**16.55**	**17.03**	**17.03**

The Commission therefore, approves the R&M expenses for FY 2011-12 at Rs 17.03 Cr.

Summary of O&M Expenses approved for FY 2011-12

The O&M expenses as submitted and approved for FY 2011-12 are as below:

Table 22: O&M expenses approved by the Commission for FY 2011-12 (Rs Cr)

Particulars	FY 2009-10 Provisional Actuals	FY 2010-11 Provisional Actuals	FY 2011-12 as per 5th June'12 submission	FY 2011-12 Approved
Employee Expenses	124.29	123.51	125.89	125.89
A&G Expenses	20.18	17.84	19.31	19.31
R&M Expenses	16.69	16.55	17.03	17.03
O&M Expenses (Rs Cr)	**161.16**	**157.89**	**162.23**	**162.23**

The Commission observes the submission where the petitioner has stated that the expenses are considered based on cash basis of accounting. The absence of audited accounts of the petitioner has hindered the process of prudence check. The Commission therefore directs the petitioner to prepare separate accounts for the electricity business and get it audited. **The petitioner is further directed to provide its audited accounts for period FY 2007-08 onwards till FY 2011-12 along with its next ARR filing. It may also be noted that O&M expenses for FY 2011-12 have been approved based on the petitioner's submission as this being the first year of ARR**

determination by the Commission. This should not be taken as a precedence in determination of ARR for future years, same would be dealt with in accordance with the regulations in vogue at that period of time.

5.9 Capital Expenditure and Capitalization

Petitioner's submission

The Petitioner has submitted that the prevailing infrastructure is insufficient to cater to the present load and hence to meet the increasing demand from HT and LT load, it is absolutely necessary to undertake significant capital expenditure.

The Petitioner has proposed the capital expenditure of Rs 218.18 Cr and out of the total capital work in progress, an amount of Rs 125.77 Cr is proposed for capitalisation for FY 2011-12.
The Petitioner has submitted that as per the Government of Goa notification issued on 28th May 2008, the Electricity Duty collected from the consumers shall be transferred to a separate reserve/fund account for creation of transmission and distribution infrastructure development for the state of Goa. The Petitioner has submitted that works proposed to be capitalized from this ED Reserve/Fund accounts are estimated at Rs 44.19 Cr.

The Petitioner has also submitted that investments capitalized for FY 2009-10 and FY 2010-11 based on provisional actuals have been Rs 60.33 Cr and Rs 158.22 Cr respectively.

Commission's analysis

The Commission observes that the capital expenditure and the capitalization submitted by the Petitioner for FY 2011-12 is required to meet the increasing demand in the licensee area.

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. 125.77 Cr proposed by the Petitioner for FY 2011-12. Further, Petitioner is directed to submit the detailed statement of the capital expenditure incurred quarterly and asset capitalization during the year for true up. **The Commission permits the expenditure as a**

special case to ensure the creation of infrastructure for adherence to Standard of Performance and Supply Code Regulations.

5.10 GFA and Depreciation

Petitioner's submission

The Petitioner has submitted that the opening Gross Fixed Assets (GFA) have been computed based on actual unaudited figures of FY 2008-09 and FY 2009-10. The figures pertaining to additions to GFA & assets retirement for FY 2009-10 and FY 2010-11 have been considered to arrive at opening GFA for FY 2011-12.

The Petitioner has submitted that the statutory audit of accounts till FY 2006-07 has been completed and the audit of accounts thereafter till FY 2009-10 is expected to be completed by March 2012. The retirement / sale of assets are being provided by Statutory Auditors from time to time during audit process based on actual transactions.

The Petitioner has submitted the net additions to the GFA for FY 2011-12 at Rs 126 Cr on the opening GFA of Rs 751.10 Cr, resulting in the closing GFA of Rs 877.10 Cr for FY 2011-12.

In line with the Regulation 22(2) of the JERC Tariff Regulations, which stipulates that *investments made prior to and up to 31st 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* – the Petitioner in the absence of audited accounts from FY 2007-08 onwards has not claimed depreciation on the opening balance of gross fixed assets and has claimed it on the assets proposed to be capitalized and as approved by the Commission for FY 2011-12.

Further, the Petitioner has claimed depreciation on assets added during the year for 6 months only, as addition date/month would be in first half or second half. The deprecation for the ensuing year has been computed on the basis of weighted average rate of previous year. The Petitioner is claiming an amount of Rs 2.82 Cr as per the revised submissions dated 5th June 2012, considering the weighted average depreciation rate of 5.26% of the previous year – FY 2010-11.

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 and has not claimed the same for the purpose of computation of the ARR. Commission is of the view that fixed asset register records, the asset wise details, 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 31st 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 2007-08, 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.126 Cr for the FY 2011-12. The Commission, considering the reasonableness of the expenditure approves the capitalization of Rs. 126 Cr for FY 2011-12. This has been considered as the closing balance of the GFA for FY 2011-12 and the same has been taken as the opening GFA approved for the subsequent year FY 2012-13.

Table 23: Gross Fixed Assets approved by the Commission for FY 2011-12 (Rs Cr)

S. No.	Particulars	FY 2009-10 Provisional Actuals	FY 2010-11 Provisional Actuals	FY 2011-12 as per 5th June'12 submission	FY 2011-12 Approved
1	Opening Value of Assets at the beginning of the year	532.88	592.88	751.10	-
2	Additions during the year	60.33	158.41	126.00	126.00
3	Value of assets sold/disposed off	0.33	0.19	-	-
4	**Gross Fixed Assets at the end of year**	**592.88**	**751.10**	**877.10**	**126.00**

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. The Commission has accordingly considered the depreciation only on the addition to the fixed assets for the FY 2011-12.

However, in order to provide a true and fair position of the fixed assets the Commission directs the petitioner to conduct the physical verification of assets and prepare asset /depreciation registers.

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 shall be computed on the average value of assets at the end of the year which is reasonable and appropriate method. Basis this assumption, the depreciation for the FY 2011-12 is approved at Rs 3.33 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 which comprises assets written off plus assets not written off or not declared obsolete but not usable lying in store & still in the books. The asset that will qualify for depreciation is only the net value i.e. Rs. 80 Cr which is being used to provide service to the consumer. This value will also be further adjusted for depreciation already claimed.

The table below captures the depreciation as submitted by the Petitioner and as approved by the Commission for FY 2011-12.

Table 24: Depreciation approved by the Commission for FY 2011-12 (Rs Cr)

S.No.	Particulars	FY 2011-12 Petitioner's Submission as per 5th June'12	FY 2011-12 Approved
1	Opening Value of Assets at the beginning of the year (Rs Cr)	751.10	-
2	Additions during the year (Rs Cr)	126.00	126.00
3	Value of assets sold/disposed off (Rs Cr)	-	-
4	**Gross Fixed Assets at the end of year (Rs Cr)**	**877.10**	**126.00**
5	**Rate of depreciation**	**5.26%**	**5.28%**
6	**Depreciation**	**2.82**	**3.33**

The Commission therefore approves depreciation as Rs. 3.33 Cr for FY 2011-12.

5.11 Interest and Finance Charges

Petitioner's submission

The petitioner 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.

The Petitioner has proposed the computation of debt equity ratio and computation of interest on loan (including normative loan) as per the JERC Tariff Regulations and allow the same during Annual Performance Review (APR)/ true-up as the case may be. However, the Petitioner has considered only the actual loan transactions and interest on PFC loan for consideration in the ARR of FY 2011-12.

The Petitioner has requested the Hon'ble Commission to approve the interest on the PFC loan amounting to Rs 10.27 Cr for FY 2011-12. The PFC loans have been taken for the purpose of implementing the RAPDRP scheme. Further, the Letter of Credit Charges for claiming rebates on power purchase have been claimed at Rs 0.69 Cr based on the provisional actuals. The total interest and finance charges are claimed at Rs 10.95 Cr for FY 2011-12.

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 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. 88.20 Cr for FY 2011-12 (being 70% of

Rs. 126 Cr provisionally considered to be capitalized during FY 2011-12) to calculate the interest on normative loan amount. Commission has considered the SBI PLR rate which is now called as SBI advance rate, at 13.00% as on 1st April 2011 for FY 2011-12. This rate is applied to the quantum of aggregate normative loan for 12 months i.e Rs. 88.20 crs divided by 2 which comes out to be Rs 44.10 Cr. The Commission approves the normative interest charges for the year at Rs. 5.73 Cr. The table below shows the computation of the normative interest for the FY 2011-12 approved by the Commission:

Table 25: Interest on normative loan approved by the Commission for FY 2011-12 (Rs Cr)

Sr. No.	Particulars (in Rs Cr)	FY 2011-12 Submission as per 5th June'12	FY 2011-12 Approved by the Commission
1	Opening Normative Loan	Only proposed, not claimed	0.00
2	Add: Normative Loan during the year		88.20
3	Less: Normative Repayment		0.00
4	Closing Normative Loan		88.20
5	Average Normative Loan		**44.10**
6	Rate of Interest (@SBI PLR rate)		**13.00%**
7	**Interest on Normative Loan**		**5.73**

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 Commission has also allowed the LC charges of Rs 0.69 Cr claimed by the petitioner.

Table 26: Other interest and finance charges approved by the Commission for FY 2011-12 (Rs Cr)

S.No.	Particulars	FY 2011-12 Petitioner's Submission as per 5th June'12	FY 2011-12 Approved
1	Interest on PFC loan	10.27	-
2	Less capitalization	-	-
3	Net interest	10.27	-
4	LC charges	0.69	0.69
5	Finance Charges	-	-
6	**Other Interest and Finance Charges**	**10.95**	**0.69**

The Commission therefore approves the total interest and finance charges as Rs. (5.73+0.69) 6.42 Cr for FY 2011-12.

5.12 Interest on Working Capital

Petitioner's submission

The Petitioner has submitted that the JERC Tariff Regulations provide for claiming normative interest on working capital; however, in absence of any actual borrowings in the past for such requirement, the Petitioner for the present filing has decided not to claim any interest on working capital.

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 on the basis of the above-stipulated norms 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 2011-12.

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 13% as on 1st April 2011 for ARR of FY 2011-12. The details of submission of the Petitioner vis-a-vis approval of the Commission is given in the table below:

Table 27: Interest on working capital approved by the Commission for FY 2011-12 (Rs Cr)

Sr. No.	Particulars (In Rs Cr)	FY 2011-12 Submission as per 5th June'12	FY 2011-12 Approved by the Commission
1	Power Purchase Cost for one month*	88.72	78.51
2	Employee Cost for one month	10.49	10.49
3	A&G Expenses for one month	1.61	1.61
4	R&M Expenses for one month	1.42	1.42
5	**Total Working Capital for one month**	**102.24**	**92.02**
6	Closing Security Deposit (amount already with ED Goa)		**62.57**
7	Total Working Capital considered for one month (5-6)	**102.24**	**29.45**
8	**SBI PLR Rate**	-	**13.00%**
9	**Interest on Working Capital**	**Not Claimed**	**3.83**

The Commission therefore approves the interest on working capital as Rs. 3.83 Cr for FY 2011-12.

5.13 Interest on Security Deposit

Petitioner's submission

The Petitioner has submitted that security/ miscellaneous deposits are collected from the consumers by the utility.

The Petitioner has submitted that Regulation 25(4) of the JERC Tariff Regulations provides for Interest on security deposits if made by the consumers with licensee or electricity department. The provision of interest on security deposits is to be made at the bank rate and the Petitioner has considered the bank rate of 6% for computation of the interest on security deposit for FY 2011-12.

The Petitioner has requested the Commission to approve the interest on security deposit of Rs 3.52 Cr for FY 2011-12.

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 on the security deposit to the consumers for FY 2011-12. The submission of the Petitioner that it has made provisions for payment of interest on security deposit of the consumers in the revised 'Conditions of Supply', which have been sent to JERC for intimation, is noted.

Since the Petitioner has not actually paid the interest on security deposit due to the consumers, the Commission for FY 2011-12, has not considered the same.

The Commission hereby directs the petitioner to deliver its obligation under the Section 47(4) of the Electricity Act, 2003 and pay the interest on security deposit due for FY 2011-12 at the rate of 6% per annum (Being the Bank Rate as on 1st April 2011). The amount paid should explicitly be mentioned as 'Interest on security deposit for FY 2011-12' on the bills of the consumers. The Commission would consider the expense at the time of true up based on the actual disbursement of the amount.

5.14 Return on capital base/Net fixed assets

Petitioner's submission

The Petitioner has submitted that Regulation 23 (2) and Regulation 24 of the JERC Tariff Regulations provides for entitlement for Returns on Capital Base/ Net Fixed Assets by the utility / licensee. However, the Petitioner submits that since it is in the process of finalization of past accounts and in line with the stand taken for depreciation, the return on net fixed assets is not being claimed.

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 it 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 provided the required data and details to the Commission.

The Commission, as also explained in the section on 'GFA and Depreciation', has only allowed additional capitalization for the year and has disallowed opening GFA till such time the asset and depreciation registers are prepared and got audited. Since the Commission has not considered the opening GFA, return @ 3% of Net Fixed Assets at the beginning of the year cannot be allowed and may be considered at the time of true-up subject to the provisions of the regulations.

5.15 Provision for Bad & Doubtful debts

Petitioner's submission

The Petitioner has not claimed any provision for bad and doubtful debts in the ARR of FY 2011-12 for pass through in the tariff.

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

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

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 28: Provision for bad debts approved by the Commission for FY 2011-12

Particulars	FY 2011-12 Petitioner's Submission	FY 2011-12 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 2011-12 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 submitted that past expenses have been incurred as compensation for incidents/ accidents on account of electrocution of animals & / human beings to its electrical system. The same are estimated to be around Rs 0.21 Cr for FY 2011-12 and requests the Commission to approve the same as part of the ARR for FY 2011-12.

Commission's analysis

The Commission observes that the expenses projected are penal in nature and mostly associated to compensations made for fatal and non-fatal accidents. The Commission does not find it prudent to allow such expenses as a part of the ARR as these are incurred due to the negligence of the petitioner. Any expense on account of penal charges/ compensations due to its negligence shall be borne by the licensee & therefore are not allowable as a pass through in the Tariff.

Table 29: Other expenses approved by the Commission for FY 2011-12 (Rs Cr)

Sr.No.	Particulars	FY 2011-12 Petitioner's Submission as per 5th June'12	FY 2011-12 Approved
1	**Other Expenses**	0.21	NIL

5.17 Non-Tariff Income

Petitioner's submission

The Petitioner has submitted that the non-tariff income estimated for FY 2011-12 is Rs 21.06 Cr comprising of the proceeds from sale of dead stock, waste paper & other miscellaneous receipts. The provisional actuals for FY 2009-10 and FY 2010-11 have been Rs 12.76 Cr and Rs 9.61 Cr respectively.

Commission's analysis

The Commission has noted the break-up of the non-tariff income as submitted by the Petitioner for FY 2011-12 and also analysed the past provisional actuals of FY 2009-10 and FY 2010-11. The Commission has observed that the submission of the Petitioner is reasonable and hence approves the same for FY 2011-12. Accordingly the Commission approves the Non-Tariff income for FY 2011-12 at Rs 21.06 Cr.

Table 30: Non-tariff income approved by the Commission for FY 2011-12 (Rs Cr)

Sr. No.	Particulars (in Rs Cr)	FY 2011-12 Submission as per 5th June'12	FY 2011-12 Approved by the Commission
1	Sale Proceeds of dead stock, waste paper etc	0.61	0.61
2	Receipt from State Electrical Inspectorate	0.45	0.45
3	Misc. Receipts/income	20.00	20.00
4	**Total income**	**21.06**	**21.06**
5	Add: prior period income	-	-
	Total Non-tariff income	**21.06**	**21.06**

The Commission therefore approves Non-tariff income as Rs. 21.06 Cr for FY 2011-12.

5.18 Revenue from Sale of Surplus Power

Petitioner's submission

The Petitioner has submitted that the revenue earned by ED-Goa from sale of surplus power available from April 2011 to August 2011 through exchanges and UI pool has been Rs 52.16 Cr. Based on the revised submissions made by the Petitioner vide affidavit dated 5th June 2012, the revenue earned from sale of surplus power through UI pool and exchanges has been Rs 52 Cr and Rs 57.70 Cr respectively based on the provisional actuals. The total revenue from these two sources is Rs 109.70 Cr.

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. This can not be treated as a prudent commercial practice and the Commission finds it hard to accept. 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 would have been fully justified in not recognizing the business transactions not performed on prudent commercial principles. However, considering the fact that the period under consideration is already over and the Commission had not given any specific directions to the petitioner in this regard, and also recognizing that these transactions cannot be reversed at this stage, the Commission considering this as a fait accompli has considered the same. This issue has been dealt in greater detail for FY 2012-13 in Chapter 6. Thus the revenue earned through sale to UI pool and exchanges at Rs 52 Cr and Rs 57.70 Cr respectively based on the provisional actuals have been considered, subject to true-up.

Table 31: Revenue from sale of surplus power for FY 2011-12 (Rs Cr)

S.No.	Particulars	Petitioner's Submission	Approved
1	Revenue from sale of surplus power – UI Pool	52.00	52.00
2	Revenue from sale of surplus power- Exchanges	57.70	57.70

5.19 Revenue from banking of power

Petitioner's submission

The Petitioner has submitted that the revenue earned from banking of power to NVVNL as per the power purchase agreement is Rs 8.71 Cr i.e. Rs 3.69/kWh for 23.61 MUs sold.

Commission's analysis

The Commission has noted the submission of the Petitioner and based on the provisional actuals for FY 2011-12, considers the revenue from banking of power approved subject to further consideration at the time of true-up.

Table 32: Revenue from banking of power approved by the Commission for FY 2011-12 (Rs Cr)

S.No.	Particulars	Petitioner's Submission	Approved
1	Revenue from banking of power	8.71	8.71

The Commission therefore approves the revenue from banking of power as Rs. 8.71 Cr for FY 2011-12.

5.20 Aggregate Revenue Requirement (ARR) for FY 2011-12

Petitioner's submission

Based on the above items of expenditure and revenue as discussed in the above sections, the Petitioner requests the Commission to approve the net revenue requirement at Rs. 1104.88 Cr. This is as per the revised submissions of the 'Tariff Filling Formats for FY 2011-12' by the Petitioner vide affidavit dated 5th June 2012.

Commission's analysis

The Commission has considered and approved ARR for FY 2011-12 based on the items of expenditure and revenue discussed in the preceding sections and the same has been summarized in the table below.

Table 33: Aggregate Revenue Requirement (ARR) approved by the Commission for FY 2011-12 (Rs Cr)

Sr. No.	Particulars (In Rs Cr)	FY 2011-12 Submission as per 5th June 2012	FY 2011-12 Approved by the Commission as part of TO FY 13
1	Cost of power purchase	1,064.61	1,060.47
2	Employee costs	125.89	125.89
3	R&M expenses	17.03	17.03
4	Administration and general expenses	19.31	19.31
5	Depreciation	2.82	3.33
6	Interest and Finance Charges	10.95	6.42
7	Interest on Working Capital	Not Claimed	3.83
8	Interest on Security Deposit	3.52	NIL
9	Return on NFA	Not claimed	-
10	Provision for Bad Debts	Not claimed	NIL
11	Other Expenses	0.21	NIL
12	**Total Revenue Requirement**	**1,244.35**	**1,236.27**
13	Less: Non Tariff Income	21.06	21.06
14	Less: Revenue from Sale of Power - UI Pool	52.00	52.00
15	Less: Revenue from Sale of Power-Exchanges	57.70	57.70
16	Less: Revenue from Sale / Banking of Power	8.71	8.71
17	**Aggregate Revenue Requirement**	**1,104.88**	**1,096.80**

The Commission therefore approves the Annual Revenue Requirement at Rs 1,096.80 Cr for FY 2011-12.

5.21 Revenue at existing tariff for FY 2011-12

Petitioner's submission

The total revenue from tariff charges for FY 2011-12 based on the provisional actuals is Rs 813.65 Cr. This as per the revised submission dated 5th June 2012 by the Petitioner.

Commission's analysis

The petitioner vide its letter dated June 5, 2012 has submitted the actual revenue from sale of power for FY 2011-12. As the complete year has elapsed, the Commission finds it prudent to allow the actual 'Revenue from existing tariff' at Rs. 813.65 Cr subject to further consideration at the time of true up.

5.22 Revenue Gap at existing tariff for FY 2011-12

Petitioner's submission

The Petitioner has submitted the revenue gap for FY 2011-12 at Rs 291.23 Cr based on the aggregate revenue requirement of Rs 1104.88 Cr and revenue from existing tariff of Rs 813.65 Cr as per the revised submissions dated 5th June 2012.

The Petitioner in its submission of the 'Tariff Proposal for FY 2012-13' vide affidavit dated 5th April 2012 has submitted that the entire revenue gap for FY 2011-12 as per the revised estimates is to be met through budgetary support and there is no revenue gap of FY 2011-12 to be carried forward in FY 2012-13. The Petitioner has submitted a letter from the Government of Goa for budgetary support for FY 2011-12 dated 5th April 2012, the main contents of which are reproduced below. The letter is addressed to ED-Goa and signed by the Under Secretary Finance, Budget Department, 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 during the Financial Year 2011-12, and had provided the requisite budgetary support to meet the deficit, and hence has decided not to carry forward the deficit as may be approved by the Hon'ble Commission during the process of finalizing the ARR for FY 2011-12 to the next financial year 2012-13.''

Commission's analysis

The revenue gap worked out for FY 2011-12 is Rs 283.15 Cr on the basis of the aggregate revenue requirement of Rs 1096.80 Cr and the revenue from existing tariff of Rs. 813.65 Cr.

The petitioner has submitted that the entire gap for FY 2011-12 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 dated 5th April 2012 wherein the Government of Goa has assured to provide requisite budgetary support to meet the deficit at the existing tariff for FY 2011-12. In view of the budgetary support for FY 2011-12 from the Government of Goa, there is no net revenue gap for FY 2011-12.

Table 34: Revenue Gap at existing tariff approved by the Commission for FY 2011-12 (Rs Cr)

Particulars (Rs Cr)	FY 2011-12 Petitioner's Submission as per 5th June'12	FY 2011-12 Approved
Aggregate Revenue Requirement	1104.88	1096.80
Revenue from existing tariff	813.65	813.65
Revenue Gap	**291.23**	**283.15**
Less : Budgetary Support from Govt.	**291.23**	**283.15**
Net final revenue Gap	**NIL**	**NIL**

5.23 Average Cost of Supply for FY 2011-12

The average cost of supply for FY 2011-12 on the basis of the approved ARR and total sale is as shown below.

Table 35: Average Cost of supply approved by the Commission for FY 2011-12 (Rs/kWh)

Particulars	FY 2009-10 Provisional Actuals	FY 2010-11 Provisional Actuals	FY 2011-12 Petitioner's Submission as per 5th June'12	FY 2011-12 Approved
Average Cost of Supply (Rs/kWh)	2.93	3.30	4.02	3.99

6. Aggregate Revenue Requirement (ARR) for FY 2012-13

6.1 Background

The ARR & Tariff Petition for FY 2012-13 was filed by ED- Goa before the Commission on 31st December 2011 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. Actual Performance in FY 2009-10 and FY 2010-11 (Actual Un-audited Figures);

ii. Estimates submitted by the Petitioner for FY 2011-12 in the petition dated 21st October 2011

iii. ARR for FY 2011-12 approved by the Commission considering the above estimates and provisional figures for FY 2011-12 based on the actual data / information furnished vide affidavit dated 30th April 2012 and further revised and updated vide affidavit dated 5th June 2012

6.2 Analysis of Aggregate Revenue Requirement of FY 2012-13

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,
"

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

x. Fuel Cost for own generation, if applicable.

xi. Cost of Power Purchase, if any

xii. Operation and Maintenance Expenses,

xiii. Depreciation, including Advance Against Depreciation,

xiv. Interest and Cost of Finance,

xv. Return on Equity,

xvi. Income Tax

xvii. Provision for Bad & Doubtful Debts

xviii. Other Expenses.

4) 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."

"

5) 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:

v. Necessary adjustments under Regulation 9 'Review and Truing Up'.

vi. Income from surcharge and additional surcharge from Open Access Consumers, if any ;

vii. Transmission and/or Wheeling Charges recovered from the Open Access Customers, if any ;

viii. 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 total consumption for HT Industry is approximate 61 percent and Domestic category contributes to around 25 percent of total sales. 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. In addition to this, the growth trend in number of consumers and connected load approvals given have been taken as guiding factors in arriving at the requirement of demand for energy.

The Petitioner has considered past trend and CAGR of about 5%, for projecting the category wise sales for FY 2012-13. Further, the Petitioner submits the numbers of consumers are expected to grow by 2% over previous year.

The Petitioner submits that the number of consumers estimated for the year is 611,112 and energy sales for the year are estimated at 2940 MU. The Connected load submitted for the LT supply is 1451910 KW, HT supply at 644,353 kVA and LT temporary supply at 2953 KW for FY 2012-13.

Commission's analysis

<u>Consumers</u>

The past trends of the number of consumers from FY 2009-10 to FY 2011-12 as per the available data have been analysed. The Commission has considered the 2 year CAGR growth rate on the approved values of FY 2011-12 to project the number of consumers for FY 2012-13, with the exception of the LTP/Motive Power, LTPL/Public Lighting, HTI/Industrial and HT Industrial/Steel Rolling. The Commission has considered a zero growth rate, wherever the 2 year CAGR was negative with the exception of the above mentioned categories.

The Commission has noticed an aberration in the past trends for the data available for the LTP/Motive Power, LTPL/Public Lighting, HTI/Industrial and HT Industrial/Steel Rolling, therefore the Commission has considered the petitioner's submission for the aforesaid categories which seems reasonable.

The approved number of consumers for FY 2012-13 vis-à-vis the petitioner's submission has been tabulated below:

Table 36: Number of consumers approved by the Commission for FY 2012-13

Sr. No.	Category of Consumer	FY 09-10 (Actuals)	FY 10-11 (Actuals)	FY 11-12 (Actuals)	FY 12-13 (Proposed)	FY 12-13 (Approved)
A	**Low Tension Supply**					
1(a)	Tariff LTD/Domestic and Non-Commercial	411399	436331	440198	459325	455,345
1(b)	Tariff LTD/Low Income Group	16485	17483	14200	14790	14,200
1(c)	Tariff LTD/Domestic Mixed	46	48	50	51	52
2	Tariff-LTC/Commercial	84253	91119	94259	100284	99,699
3 (a)	Tariff-LTP/Motive Power	6940	7967	9500	9532	9532
3 (b)	Tariff-LTP/ Ice Manufacturing*				696	696
3 c)	Tariff-LTP/Mixed (Hotel Industries)*	-	-	-	85	85
4	Tariff-LTAG/Agriculture	9,711	11,060	11000	15400	11,707
5	Tariff-LTPL/Public Lighting	7,400	8,000	9000	9180	9180
6	Tariff-LT PWW/Public Water Works	515	542	546	559	562
B	**High Tension Supply**					
7	Tariff HT-Mixed	176	186	201	201	215
8 (a)	Tariff HTI/Industrial	359	387	413	416	416
9	H.T.Industrial (Ferro Mettallurgical/ Steel Melting/ Power Intensive)	25	27	26	29	27
10	Tariff-HTAG/Agriculture	40	45	42	66	43
11	EHTI/Industrial	4	4	4	5	4
12	H.T. PW/Public Water Supply and Sewage	30	31	31	33	32
13	H.T. MES/Defence Establishments	10	10	12	11	13
14	H.T. Industrial (Steel Rolling)	9	10	13	11	11
15	Tariff HT-Industries (IT High Tech).	7	7	8	8	9
	Tariff HT-Industries (ICE).			2		
C	**Temporary Supply**					
16	Tariff-LT/Temporary	360	389	408	430	434
17	Tariff-HT/Temporary					
	TOTAL	**537,769**	**573,646**	**579,913**	**611,112**	**602,262**

*Data not available for the previous years

Connected Load

The past trends of the connected load from FY 2009-10 to FY 2011-12 as per the available data have been analysed. The Commission has considered the 2 year CAGR growth rate on the approved values of FY 2011-12 to project the connected load for FY 2012-13, with the exception of the LTD/LIG, LTD/Domestic Mixed, LTC/Commercial, LTP/Motive Power, LTAG/Agriculture, LTPL/Public Lighting, HT/Mixed. The Commission has considered a zero growth rate, wherever the 2 year CAGR was negative with the exception of the above mentioned categories.

For the LTD/LIG the Commission observes that the connected load submitted by the Petitioner is not in semblance of no of consumers and authorisation of use of permissible load under this category. The total no of consumers in this category as approved are 14200 and ,therefore, the total connected load in this category is assessed to be 1136 KW. For the LTD/Domestic Mixed, LTC/Commercial, LTP/Motive Power, LTAG/Agriculture, LTPL/Public Lighting, HT/Mixed the past trends have been analysed and the Commission found the aberration in the data, therefore the submission of the Petitioner for these categories have been considered reasonable. The approved connected load for FY 2012-13 vis-à-vis the petitioner's submission has been tabulated below:

Table 37: Connected Load approved by the Commission for FY 2012-13*

Sr. No.	Category of Consumer	FY 09-10 (Actuals)	FY 10-11 (Actuals)	FY 11-12 (Actuals)	FY 12-13 (Proposed)	FY 12-13 (Approved)
A	**Low Tension Supply**					
1(a)	Tariff LTD/Domestic and Non-Commercial	629652	667738	681797	718042	709467
1(b)	Tariff LTD/Low Income Group	5170	5480	4550	5610	1136
1(c)	Tariff LTD/Domestic Mixed	8	82	84	111	111
2	Tariff-LTC/Commercial	220080	238010	256810	269854	269854
3 (a)	Tariff-LTP/Motive Power	230120	264200	332470	325346	325346
3 (b)	Tariff-LTP/ Ice Manufacturing				23748	23748
3 c)	Tariff-LTP/Mixed (Hotel Industries)	-	-	-	-	-
4	Tariff-LTAG/Agriculture	42,060	47,900	66250	75714	75714
5	Tariff-LTPL/Public Lighting	9,011	9,410	12670	12670	12670
6	Tariff-LT PWW/Public Water Works	11,600	12,220	12350	20815	12743
B	**High Tension Supply**					
7	Tariff HT-Mixed	57341	60776	72808	79775	79775
8	Tariff HTI/Industrial	218329	235788	232635	267941	240136
9	H.T.Industrial (Ferro Mettallurgical/ Steel Melting/ Power Intensive)	114588	123753	99200	123552	123552
10	Tariff-HTAG/Agriculture	9165	10435	8450	17322	8450
11	EHTI/Industrial	68235	68235	60000	96551	60000
12	H.T. PW/Public Water Supply and Sewage	34353	36200	27080	37698	27,080
13	H.T. MES/Defence Establishments	7918	7918	6675	9339	6675
14	H.T. Industrial (Steel Rolling)	19235	20765	20000	8093	20394
15	Tariff HT-Industries (IT High Tech).	3588	3588	3188	4082	3188
C	**Temporary Supply**					
16	Tariff-LT/Temporary	2480	2680	2620	2953	2693
17	Tariff-HT/Temporary					

* 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 2006-07 to FY 2011-12. The 5 year CAGR (from 2006-07 to 2011-12) has been applied on the approved sales for the FY 2011-12 to arrive at the approved sales for FY 2012-13. The modified 5 year CAGR has been considered i.e. in case the CAGR is negative, then zero growth is assumed for the consumer class. As the provisional actuals for FY 2011-12 were submitted to the Commission as per the latest submission of the Petitioner vide affidavit dated 5th June 2012, the same have been considered by the Commission in the analysis of the ARR for FY 2012-13.

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 hrs per day which is considered adequate in rural areas.

The Petitioner has claimed consumption of 5 MUs for 14790 consumers in this category, thereby giving an average consumption of 338.07 units/consumer/year which is almost twice as much as fairly assessed by the Commission. 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 total sales approved for the year 2012-13 are 2916.08 MU.

Table 38: Energy Sales approved by the Commission for FY 2012-13

Sr. No.	Category of Consumer	FY 12-13 (Proposed)	FY 12-13 (Approved)
A	**Low Tension Supply**		
1(a)	Tariff LTD/Domestic and Non - Commercial	733	744
1(b)	Tariff LTD/Low Income Group	5	2
1(c)	Tariff LTD/Domestic Mixed	2	2
2	Tariff LTC/Commercial	331	351
3	Tariff LTP/Motive Power	96	96
3(a)	Tariff-LTP/Mixed (Hotel Industries)	7	6
3 c	Tariff LTP/Ice Manufacturing	7	7
4	Tariff-LTAG/Agriculture	16	10
5	Tariff-LTPL/Public Lighting	33	31
6	Tariff-LT PWW/Public Water Works	3	2

B	**High Tension Supply**		
7	Tariff HT-Mixed	145	160
8	Tariff HTI/Industrial	538	596
9	H.T.Industrial (Ferro Mettallurgical/ Steel Melting/ Power Intensive)	545	496
10	Tariff-HTAG/Agriculture	6	4
11	EHTI/Industrial	189	175
12	H.T. PW/Public Water Supply and Sewage	123	120
13	H.T. MES/Defence Establishments	84	44
14	H.T. Industrial (Steel Rolling)	55	49
15	Tariff HT-Industries (IT High Tech).	6	5
16	Tariff HT-Industries (ICE).	-	
C	**Temporary Supply**	**16**	
17	Tariff-LT/Temporary	16	**16**
18	**Total Demand/ Sale Within State/UT**	**2,940**	**2916**

6.4 Intra-Transmission & Distribution Loss

Petitioner's submission

The Petitioner has considered the distribution losses for FY 2012-13 as 12.50%. The Petitioner has further submitted that it expects that post completion of R-APDRP activities it would be in a better position to reduce losses further.

Commission's analysis

The Commission has analysed the past trends of the distribution losses and observes that the Petitioner has assumed a reduction of approximately 1% in the distribution losses (inclusive of intra state transmission loss) for FY 2012-13 over FY 2011-12. The reduction in the losses, considering the past performance of the utility is considered reasonable and hence Commission approves the distribution loss at 12.50% for FY 2012-13.

Table 39: Intra-transmission losses & distribution losses approved by the Commission for FY 2012-13

Particulars	FY 2011-12 Approved	FY 2012-13 Petitioner's Submission	FY 2012-13 Approved
Intra-transmission and distribution losses	13.48%	12.50%	12.50%

6.5 Inter-State Transmission Loss

Petitioner's submission

The Petitioner as per the petition dated 31st December 2011 has submitted that the transmission losses of western region for past 52 weeks work out to be 3.59% which are considered for the purpose of energy balance and to arrive at the quantum of energy required at the State periphery. The Petitioner has revised the inter-state transmission losses to 4.31% as per the latest submission dated 5th June 2012.

Commission's Analysis

The Commission for projecting the inter-state transmission losses has considered the 52 weeks moving average pooled losses for the Region. Accordingly, the Commission **considers inter-state transmission losses at 3.56% as reasonable and approves the same for FY 2012-13.**

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 116.69 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 2012-13.

Table 40: Inter-state transmission losses approved by the Commission for FY 2012-13

Particulars	FY 2011-12 Approved	FY 2012-13 Petitioner's Submission	FY 2012-13 Approved
Inter-state transmission Losses	4.31%	4.31%	3.56%

6.6 Power Purchase Quantum and Cost

Petitioner's submission

The summary of the power purchase quantum and cost projected by the Petitioner is tabulated below.

Table 41: Power purchase quantum submitted by the Petitioner for FY 2012-13

Sr.No	Source	Capacity (MW)	Firm Allocation to Licensee		Licensee share (%)	Purchase (MU)
			%	MW		
A	**Central Sector Power Stations**					
I	**NTPC**	**14,221**		**450**		**3,210.81**
	KSTPS	2,100	10.04%	211	10.04%	1,583.00
	VSTPS - I	1,260	2.82%	36	2.82%	278.00
	VSTPS - II	1,000	1.25%	12	1.25%	101.00
	VSTPS -III	1,000	1.05%	10	1.05%	86.00
	KGPP	656	1.89%	12	1.89%	13.00
	GGPP	657	1.92%	13	1.92%	12.81
	SIPAT	1,000	1.05%	10	1.05%	126.00
	RSTPS	2,100	4.76%	100	4.76%	734.00
	KORBA - III	500	0.96%	5	0.96%	42.00
	SIPAT - Stage I	1,980	1.07%	21	1.07%	99.00
	RGPPL	1,967	1.00%	20	1.00%	136.00
II	**NPCIL**	**1,520**		**27**		**193.00**
	KAPS	440	3.44%	15	3.44%	109.00
	TAPS	1,080	1.06%	11	1.06%	84.00
B	**Within State Generations**					
I	**CO- GENERATION**	**12**		**3**		**171.60**
	Goa Energy Private Limited	-	-	-	0%	107.33
	Goa Sponge & Power Limited	12	25%	3	25%	9.27
	Sesa Goa				0%	55.00
C	**IPP**					
	Reliance Infra	**48**	29%	**14**	**-**	**108.00**
D	**Renewable Energy Sources**					**88.19**
	(2.60% for - Non Solar)	-	-	-	-	76.43
	(0.40% for Solar)	-	-	-	-	11.76
	Total	**15,801**		**493.80**		**3,771.60**

The power purchase cost as projected by the Petitioner is as below.

Table 42: Power purchase cost submitted by the Petitioner for FY 2012-13

Sr. No.	Source	Purchase (MU)	FC (Rs. Cr)	VC (Rs.Cr)	Others (Rs.Cr)	Supplementary (Rs. Cr)	Total (Rs.Cr)
A	**Central Sector Power Stations**						
I	**NTPC**	**3,210.81**	**175.88**	**435.95**	**6.20**	**-**	**618.03**
	KSTPS	1,583.00	84.94	151.97	3.60	-	240.51
	VSTPS - I	278.00	14.62	47.82	1.20	-	63.64
	VSTPS - II	101.00	6.52	16.36	0.50	-	23.38
	VSTPS -III	86.00	8.04	13.93	0.50	-	22.47
	KGPP	13.00	1.73	3.90	-	-	5.63
	GGPP	12.81	1.84	3.84	-	-	5.69
	SIPAT	126.00	8.80	13.23	0.25	-	22.28
	RSTPS	734.00	38.51	117.44	-	-	155.95
	KORBA - III	42.00	4.18	3.36	0.05	-	7.59
	SIPAT - Stage I	99.00	6.70	9.70	0.10	-	16.50
	RGPPL	136.00	-	54.40	-	-	54.40
II	**NPCIL**	**193.00**	**-**	**47.13**	**-**	**-**	**47.13**
	KAPS	109.00	-	23.11	-	-	23.11
	TAPS	84.00	-	24.02	-	-	24.02
B	**Within State Generations**						
I	**CO- GENERATION**	**171.60**	**-**	**41.18**	**-**	**-**	**41.18**
	Goa Energy Private Limited	107.33	-	25.76	-	-	25.76
	Goa Sponge & Power Limited	9.27	-	2.22	-	-	2.22
	Sesa Goa	55.00		13.20			13.20
C	**IPP**						
	Reliance Infra	**108.00**	**19.83**	**88.48**	**-**	**-**	**108.31**
D	**Renewable Energy Sources**						
	(2.60% for - Non Solar)	76.43	**-**	30.57	-	-	**30.57**
	(0.40% for Solar)	11.76	-	10.58	-	-	**10.58**
E	**OTHER CHARGES**	**-**	**-**	**-**	**-**	**103.59**	**103.59**
	PGCIL Transmission Charges (POC Charges WR + SR)					98.90	98.90
	KPTCL					1.84	1.84

Sr. No.	Source	Purchase (MU)	FC (Rs. Cr)	VC (Rs.Cr)	Others (Rs.Cr)	Supplementary (Rs. Cr)	Total (Rs.Cr)
	Wheeling Charges						
	Other Charges (WR & SR Fees, Scada Charges, Open Access, Reactive, WRTMPL, WRTGPL etc)					2.86	2.86
F	**Total**	**3,771.60**	**195.71**	**653.91**	**6.20**	**103.59**	**959.41**

Commission's Analysis

<u>Power Purchase Quantum and Cost for FY 2012-13- An Analysis</u>

It is seen from the data submitted by the petitioner for FY 2011-12 and FY 2012-13 that the availability of power with the petitioner exceeds the requirement to serve the consumers of ED, Goa. The data as submitted by the petitioner is as under:

Year	Energy Available (MU)	Energy required (MU)	Excess energy (MU)
FY 2011-12	3597.27	3174.32	422.95
FY 2012-13	3621.14	3359.51	261.64

The petitioner has submitted that in FY 2011-12, he had underdrawn power (210.45 MU) thereby earning Rs 52 Crs as UI charges and had also sold surplus energy (212.50 MU) through power exchange/bilateral transactions and earned Rs 66.41 Crs. During the same period, he had also overdrawn from the grid (57.23 MU) and incurred Rs. 36.52 Crs as UI charges.

As far as FY 2012-13 is concerned, the petitioner has proposed to deal with the projected surplus energy 261.64 MUs by selling through power exchange/bilateral transactions (206.64 MU) amounting to Rs 92.16 Crs. and underdrawl from the grid (55 MU) earning Rs 13.70 Crs as UI charges.

The Commission looked into details of the approach adopted by the petitioner in FY 2011-12, which has also been proposed for FY 2012-13. The Commission found that the petitioner had procured 120 MUs from the IPP (Reliance Infrastructure Ltd.) at an average per unit energy (variable) rate of Rs 10.70/unit, 87.70 MUs from NTPC Kawas GTPP at an average per unit energy (variable) rate of Rs 2.78/unit and 85.92 Mus from NTPC Gandhar GTPP at an average per unit energy (variable) rate of Rs 2.75/unit. During the same period, the petitioner had sold 212.50 MUs through power exchange/bilateral transactions at an average per unit rate of Rs 3.13/unit and had underdrawn 210.45 MUs thereby earning Rs 52 Crs as UI charges, which works out to Rs 2.47 per unit.

From the above data, it is evident that the petitioner had purchased costly energy from the IPP and at the same time sold surplus energy to the persons other than the consumers of ED, Goa at a much lower rate. ***Such transaction resulted in net loss to the petitioner.***

The Commission, in order to understand the rationale behind the approach adopted by the petitioner, sought the relevant details and justification from the petitioner. The petitioner's response on the Commission's queries is summarized below:

Clarifications from the petitioner on Power Purchase from IPP:

As clarified in earlier submissions, the PPA and supplementary PPAs with IPP were executed between 1997 to year 2000, which is prior to the coming of the EA-2003.

Against the revised rated capacity of 19.8 MW, the department is drawing 16/12 MW.

The letters of IPP-RIL justifying reasons for not being able to run the power plant at lower capacity is provided at Annexure - 6 which are self-explanatory. It is clear from the said letters that any further reduction in the dispatch instructions from the present level of 16 MW for 12 hours and 12 MW for balance 12 hours as against the present rated capacity of 19.8 MW would affect the operation of the power plant and lead to unstable and unsafe operation which would result in shut down of the plant.

Schedule 7 of the main PPA deals with despatch procedure, the relevant clauses 1.3, 6.2 to 6.4 limit the possibility of the department from further reducing the intake of power from the IPP without affecting the smooth functioning of the generating plant consistent with good industry practise.

Further RIL as per the 3rd supplementary agreement executed with the Government is still supplying power to a number of dedicated HT consumers. In the event of closure of the plant by the Government, the Government would be duty bound to service these consumers which it is presently not in a position to do. Apart from this the Department would be bound to continue to pay all fixed cost and other liabilities as per the agreement.

In view of above stated position the question of JERC deciding not to consider the purchase from the IPP which was a committed liability as per the long term PPA executed in 1999 does not arise. Further ED- Goa confirms that no consumer of the electricity department has switched over to the IPP after coming into force of EA-2003.

Background of the IPP

Salient features of the Power Purchase Agreements with M/S. RSPCL as submitted by the petitioner :

1. Power Purchase Agreement (PPA) was signed with RSPCL on 10.01.1997 for the purchase of Power generated by them from their Naptha based Power Plant having installed Capacity of 39.8 MW and to be operated in Open Cycle.
2. Supplementary Power Purchase Agreement (SPPA) was signed with RSPCL on 10.09.1997 to operate the 39.8 MW Power Plant in Combined Cycle mode so as to increase its capacity to 48 MW. Also allowed RSPCL to sell power generated in excess of 39.8 MW from the Combined Cycle electricity generating station of 48 MW capacity, to the consumers in Goa.
3. Permission given to Reliance as per the Government approval to sell 7 MW Power to MPT on 16.04.1998.
4. Actual Capacity of the Power Plant available to the Electricity Department after deducting power to be sold to MPT and deducting auxiliary consumption @ 3% by M/s.RSPCL, works out to 39.80 MW.
5. The Power Plant was put into "Commercial" operation in combined cycle mode from 14-08-1999.
6. Second Supplementary PPA was signed on 20th Sept 2000, allowing M/s.RSPCL to sell the power generated beyond 33.8 MW, directly to the consumers.
7. Third supplementary Agreement (TSA) was signed on 05/11/ 2001, allowing M/s.RSPCI, (now M/s. Reliance Infrastructure Limited) to sell the power directly to the consumers in a phased manner so that the liability of purchasing power from M/s. Rlnfra reaches to the level of 19.8 MW.

8. Department is therefore required to schedule 19.8 MW from M/s. Rlnfra. However to lower the costly purchase Department schedules only 80% of the 19.8 MW i.e. 16 M W.

9. In case Department schedules below 80%, then Department has to pay fixed charges even for the power not received as payment of fixed charges corresponding to 80% of the Contract Capacity (19.8 MW) are guaranteed in the Agreement through the Tariff Calculation Formulae (Sheet containing Tariff Calculation Formulae is enclosed). The Tariff Calculations are detailed in the SCHEDULE — 8 of the PPA. The values in the Tariff Calculation Formulae were originally provided in the PPA. However the same were revised in the SPPA (Power Plant was converted to Combined Cycle from Open Cycle).

10. Further, Department in no event, other than an Emergency, can issue a schedule that requires shut down of the generator as per Clause 6.4 of the SHEDULE 7 of the PPA (copy of abstract enclosed).

11. The liability towards costly power of Reliance Infrastructure Ltd. is further reduced by permitting them to trade their surplus power and daily reducing 4 MW power in dispatch instructions by the Electricity Department during specified time periods of the day with effect from 17/01/2009 from their 48 MW Naptha based Power Plant at Sancoale.

<u>Letters dated 1st June 2012 and 4th June 2012 from M/s Reliance Infrastructure Limited</u>

The petitioner also submitted the letters dated 1st June 2012 and 4th June 2012 from M/s Reliance Infrastructure Limited, the IPP, mentioning as under:

“With reference to your query, the Technical Clarifications regarding 48 MW Naphtha based Combined Cycle Operation of Goa Power Station are as under,

Design Capacity - 48 MW

Gas Turbine Generator (GIG) 32 MW BHEL Make

Steam Turbine Generator (STG) - 16 MW BHEL Make

In a Combined Cycle Operation the Gas Turbine is designed and desired to be operated at Base Load in order to achieve the best optimized performance and efficiency. Even the performance guarantees of plant is offered by OEM only for Base Load Operations because the Plant is not supposed to be Operated on Part Load for Continuous Basis; Accordingly the GT is Designed to be operated on 32 MW and STG on 16 MW for generating 48 MW in Combined Cycle Mode. It may also be noted that the STG's Design Capacity is 37 MW (Considering plant Expansion to 100 MW in future).

Under the present circumstances, the plant is already operating at a PLF of only 65 % i.e. average load of 30 - 32 MW only. On Sundays and holidays the plant load drops further down.

The Individual Average Equipment Loading is as under -

GIG 21-22 MW

SIG - 10-11 MW

Technical Issues / Limitations of Low Load Operations Combined Cycle Mode

STG - It Requires Min Steam Temp of 480 Deg C at its Inlet to Generate Power.

HRSG To achieve 480 deg C at STG inlet, the Min Temp at HRSG Outlet should be minimum 485 Deg C

GTG - In view of above Technical Requirements, GT needs to run on Min 24- 25 MW to achieve sufficient Exhaust Gas Temps. to generate Superheated Steam in Unfired HRSG Accordingly the Output from STG corresponding to GT load Comes to Min 11-12 MW

In Combined Cycle Mode this comes to 36- 37 MW Min Operating Load to meet OEMs Technical Requirements of Individual Equipment.

Further as Naphtha is a very Hazardous and Volatile Fuel, it is generally recommended by OEMs to Operate GT on Naphtha above 20 MW only due to safety reasons. Accordingly, HSD is recommended for Startups & Low Load Operations.

Presently due to Drastic Reduction of Dispatch Instructions from Govt of Goa, we are already being Compelled to Operate this Power Station on 30-32 MW Loads which is much below the Minimum Technical Recommendations of OEM i.e. approx 36 - 37 MW minimum.

Any Further Reductions would not be possible and would also lead to Protection Trips of Various Equipments and Cause Safety Hazards.”

“With reference to the clarification sought out in your letter dated 4th June 2012. we wish to bring to your kind attention that we have already clarified the Technical Limitations of Operating the Plant at Low Loads in Combined Cycle Mode vide letter no RINFRA/GPS/GOG/2012146 dated 1 June 2012 .

To summarize, as per the OEM Technical Recommendations of the Generating Equipments. The Minimum Total Plant Load works out to be 34-37 MW in Combined Cycle Mode, whereas Currently we are already operating at 30-32 MW which is 56-6 MW below the Min Recommended Load .

Out of this Total Plant Load of 30 — 32 MW, GOG off take is only 14.4 MW on an Average and the Industrial Load is 16- 17 MW only This 14.4 MW Is also a reduction against the Agreed Minimum Dispatch Instruction of 16 MW .

We hereby humbly submit that as we are already Operating at Critical Levels, any further reduction in the Loads/Dispatch instructions would lead to Unstable and Unsafe Operations of the Power Plant and would result in the Shutdown of the plant. This would also be in contravention to the clause 6 4 of Schedule 7 of the PPP. & certain other provisions of the PPA .

It may also be noted that the shutdown of our Power Station would also adversely affect the Power Supply to the 80 odd Industrial Consumers of Goa.”

The Commission considered the submissions of the petitioner and conveyed as under:

“On perusal of the letters dated 1st June and 4th June of the IPP, it is seen that procurement of 16 MW power has been justified on some technical grounds. The petitioner has merely enclosed the letters without giving their views. The petitioner should categorically state whether they agree or disagree. Further, the IPP needs to furnish proper technical back up such as document from the OEM mentioning the operating parameters, constraints, etc. The petitioner could provide justification either quoting from the Contract documents or could get the submission vetted from the OEM namely BHEL. Either of the above mentioned needs to be complied with.”

The petitioner responded as under:

1. The purchase of 12 MW/16 MW from the IPP was justified in the Affidavit dated 5th June, 2012 by referring to clause 1.3, 6.2 & 6.4 of Schedule 7 of the contract document i.e. PPA. These clauses are reproduced below for perusal and ready reference;

Clause 1.3: Changes in Procedures

Either GOG or RSPCL may request a change to the dispatch procedures set out in this Schedule 7 provided that neither party shall request a change which is inconsistent with Good Industry Practice and that GOG shall not request a change which would be likely to have an adverse effect upon available Capacity or to prejudice RSPCL's ability to ensure that the Power Station complies with the Dynamic Parameters. The parties shall discuss any such change with each other in sufficient time to implement the change properly and in a manner consistent with Good Industry Practice. No change shall be effective unless approved by both parties in writing and such approval is not to be unreasonably withheld.
In addition, at least once in each calendar year, GOG and RSPCL shall jointly discuss and review the dispatch procedures. If requested by GOG, RSPCL shall attend co-ordination meetings for system dispatch.

RSPCL Weekly Schedule

2. RSPCL shall submit to GOG in respect of the generator by 10.00 hours each Thursday, a weekly schedule which shall run from 00:00 hours on the Saturdays to 24:00 hours on the following Friday. The weekly schedule shall indicate.

   (a) the times and Capacity at which RSPCL anticipates that the generator will be available;
   (b) the reason, if the Generator will not be available, for its non-availability; and
   (c) ancillary services (separately by reference to each ancillary service) that are not expected to be available during that period and the reason for such non-availability.

Clause 6.2 Despatch Compliance:

RSPCL shall not be obliged to comply with any Generation Schedule or Despatch Instruction, to the extent that it would require RSPCL to operate the Power Station otherwise than in accordance with the relevant Availability Declaration or the Dynamic Parameters applicable from time to time. In the event that RSPCL considers that a Generation Schedule or

Despatch Instruction would require RSPCL to operate the Power Station otherwise than in accordance with the relevant Availability Declaration or Dynamic Parameters, RSPCL shall immediately notify GOG together with all relevant details.

Clause 6.4

GOG shall use reasonable efforts to issue Generation Schedules and Despatch Instructions so as to allow RSPCL to maintain the gas turbine generating Active Energy at all times. In no event, other than an Emergency, shall GOG issue Despatch Instructions that require the shutdown of the generator.

These clauses support the stand taken by ED-Goa in the earlier Affidavit as follows;

1. As per clause 1.3, GOG shall not request a change which is inconsistent with Good Industry Practice, and which would have an adverse effect upon the available capacity or to prejudice RSPCL's (now R-Infra) ability to ensure that the Power Station complies with the Dynamic Parameters.

2. As per Clause 6.2, RSPCL is not bound to oblige any Generation schedule or dispatch instructions which is inconsistent with the relevant Availability Declaration or with Dynamic parameters applicable.

3. As per Clause 6.4, GOG cannot issue Generation Schedule and Despatch instructions which will force RSPCL to shut down the generator.

To justify the minimum quantum of Despatch instructions, the calculations/technical reasons as furnished by the IPP were submitted by us vide Affidavit dated 5th June, 2012.

Now, to substantiate that stated position, the technical parameters as recommended by the OEM (BHEL) are attached as Annexure-1 and Annexure-2. Annexure 1 i.e. Turbine Design Data indicates that the initial steam temperature required is minimum 475oC to operate the STG. Annexure-2 i.e. Heat Balance Diagram for HRSG, indicates that the temperature of 480oC is achieved at 75% load on GTG which works out to 24 MW(i.e 75% of 32 MW).

Accordingly, the minimum total plant load in combined cycle mode works out to 36-37 MW i.e. 24 MW on GT+11-12 MW on STG, whereas the present average load is around 32 MW i.e. an average load of industrial consumers of IPP (refer to list of consumers of IPP annexed at Annexure-3), totalling 17.54 MW plus an average load of GOG of 14.26 MW .

This clearly indicates that the plant is already running much below the technical recommendations of the OEM (i.e. below 36-37MW). Also the IPP has made it categorically clear vide their letters dated 1st & 4th June, 2012 which were enclosed with the Affidavit dated 5th June, 2012 that "any further reduction in the load/Despatch instructions, would lead to Unstable and Unsafe Operations of the power plant and would result in shutdown of plant. This would also be in contravention to clause 6.4 of Schedule 7 of the PPA and certain other provisions of the PPA."

Downward Revision of Power Purchase and AFC from Kawas and Gandhar

The Commission also raised the issue of reduced off take projected in FY 2012-13 compared to FY 2011-12 from Gandhar and Kawas projects and lower projection of Fixed Charges for these stations. The petitioner replied as under

"ED-GOA submits that the scheduling of power from Kawas and Gandhar for FY 2012-13 had been assumed on a lower side as there was some surplus expected in the system. Accordingly the fixed charges were also reduced proportionately. ED-Goa would like to mention that is has already provided the assumption/ methodology used for computing availability in clause 4.1.5.1 and the allocation by MOP dated 1st Nov 2011 in clause 4.2.1 of the petition filed on 31st Dec 2011. As regards downward revision of power purchase from above stations, the explanation is already provided in our Affidavit dated 5th April 2012 at point no. 2.1.1 &2.1.2."

Commission's View

After going through the detailed submissions and justification, the Commission is of the view that the petitioner could not conclusively establish that non scheduling power from the IPP would be against the provisions of the PPA. The petitioner himself has made contradictory statements as regards the minimum load at which the plant could operate. It has also been mentioned that the STG's design capacity is 37 MW keeping in view capacity expansion to 100 MW in future. Keeping almost 100% spare capacity of STG could be a commercial decision of the generator but the consumers could not be made to pay for the same. While admitting that there could be some loss of efficiency at lower loads but to say that it would result into shutdown is not supported by the explanation provided.

It is seen from Clause 3.4 of the SPPA dated 10th September 1997 that Tariff Heat Rates have been provided for load varying from 40% to 100% which means that the plant is capable of operation at such low loads. Thus, the petitioner's contention in this regard is contrary to the provisions of the PPA.

Under Section 86 of the Electricity Act 2003, the Commission is mandated to regulate electricity purchase and procurement process of the distribution licensee. While doing so, the Commission cannot overlook the interests of the consumers. Commission has to regulate keeping in view the interests of all stakeholders. Commission is of the considered view that buying costly power when availability is in excess of the requirement and selling such excess power at a cheaper rate does not serve interest of anybody be it consumers, the licensee, the generator or the government. The Commission has therefore followed the merit order while estimating the power purchase cost in the ARR. Any excess power irrespective of the source has not been considered. While doing so, the Commission has taken care of the contractual obligation and has accordingly considered Fixed (Capacity) charges of such plants to the extent of allocated capacity. Although the petitioner has not considered full fixed charges proportionate to the allocated capacity for Kawas and Gandhar stations, the commission recognising the fact that fixed charges are contractually payable on the basis of availability and not on actual despatch have considered full fixed charges for ED Goa's share from those stations also. The Commission, however, allows the petitioner to schedule power from the sources falling outside the merit order despatch, to meet requirement of unforeseen situation, after following the merit order principles. The petitioner is also at liberty to schedule costly power and sell through power exchanges/traders/bilateral deals provided negative financial impact of such transactions is not loaded on to consumers of ED Goa.

The following approach has been adopted by the Commission for regulating 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 and Gandhar for FY 2012-13 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/2012/684 dated May 24, 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.

- **New Station**: Further it is also pertinent to mention here that the second unit of SIPAT STPS Stage -1, Unit# 2 has attained COD from May 25,2012, therefore the availability from this station has been considered on pro-rata basis from the date of COD. It would have been inappropriate to consider one month PLF for the station, therefore 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 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 January 2012 to March 2012 submitted by the petitioner for consideration of the per unit variable charges for the FY 2012-13.

- Variable Charges for Ratnagiri GPPL has been considered as per the bill of May 2012.

- **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. For Kawas and Gandhar stations also, although the petitioner has projected less fixed charges considering lower dispatch, the Commission has considered full fixed charges in proportion to the allocated capacity, recognizing the fact that Fixed Charges are payable on the basis of availability and not on actual dispatch.

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

Table 43: 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%	5.46	3772	6.50%	3527	38.5	1.4	37.1
KSTPS	2100	86.13	10.12%	212.60	15844	6.50%	14815	1,467.7	52.3	1,415.5
SIPAT - Stage I	1320	85.00	1.20%	15.86	9156	6.50%	8560	100.7	3.6	97.1
SIPAT Stage 2	1000	95.23	1.16%	11.59	8342	6.50%	7800	90.4	3.2	87.1
VSTPS - II	1000	92.50	1.36%	13.57	8103	6.50%	7576	102.8	3.7	99.1
VSTPS -III	1000	92.50	1.16%	11.59	8103	6.50%	7576	87.8	3.1	84.6
VSTPS - I	1260	92.50	2.93%	36.94	10209	6.50%	9546	279.9	10.0	269.9
RSTPS	2100	91.68	4.76%	99.96	16865	6.50%	15769	734.6	26.2	708.4
RGPPL	1967	91.67	1.00%	19.67	15796	3.00%	15322	88.2	3.1	85.1
GGPP	657	70.50	1.92%	12.63	4060	3.00%	3938			
KGPP	656	69.10	1.89%	12.37	3972	3.00%	3853			
Total	**13561**			**452.23**				**2,990.4**	**106.5**	**2,883.9**

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

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

Table 44: Approved Power purchase Cost from NTPC stations

Source	Energy Available at Periphery (MUs)	Fixed Charges (Rs Crores)	Variable Charges (RS Crores)	Total Charges (Rs Crores)
KORBA - III	37.11	5.66	2.83	8.49
KSTPS	1,415.47	87.20	108.73	195.93
SIPAT - Stage I	97.07	13.87	9.32	23.19
SIPAT Stage 2	87.15	10.86	8.50	19.36
VSTPS - II	99.12	7.80	13.63	21.42
VSTPS -III	84.64	9.88	11.70	21.58
VSTPS - I	269.92	16.75	39.54	56.29
RSTPS	708.41	42.63	113.79	156.42
RGPPL	85.06	19.59	20.59	40.18
GGPP	-	11.53	-	11.53
KGPP	-	10.02	-	10.02
Total	**2,883.94**	**235.78**	**328.63**	**564.41**

- **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 except Ramagundam STPS as per the notification of the Western Region Power Committee vide WRPC/Comml-I/6/Alloc/2012/684 dated May 24, 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 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 it 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 January 2012 to March 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 45: 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	3777	10.00%	3399	119.5	4.3	115.3
TAPS	1080	80.01	1.18%	12.73	7551	10.00%	6796	80.3	2.9	77.5
Total	**1520**			**28.21**				**199.9**	**7.1**	**192.7**

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

Table 46: Approved Power purchase Cost for NPCIL Stations

Source	Energy Available at Periphery (MUs)	Fixed Charges (Rs Crores)	Variable Charges (RS Crores)	Total Charges (Rs Crores)
KAPS	115.28	-	27.20	27.20
TAPS	77.46	-	22.52	22.52
Total	**192.75**	**-**	**49.73**	**49.73**

➢ **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 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 petitioners 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 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 47: Approved Power purchase quantum and Cost for Co-Gen

Source	Purchase (MUs)	Energy Available at Periphery (MUs)	Fixed Charges (Rs Crores)	Variable Charges (RS Crores)	Total Charges (Rs Crores)
Goa Energy Private Limited	107.33	107.33	0	25.76	25.76
Goa Sponge & Power Limited	9.27	9.27	0	2.22	2.22
Sesa Goa	55.00	55.00	0	13.20	13.20
Total	**171.60**	**171.60**	-	**41.18**	**41.18**

- **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 12.5 per unit. Moreover, the actual variable charges for the said IPP for the FY 2011-12 has been Rs 10.70 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 and has provided an opportunity to the petitioner to justify the high cost of power purchase. The Petitioner’s response and the Commission’s views have been dealt earlier in this chapter.

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. The petitioner has envisaged a reduction in average costs from the IPP as the cheaper fuel is expected post installation of gas pipeline by GAIL. Variable charges envisaged by the petitioner at Rs 8.2 per unit is still far more than the competitive prices available in the market. Further, in view of the projected surplus in the system, the energy from the IPP is falling outside merit order dispatch, hence not considered. However, the Commission considers the petitioner’s submission and provisionally allows the fixed charges 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.

Table 48: Approved Power purchase quantum and Cost from IPP

Source	Purchase (MUs)	Energy Available at Periphery (MUs)	Fixed Charges (Rs Crores)	Variable Charges (RS Crores)	Total Charges (Rs Crores)
IPP- Reliance Infra	-	-	19.83	-	19.83
Total	**-**	**-**	**19.83**	**-**	**19.83**

➢ **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 in its submission dated April 2012 has submitted that it is considering procurement of renewable energy to meet its renewable energy obligation.

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

Table 49: Approved Power purchase quantum and Cost from Renewable Energy Sources

Source	Purchase (MUs)	PGCIL Losses	Energy Available at Periphery (MUs)	Fixed Charges (Rs Crores)	Variable Charges (RS Crores)	Total Charges (Rs Crores)
Non Solar	75.82	2.70	73.12	0	30.33	30.33
Solar	11.66	0.42	11.25	0	10.50	10.50
Total	87.48	3.11	84.37	-	40.83	40.83

➢ **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 31.03.2012 applicable for April 2012 to September 2012 for approving the Transmission charges for the FY 2012-13. Accordingly the Transmission charges for usage of the PGCIL network is approved at **Rs 90.97 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 paisa per unit which is pursuant to a contract between the petitioner and KPTCL. The Commission therefore approves **Rs 1.84 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 2.86 Cr**.

Accordingly, the total Transmission charges approved for the FY 2012-13 are tabulated below:

Table 50: Approved Transmission charges for FY 2012-13 (Rs Cr)

S.No.	Particulars	Petitioner's Submission	Approved
1	PGCIL Transmission Charges	98.90	90.97
2	KPTCL wheeling charges	1.84	1.84
3	Other Charges	2.86	2.86
4	Total	103.59	95.67

- **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 51: Power Purchase cost approved for FY 2012-13

Source	Purchase (MUs)	PGCIL Losses	Energy Available at Periphery (MUs)	Fixed Charges (Rs Crores)	Variable Charges (RS Crores)	Total Charges (Rs Crores)
NTPC	2,990.4	106.5	2,883.9	235.8	328.6	564.4
NPCIL	199.9	7.1	192.7	-	49.7	49.7
Co-Gen	171.6	-	171.6	-	41.2	41.2
Renewable Energy	87.5	3.1	84.4	-	40.8	40.8
IPP	-	-	-	19.8	-	19.8
Transmission Charges						95.7
Total	3,449.3	116.7	3,332.7	255.6	460.4	811.6

6.7 Energy Balance

Petitioner's Submission

The Petitioner has submitted an energy requirement of 3621.14 MU for the State, including the sale of 261.64 MU to the common pool consumers/UI. To meet the requirement of 3621.14 MU the Petitioner has submitted the power purchase at 3771.6 MU, and considering the external losses at 4.31%, the net availability at the periphery translates into 3621.14 MU for the state. This is as per the latest submission of the Petitioner dated 5th June 2012.

Commission's analysis

The Commission has 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 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. This effectively, is 3449.35 MU. As per the above mentioned principles, no sale outside the state through the common pool/UI has been allowed by the Commission for FY 2012-13. The approved energy balance for the FY 2012-13 is shown in the table below;

Table 52: Energy balance approved by the Commission for FY 2012-13

Sr. No.	Particulars	FY 12-13 (Proposed)	FY 12-13 (Approved)
A)	**ENERGY REQUIREMENT**		
1	Sales within the State/UT	2940	2,916.08
2	Distribution losses		
i)	%	12.50%	12.50%
ii)	MU	419.94	416.58
3	Energy required at State Periphery for Sale to Retail Consumers	3,359.51	3,332.66
4	Add: Sales to common pool consumers/ UI	261.64	
i	Sales outside state/UT : UI/Under drawal	55.00	
ii)	Sales	-	
	a) Through PX	206.64	
	b) Traders	-	
Iii	Sales to other distribution licensees	-	
	a) Bilateral Trade	-	
	b) Banking Arrangement (NVVN)	-	
5	Total Energy Requirement for State	3,621.14	3,332.66

6	Transmission losses		
i)	%	4.31%	3.56%
ii)	MU	150.45	116.69
8	Total Energy at Generator end	3,771.60	3,449.35
B)	**ENERGY AVAILABILITY / PURCHASED**		
1	Net thermal generation (Own+ IPP + Share from Central Stations)	3,683.41	3,361.86
A	Share from Central Sector (NTPC + NPCIL)	3,403.81	3,190.26
B	IPPs	108.00	-
C	Co-generation within State (GEPL, GSPL & Sesa)	171.60	171.60
2	Power Purchased from	88.19	87.48
	a) Common Pool/UI/ OD	-	
	b) Traders/ Exchanges	-	
	c) Renewable Energy Sources	88.19	87.48
	d) Banking Arrangement (NVVN)	-	
3	Net power purchase	3,771.60	3,449.35
4	Net Availability	3,621.14	3,332.66

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 Annual Revenue Requirement.

Employee Cost

Petitioner's submission

The Petitioner has submitted that employee cost consists of salary and allowance, bonus, Leave Travel Concession (LTC) & Honorarium etc. It is submitted that apart from Leave encashment benefits others terminal benefits including pension, gratuity etc are paid by Directorate of Accounts, Government of Goa. The Petitioner has projected the employee cost for FY 2012-13 taking into consideration increase in the basic salary and related other remunerations on account of implementations of recommendations of Sixth Pay Commission and also corresponding increase due to additions during the year.

The details of the salary expenses projected for FY 2012-13 is given in the below table.

Table 53: Employee expenses projected by the Petitioner for FY 2012-13 (Rs Cr)

		FY 2012-13	
Sr.No	Particulars	As per petition dated 31st December 2011	As per latest submission dated 5th June 2012
A	**Salaries& Allowances**		
1	Pay in Band	69.72	59.72
2	Grade Pay	19.69	16.69
3	Dearness allowance	48.53	42.51
4	House rent allowance	17.49	14.40
5	Field Duty Allowance	1.44	1.44
6	Washing Allowance	0.40	0.40
7	Special Allowance	0.03	0.03
8	Personal Pay	0.12	0.12
9	Travelling Allowance	7.56	7.56
10	Conveyance Allowance	0.29	0.29
11	Any other allowances	-	-
	Sub-Total - A	165.25	143.16
B	**Terminal Benefits**		
12	Leave encashment	9.42	8.79
	Sub-Total - B		8.79
C	**Other Salary payments**	9.42	
13	Arrears on account of VIth Pay Commission		-
14	Contractual basis	0.10	3.10
	Sub-Total- C	0.28	3.10
	Total (A+B+C)		155.05
15	Less: Amount capitalized	0.38	-
16	Net amount	175.05	155.05
17	Add : prior period expenses	-	-
18	**Total Employee Expenses**	175.05	155.05

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 has approved employee cost as Rs 125.89 Cr for ARR for FY 2011-12 for reasons explained therein. Applying escalation of 8.76% on the approved values for FY 2011-12, the employee Cost for FY 2012-13 works out to be Rs 136.21 Cr. The employee cost arrears amounting to Rs 0.64 Cr in the FY 2011-12 have not been considered while escalating the employee expenses for FY 2012-13. 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. The inflation increase from FY 2010-11 to FY 2011-12 has been applied on the approved figures of FY 2011-12 to arrive at the approved employee cost for FY 2012-13.

Table 54: WPI considered by the Commission for FY 2012-13

Year	Average WPI index	% increase
FY 09-10	130.82	
FY 10-11	143.33	9.56%
FY 11-12	155.88	8.76%
Actual WPI increase for FY 2011-12 over FY 2010-11		**8.76%**

Table 55: Employee expenses approved by the Commission for FY 2012-13 (Rs Cr)

Particulars	FY 2011-12 Approved	FY 2012-13 Petitioner's Submission	FY 2012-13 Approved
Employee Expenses	125.89	155.05	136.21

Number of Employees

Petitioner's Submission

The breakup of the number of employees submitted by the Petitioner for FY 2012-13 is as tabulated below:

Table 56: Number of employees submitted by the Petitioner for FY 2012-13

Sr. No.	Particulars	Ensuing year (FY 2012-13)
1	Number of employees as on 1st April 2012	5,235
2	Number of Contractors as on 1st April 2012	922
3	Total Employees + Contractors as on 1st April 2012	**6,157**
4	Permanent Posts filled during the year (FY 2012-13)	1,209
5	Contractors as on 31st March 2013	57
6	Total number of employees + Contractors (3+4+5)	**7,423**
7	Number of employees retired/retiring during the year	125
8	Number of employees + contractors at the end of the year (6-7)	**7,298**

The Petitioner has submitted total no. of employees for FY 2011-12 as 6157, out of which 922 were on contract basis. The provisional actuals for FY 2009-10 and FY 2010-11 have been 4976 and 5036 at the end of the year respectively.

Commission's Analysis

The submission of the petitioner for the previous years has been as follows:

Table 57: Number of employees submitted by the Petitioner for the previous years

Sr. No.	Particulars	FY 2009-10	FY 2010-11	FY 2011-12
1	Number of employees as on 1st April	4,837	4,976	5,036
2	Posts filled during the year	166	153	316
3	Total number of employees (1+2)	**5,003**	**5,129**	**5,352**
4	Number of employees retired/retiring during the year	27	93	117
5	Number of employees at the end of the year (3-4)	**4,976**	**5,036**	**5,235**

The analysis of the previous years shows one employee was serving an average of 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 way too high, considering that the all India average number of employee per thousand consumers is 0.409 as per the annual plan of FY 2011-12, which translates into one employee catering approximately 2500 consumers. Here, in the case of ED-Goa one employee is proposed to cater 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 quite overstaffed, even with reference to the quality of service claimed by the licensee for which no data is provided. Hence, the Commission does not approve the manpower recruitment of 1209 employees for FY 2012-13 and considers it prudent to only allow the Petitioner to fill only such posts where some special expertise is require which is not available with the existing manpower, without compromising the service standards in line with the Standard of Performance of Distribution Code Regulations. It would be advisable that the petitioner prepares a plan for gradual reduction in employee strength to bring it closer to the all India average.

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

The Petitioner has claimed A&G expenses of Rs 26.91 Cr, the breakup of which is given as-

Table 58: A&G expenses submitted by the Petitioner for FY 2012-13 (Rs Cr)

Sr. No.	Sub-head	FY 2012-13 Petitioner's Submission
1	Rent, rates & taxes	0.36
2	Domestic Travel Allowances	0.71
3	Office Expenses	21.62
4	Regulatory Expenses (License + Petition Fees)	1.50
5	Advertisement & Publicity	0.38
6	Legal, Professional & Special Service Charges	0.21
7	Other A&G Charges	2.13
8	Registration Charges - PGCIL (WR & SR) & SCADA/ EMS Charges	0.32

[9] 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.

9	Other material related expenses	-
10	**Total**	**27.23**
11	Add/Deduct share of others (to be specified)	-
12	**Total expenses**	**27.23**
13	Less: Capitalized	0.32
14	**Net expenses**	**26.91**
15	Add: Prior period	-
16	**Total A&G Expenses**	**26.91**

Commission's analysis

The Commission has applied the WPI index of 8.76% on the approved value of FY 2011-12 of Rs 19.53 Cr (the total A&G expenses) to arrive at the total A&G for FY 2012-13 of Rs 21.24 Cr. The Commission has considered the capital component of A&G expenditure for capitalization of A&G expenses for FY 2012-13 in the same proportion of the A&G expenses as was in the provisional actuals of FY 2010-11. This translates into an amount of Rs 0.25 Cr for the year, resulting in the net A&G expenses approved for FY 2012-13 of Rs 21.00 Cr.

Table 59: A&G expenses approved by the Commission for FY 2012-13 (Rs Cr)

Sr. No.	Particulars	FY 2011-12	FY 2012-13	FY 2012-13
		Approved by the Commission	Petitioner's Submission	Approved by the Commission
1	**TOTAL Expenses**	**19.53**	**27.23**	**21.24**
2	Less: Capitalised	0.23	0.32	0.25
3	**A&G Expenses**	**19.31**	**26.91**	**21.00**

Repair & Maintenance Expenses

Petitioner's submission

The Petitioner has submitted that it is undertaking various Repairs and Maintenance activities as a step towards improvement of systems, reduction in breakdowns, reduction in response time and increasing preventive maintenance. The Petitioner has claimed R&M expenses of Rs 22.84 Cr as detailed below-

Table 60: R&M expenses submitted by the Petitioner for FY 2012-13

Sr. No	Particulars (in Rs Cr)	FY 2012-13 Petitioner's Submission
1	Plant & machinery	
	-Plant & Apparatus	0.11
	-EHV substations	
	- 33kV substation	
	- 11kV substation	
	- Switchgear and cable connections	
	- Others	
	Total	**0.11**
2	Buildings (Electricity Residential & Non-Residential)	2.75
3	Hydraulic works & civil works	
4	Line cable & network *	
	-EHV Lines	13.20
	- 33kV lines	
	- 11kV lines	
	- LT lines	
	- Meters and metering equipment	0.12
	- Others	
	Total	**16.07**
5	Vehicles	-
6	Furniture & fixtures	-
7	Office equipments	-
8	Minor R&M Works	6.66
9	**Total**	**6.66**
10	Add/Deduct share of others (To be specified)	
11	**Total expenses**	**22.84**
12	Less : Capitalized	
13	**Net expenses**	**22.84**
14	Add: prior period	
15	**Total R&M expenses**	**22.84**

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 the approved values of the repair & maintenance expenses of Rs 17.03 Cr for FY 2011-12 as a base for estimating the repair & maintenance expenses for FY 2012-13 after applying escalation equivalent to the increase in the WPI for FY 2011-12 over FY 2010-11 which works out to be 8.76%. 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 from FY 2010-11 to FY 2011-12 and the same has been applied for FY 2012-13.

The Commission, therefore, approves the R&M expenses at Rs 18.52 Cr for FY 2012-13.

Table 61: R&M expenses approved by the Commission for FY 2012-13

Sr. No.	Particulars	FY 2011-12 Approved by the Commission	FY 2012-13 Petitioner's Submission	FY 2012-13 Approved by the Commission
1	R&M	17.03	22.84	18.52

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

The O&M expenditure estimated by the Petitioner vis-à-vis approved by the Commission for FY 2012-13 is given below:

Table 62: O&M expenses approved by the Commission for FY 2012-13

Sr.No.	Particulars (Rs Cr)	Petitioner Submission (FY 2012-13)	Approved by the Commission (FY 2012-13)
1	Employee Expenses excluding arrears.	155.05	136.21
2	A&G Expenses	26.91	21.00
3	R&M Expenses	22.84	18.52
4	**Total O&M Expenses**	**204.80**	**175.74**

6.9 Capital Expenditure and Capitalisation

Petitioner's submission

The Petitioner has submitted that the prevailing infrastructure of ED-Goa is insufficient to cater to the present load and hence to meet the increasing demand from HT and LT load, it is absolutely necessary to undertake significant capital expenditure.

The objective of incurring the capital expenditure is also to upgrade and strengthen the distribution network to meet the desirable standards of performance and provide better network reliability and sustainable performance to the consumers of Goa.

The Petitioner proposes to incur an amount of Rs 336.85 Cr towards capital expenditure, out of which the works proposed to be incurred from the Electricity Duty Reserve/ Fund Accounts are estimated to Rs 60.00 Cr. The total capitalization of the assets from the above capital expenditure is projected at Rs 178.53 Cr for FY 2012-13.

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.

The treatment of the capital expenditure and capitalisation is the same as discussed in the chapter on ARR for FY 2011-12. Since the Petitioner has not submitted the detailed capital investment plan for FY 2012-13, the same is not being considered by the Commission. This is in line with the Regulation 21 of the JERC Tariff Regulations. The Commission, provisionally, approves the capitalisation of Rs 178.53 Cr for FY 2012-13. Further, the Commission directs the Petitioner to submit the detailed statement of the capital expenditure incurred quarterly and asset capitalization during the year for review and true up.

This expenditure of Rs. 178.53 cr is permitted as a special case to ensure the creation of infrastructure for adherence to Standard of Performance and Supply Code Regulations.

6.10 GFA and Depreciation

Petitioner's submission

The Petitioner has submitted that the statutory audit of accounts till FY 2006-07 has been completed and the audit of accounts thereafter till FY 2009-10 was expected to be completed by March 2012. The retirement / sale of assets are in process by Statutory Auditors from time to time during audit process based on actual transactions.

The Petitioner has submitted the net additions to the GFA for FY 2012-13 at Rs 178.53 Cr on the opening GFA of Rs 877.10 Cr, resulting in the closing GFA of Rs 1055.63 Cr for FY 2012-13.

In line with the Regulation 22(2) of the JERC Tariff Regulations, which stipulates that *investments made prior to and up to 31st 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* – the Petitioner in the absence of audited accounts from FY 2007-08 onwards has not claimed depreciation on the opening balance of gross fixed assets and has claimed it on the assets proposed to be capitalized and as approved by the Commission for FY 2012-13.

Further, the Petitioner has claimed depreciation on assets added during the year for 6 months only, as addition date/month would be in first half or second half. The deprecation for the ensuing year has been computed on the basis of the weighted average rate of previous year. The Petitioner is claiming an amount of Rs 4.71 Cr considering the weighted average depreciation rate of 5.28% of the previous year – FY 2011-12.

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 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 31st 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. 178.53 Cr for FY 2012-13. The Commission, considering the reasonableness of the expenditure approves the capitalization of Rs. 178.53 Cr for FY 2012-13. This amount is the net addition to the assets on the approved closing balance of FY 2011-12 of Rs 126 Cr, resulting in the closing GFA approved for FY 2012-13 of Rs 304.53 Cr.

Table 63: Gross Fixed Assets approved by the Commission for FY 2012-13

Sr. No.	Particulars	FY 2011-12 Approved by the Commission	FY 2012-13 Petitioner's Submission	FY 2012-13 Approved by the Commission
1	**Opening Value of Assets at the beginning of the year**	-	877.10	126.00
2	Additions during the year	126.00	178.53	178.53
3	Value of assets sold/disposed off	-		-
4	**Gross Fixed Assets at the end of year**	**126.00**	**1,055.63**	**304.53**

<u>Depreciation</u>

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 2012-13 on the closing GFA approved for FY 2011-12, taken as the opening GFA for FY 2012-13.

However, in order to provide a true and fair position of the fixed assets the Commission directs the petitioner conduct the physical inventory of assets and construct asset /depreciation registers and file the same along with next tariff petition.

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 11.37 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 2012-13.

Table 64: Depreciation approved by the Commission for FY 2012-13

Sr. No.	Particulars	FY 2011-12	FY 2012-13	FY 2012-13
		Approved by the Commission	Petitioner's Submission	Approved by the Commission
1	**Opening Value of Assets at the beginning of the year**	-	877.10	126.00
2	Additions during the year	126.00	178.53	178.53
3	Value of assets sold/disposed off	-		-
4	**Gross Fixed Assets at the end of year**	**126.00**	**1,055.63**	**304.53**
5	**Rate of depreciation**	**5.28%**	**5.28%**	**5.28%**
6	**Depreciation**	**3.33**	**4.71**	**11.37**

6.11 Interest and Finance Charges

Petitioner's submission

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.

The Petitioner has proposed the computation of debt ratio and computation of interest on loan (including normative loan) as per the JERC Tariff Regulations and allow the same during Annual Performance Review (APR)/ true-up as the case may be. However, the Petitioner has considered only the actual loan transactions and interest on PFC loan for consideration in the ARR of FY 2012-13.

The Petitioner has requested the Hon'ble Commission to approve the interest on the PFC loan amounting to Rs 8.17 Cr for FY 2012-13. The PFC loans have been taken for implementing the RAPDRP scheme. Further, the Letter of Credit charges for claiming rebates on power purchase of Rs 0.80 Cr have been claimed. The total interest and finance charges are claimed at Rs 8.97 Cr for FY 2012-13.

Commission's analysis

The Commission in line with Regulation 25 of the JERC Tariff Regulations allows the normative interest charges of Rs 21.58 Cr on the average normative loan of Rs 146.27 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 X 178.53= Rs 124.97 Cr. Commission has considered the SBI PLR rate, which is now substituted as SBI advance rate, at 14.75%as on 1st April 2012 for FY 2012-13. The Commission approves the normative interest charges for the year at Rs. 21.58 Cr. The table below shows the computation of the normative interest for FY 2012-13 approved by the Commission:

Table 65: Interest on normative loan approved by the Commission for FY 2012-13

Sr. No.	Particulars (in Rs Cr)	FY 2011-12	FY 2012-13	FY 2012-13
		Approved by the Commission	Petitioner's Submission	Approved by the Commission
1	Opening Normative Loan	0.00	Only proposed, not claimed	88.20
2	Add: Normative Loan during the year	88.20		124.97
3	Less: Normative Repayment	0.00		8.82
4	Closing Normative Loan	88.20		204.35
5	Average Normative Loan	**44.10**		**146.27**
6	Rate of Interest (@SBI PLR rate)	**13.00%**		**14.75%**
7	**Interest on Normative Loan**	**5.73**	-	**21.58**

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.

Table 66: Other interest and finance charges approved by the Commission for FY 2012-13

Sr. No.	Particulars (in Rs Cr)	FY 2011-12	FY 2012-13	FY 2012-13
		Approved by the Commission	Petitioner's Submission	Approved by the Commission
1	Interest on PFC loan	-	8.17	-
2	Less capitalisation	-	-	
3	Net interest	-	8.17	-
4	LC charges	0.69	0.80	0.80
5	Finance Charges	**-**	-	**-**
6	**Other Interest and Finance Charges**	**0.69**	**8.97**	**0.80**

The Commission has also allowed the LC charges of Rs 0.80 Cr as claimed by the Petitioner resulting in total interest and finance charges approved of Rs 22.38 Cr for FY 2012-13.

6.12 Interest on Working Capital

Petitioner's submission

The Petitioner has submitted that the JERC Tariff Regulations provide for claiming normative interest on working capital, however in the absence of any actual borrowings in the past for such requirement, the Petitioner for the present filing has decided not to claim any interest on working capital for FY 2012-13.

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 2012-13.

The Commission has considered the SBI PLR rate, which is now substituted as SBI advance rate, at 14.75% as on 1st April 2012 for FY 2012-13 as per the regulations for calculation of the interest on working capital.

The table below captures the submission of the Petitioner and that approved by the Commission.

Table 67: Interest on working capital approved by the Commission for FY 2012-13

Sr. No.	Particulars (In Rs Cr)	FY 2011-12 Approved by the Commission	FY 2012-13 Petitioner's Submission	FY 2012-13 Approved by the Commission
1	Power Purchase Cost for one month	78.51	79.95	67.64
2	Employee Cost for one month	10.49	12.92	11.35
3	A&G Expenses for one month	1.61	2.24	1.75
4	R&M Expenses for one	1.42	1.90	1.54

Sr. No.	Particulars (In Rs Cr)	FY 2011-12 Approved by the Commission	FY 2012-13 Petitioner's Submission	FY 2012-13 Approved by the Commission
	month			
5	**Total Working Capital for one month**	**92.02**	**97.02**	**82.28**
6	Closing Security Deposit (amount already with ED Goa)	**62.57**		**70.24**
7	Total Working Capital considered for one month	**29.45**	**97.02**	**12.04**
8	**SBI PLR Rate**	**13.00%**	**13.75%**	**14.75%**
	Interest on Working Capital	**3.83**	**Not Claimed**	**1.78**

6.13 Interest on Security Deposit

Petitioner's submission

The Petitioner has submitted that it does collect security/ miscellaneous deposits from consumers in accordance with the regulation 25 (4) of JERC Tariff Regulations. The Petitioner has claimed an interest on security deposit of Rs 3.98 Cr for FY 2012-13 at the bank rate of 6% on the average security deposit amount of Rs 66.41 Cr for the year.

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 provisions for payment of interest on security deposit of the consumers in the revised 'Conditions of Supply', which have been sent to JERC for intimation, 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. The same as also discussed in the Chapter on ARR for FY 2011-12 must be paid effective 1st April 2011 for FY 2011-12.

The Commission directs that the Petitioner must pay interest on consumer security deposit for FY 2012-13 (at the Bank Rate i.e. 9.50[10]% per annum applicable as on 1st April 2012) with effect from 1st April 2012 to the consumers on their security deposit irrespective of petitioner's 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 9.50%[11] per annum for the FY 2012-13. **The Commission in this regard shall view any non-compliance seriously.**

Table 68: Interest on security deposit approved by the Commission for FY 2012-13

Sr. No.	Particulars (In Rs Cr)	FY 2011-12 Approved by the Commission	FY 2012-13 Petitioner's Submission	FY 2012-13 Approved by the Commission
1	Opening Security Deposit	54.90	62.57	62.57
2	Add: Deposits during the Year	9.19	9.19	9.19
3	Less: Deposits refunded	1.52	1.52	1.52
4	**Closing Security Deposit**	**62.57**	**70.24**	**70.24**
5	**Bank Rate**	6.00%	6.00%	**9.50%**
6	**Interest on Security Deposit**	**NIL**	**3.98**	**5.94**

6.14 Return on Capital base/ Net Fixed Assets

Petitioner's submission

The Petitioner has submitted that in accordance with the proviso of Regulation 23 (2) and Regulation 24 of JERC Tariff Regulations it is entitled for Returns on Capital Base/ Net Fixed Assets by utility / licensee. However, the Petitioner has submitted that is in the process of finalisation of past accounts and in line with the stand taken for depreciation, it is not claiming the return on net fixed assets for FY 2012-13.

[10] As per RBI circular no. RBI/2011-12/432, UBD.BPD. (PCB).Cir. No. 26 /16.11.00/2011-12 dated March 07'2012 on bank rate.

[11] As per RBI circular no. RBI/2011-12/432, UBD.BPD. (PCB).Cir. No. 26 /16.11.00/2011-12 dated March 07'2012 on bank rate.

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 2011-12 and FY 2012-13. The Commission has 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 69: Return on capital base approved by the Commission for FY 2012-13

Sr. No.	Particulars (In Rs Cr)	Petitioner's Submission	Approved by the Commission
1	Gross block at beginning of the year	877.10	126.00
2	Less accumulated depreciation	181.86	3.33
3	**Net fixed assets at beginning of the year**	**695.24**	**122.67**
4	**Reasonable return @3% of NFA**	**Not claimed**	**3.68**

6.15 Provision of Bad & Doubtful debts

Petitioner's submission

The Petitioner has not claimed any provision for bad and doubtful debts in the ARR of FY 2012-13 for pass through in the tariff.

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 70: Provision for bad debts approved by the Commission for FY 2012-13 (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 2012-13 and would consider it up in true up as per the provisions of the regulations.

6.16 Other expenses

Petitioner's submission

The Petitioner has not projected any amount under other expenses for FY 2012-13.

Commission's analysis

The Commission does not consider it prudent to allow any expenses under this head for FY 2012-13 and accordingly approves the amount as NIL.

6.17 Non Tariff Income

Petitioner's submission

The Petitioner has estimated the Non-Tariff Income for FY 2012-13 as Rs 22.53 Cr 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 and FY 2010-11 of Rs 12.76 Cr and Rs 9.61 Cr respectively. The approved figures for FY 2011-12 is Rs 21.06 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.

Table 71: Non-tariff income approved by the Commission for FY 2012-13 (Rs Cr)

Particulars	FY 2011-12 Approved	FY 2012-13 Petitioner's Submission	FY 2012-13 Approved
Non-Tariff Income	21.06	22.53	22.53

6.18 Revenue from Sale of Surplus Power

Petitioner's submission

Based on the revised submissions made by the Petitioner vide affidavit dated 5th June 2012, the revenue from sale of surplus power through UI pool and exchanges is estimated to be Rs 13.70 Cr and Rs 92.16 Cr respectively. The total revenue from these two sources is estimated at Rs 105.85 Cr for FY 2012-13 and the same has been deducted from the revenue requirement of the utility.

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 2012-13.

6.19 Aggregate Revenue Requirement (ARR) for FY 2012-13

Petitioner's submission

The net annual revenue requirement of ED-Goa for FY 2012-13 as projected by the Petitioner for FY 2012-13 is as provided in the table below:

Table 72: Aggregate Revenue Requirement submitted by the Petitioner for FY 2012-13 (Rs Cr)

S.No.	Item of expense	FY 2012-13 (Projected) as per petition dated 31st December 2011	FY 2012-13 (Projected) Revised as per dated 5th June 2012
1	Cost of fuel		-
2	Cost of power purchase	1,006.61	959.41
3	Employee costs	175.05	155.05
4	R&M expenses	22.84	22.84
5	Administration and general expenses	26.91	26.91
6	Depreciation	4.71	4.71
7	Interest charges (incl interest on working capital & Interest on Security Deposit)	12.95	12.95
8	Return on NFA /Equity	-	-
9	Provision for Bad Debt	-	-
10	Other Expenses	-	-
11	**Total Revenue Requirement**	**1,249.08**	**1,181.88**
12	Less: Non Tariff Income	22.53	22.53
13	Less: Revenue from Sale of Power - UI Pool	13.70	13.70
14	Less: Revenue from Sale of Power-Exchanges	103.35	92.16
15	**Net Revenue Requirement (11-12-13-14-15)**	**1,109.50**	**1,053.49**
16	Revenue from Retail Sales at Existing Tariff	884.70	884.70
17	**Net Gap (15-16)**	**224.80**	**168.79**
18	**Energy sales (MU)**	**2,940**	**2,940**

Commission's analysis

The Commission has 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. The Commission approves the ARR at Rs 1009.98 Cr for FY 2012-13. The same is tabulated below and the comparison with the latest submission dated 5th June 2012 is as shown below-

Table 73: Aggregate Revenue Requirement approved by the Commission for FY 2012-13 (Rs Cr)

Sr. No.	Particulars (In Rs Cr)	FY 2012-13 Petitioner's Submission	FY 2012-13 Approved by the Commission
1	Cost of power purchase	959.41	811.64
2	Employee costs	155.05	136.21
3	R&M expenses	22.84	18.52
4	Administration and general expenses	26.91	21.00
5	Depreciation	4.71	11.37
6	Interest and Finance Charges	8.97	22.38
7	Interest on Working Capital	Not Claimed	1.78
8	Interest on Security Deposit	3.98	5.94
9	Return on NFA	Not claimed	3.68
10	Provision for Bad Debts	Not claimed	NIL
11	Other Expenses	-	-
12	**Total Revenue Requirement**	**1,181.88**	**1,032.51**
13	Less: Non Tariff Income	22.53	22.53
14	Less: Revenue from Sale of Power - UI Pool	13.70	-
15	Less: Revenue from Sale of Power-Exchanges	92.16	-
16	Less: Revenue from Sale / Banking of Power	-	-
17	**Aggregate Revenue Requirement**	**1,053.49**	**1,009.98**

6.20 Revenue at existing tariff for FY 2012-13

Petitioner’s submission

The Petitioner has submitted the estimates of the revenue from existing tariff for FY 2012-13 of Rs 884.70 Cr.

Commission’s analysis

Based on the estimates of sales, consumers and connected load approved by the Commission for FY 2012-13, the Commission has arrived at the revenue from existing tariff of Rs. 880.74 Cr. The slab wise consumers, sales and the connected load have been pro-rated as per the provisional actual available data of FY 2011-12 submitted to the Commission vide affidavit dated 5th June 2012.

Table 74: Revenue at existing tariff for FY 2012-13 (Rs Cr)

S. No.	Category/Consumption Slab	Sales	Revenue FY 13 Existing tariff		TOTAL Revenue
			Fixed Charges	Variable Charges	
		FY 13	Rs Cr	Rs Cr	Rs Cr
A	**Low Tension Supply**				
1(a)	Tariff LTD/Domestic and Non-Commercial	744	-	114.05	114.05
1(b)	Tariff LTD/Low Income Group	2	0.34	-	0.34
1(c)	Tariff LTD/Domestic Mixed	2	-	0.39	0.39
2	Tariff-LTC/Commercial	351	-	110.89	110.89
3 (a)	Tariff-LTP/Motive Power	96	-	27.99	27.99
3 (b)	Tariff-LTP/ Ice Manufacturing	7	-	2.07	2.07
3 c)	Tariff-LTP/Mixed (Hotel Industries)	6	-	2.18	2.18
4	Tariff-LTAG/Agriculture	10	-	1.00	1.00
5	Tariff-LTPL/Public Lighting	31	-	6.24	6.24
6	Tariff-LT PWW/Public Water Works	2	-	0.62	0.62
B	**High Tension Supply**				
7	Tariff HT-Mixed	160	14.36	51.96	66.32
8 (a)	Tariff HTI/Industrial	596	43.22	178.80	222.03
8 c)	Tariff HTI/ Ice Manufacturing	0	-	-	-
9	H.T.Industrial (Ferro Mettallurgical/ Steel Melting/ Power Intensive)	496	103.78	74.43	178.22
10	Tariff-HTAG/Agriculture	4	-	0.50	0.50
11	EHTI/Industrial	175	10.80	52.38	63.18
12	H.T. PW/Public Water Supply and Sewage	120	4.87	36.06	40.93
13	H.T. MES/Defence Establishments	44	-	13.22	13.22
14	H.T. Industrial (Steel Rolling)	49	11.01	6.53	17.54
15	Tariff HT-Industries (IT High Tech).	5	0.57	1.16	1.74
C	**Temporary Supply**				
16	Tariff-LT/Temporary	16	-	11.29	11.29
	TOTAL	**2916**	**188.97**	**691.77**	**880.74**

6.21 Revenue Gap at existing tariff for FY 2012-13

Petitioner's submission

The Petitioner has submitted the revenue gap for FY 2012-13 at Rs 168.79 Cr based on the aggregate revenue requirement of Rs 1053.49 Cr and revenue from existing tariff of Rs 884.70 Cr as per the latest submission dated 5th June 2012.

Commission's analysis

The revenue gap worked out for FY 2012-13 is Rs 129.24 Cr based on the aggregate revenue requirement of Rs 1009.98 Cr and the revenue from existing tariff of Rs. 880.74 Cr. The table below shows the approved revenue gap for FY 2012-13 at the existing tariff:

Table 75: Revenue Gap at existing tariff approved by the Commission for FY 2012-13 (Rs Cr)

Particulars	FY 2012-13 Petitioner's Submission	FY 2012-13 Approved
Aggregate Revenue Requirement	1053.49	1009.98
Revenue from existing tariff	884.70	880.74
Revenue Gap at existing tariff	**168.79**	**129.24**

6.22 Average Cost of Supply for FY 2012-13

The average cost of supply for FY 2012-13 based on the approved ARR and total sale is as shown below.

Table 76: Average cost of supply approved by the Commission for FY 2012-13 (Rs/kWh)

Particulars	FY 2011-12 Approved	FY 2012-13 Petitioner's Submission	FY 2012-13 Approved
Average Cost of Supply (Rs/kWh)	3.99	3.58	3.46

7. Directives

The Commission issues 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. Therefore, to ensure proper accounting, audit and efficient performance to optimize resource use, the Commission issues the following directives:

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.

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.

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 31st October 2012. The

Commission on receipt and acceptance of the loss reduction road map shall approve loss reduction trajectory for subsequent years.

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 31st October 2012.

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 30th September 2012.

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[12] 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.

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 1st April 2012.

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.

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.

[12] 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.

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.

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.

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.

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.

8. Tariff Philosophy and category-wise tariffs for FY 2012-13

8.1 Preamble

The Commission in determining the revenue requirement and retail supply tariff for the financial year 2012-13 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 bought 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 2011-12, the petitioner projected a revenue gap for FY 2011-12 of Rs. 291.23 Cr at existing tariffs. The Petitioner in its submission of the 'Tariff Proposal for FY 2012-13' via affidavit dated April 05' 2012 has submitted that the entire revenue gap for FY 2011-12 as per the revised estimates is to be met through budgetary support and there is no revenue gap of FY 2011-12 to be carried forward in FY 2012-13. The Petitioner has submitted the letter from the Government of Goa for budgetary support for FY 2011-12 dated April 05' 2012, the relevant excerpts of the said letter is reproduced below. The letter is addressed to Electricity Department of Goa, and signed by the Under Secretary Finance, Budget Department, 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 during the Financial Year 2011-12, and had provided the requisite budgetary support to meet the deficit, and hence has decided not to carry forward the deficit as may be approved by the Hon'ble Commission during the process of finalizing the ARR for FY 2011-12 to the next financial year 2012-13.''
The letter is annexed as Annexure 1 in the submission dated April 05' 2012.

The petitioner in its ARR and Tariff petition for FY 2012-13, has proposed a tariff revision plan, through which it is proposed to recover a part of the projected revenue gap of Rs. 168.79 Cr (at existing tariff) for FY 2012-13. The petitioner submitted that in the interest of consumers and after considering, the letter dated 05-04-2012 addressed to the Electricity Department of Goa, by the Under Secretary Finance, Budget Department, Government of Goa, out of the projected revenue gap of Rs. 168.79 Cr for FY 2012-13; it has proposed to recover the revenue gap of Rs. 100.72 Cr through the revised tariffs to be applicable for FY 2012-13, amounting to an average increase of 11.4% and rest is proposed to be met through the budgetary support to be provided by the State Government.

The Petitioner has submitted copy of the letter dated April 5' 2012 from the Government of Goa addressed to Electricity Department of Goa, which reads as under:

''I am directed to state that the Government of Goa has proposed to raise the tariff of certain categories of consumers in state during the financial year 2012-13, and has decided to provide adequate Budgetary Support to meet the deficit as may be approved by the Hon'ble Commission during the process of finalizing the ARR and Tariff Petition for the Financial Year 2012-13''

As elaborated in Section 5.20 and Section 6.19 of this Order, the Commission has projected aggregate revenue requirement of Rs. 1096.80 Cr in FY 2011-12 and aggregate revenue requirement of Rs. 1009.98 Cr in FY 2012-13 respectively. 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 2011-12 as determined in this Order having met through the budgetary support from the Government of Goa, thus leaving no gap to be carried forward.

The Commission has computed the revenue from existing tariffs by considering the revised projection of category wise sales as approved by the Commission in this Order, and the category wise tariffs as currently applicable in the State of Goa since 2002, which is the existing tariff.

In order to recover the revenue gap of Rs. 129.24 Cr (at existing tariff for FY 2012-13), the average tariff have to be increased by around 14.68%, which is not high considering that such an increase will be taking place after almost 10 years. The petitioner's proposal entails the average hike of 11.4%. Further as submitted by the petitioner, Government of

Goa has committed to meet the deficit approved by the Commission through the budgetary support. Under the Electricity Act 2003, the Commission is mandated to protect the interest of the consumers and to move the tariff progressively towards the average cost of supply. Commission has therefore taken a considerate view in this regard while finalizing the tariff structure for different categories of consumers.

8.3 Tariff Proposal

Petitioner's submission

The petitioner has proposed a Tariff increase in the range of 4.9% to 55.8% for different categories affecting an aggregated increase of 11.4%. The category wise existing and proposed tariff submitted by the Petitioner are as under:

Table 77: Proposed Tariff for FY 2012-13 by the Petitioner (in Rs.)

S. No.	Category/Consumption Slab	Existing Tariff-FY 11-12		Proposed Tariff-FY 13	
		Fixed Charges[13]	Variable Charges[14]	Fixed Charges[15]	Variable Charges[16]
A	**Low Tension Supply**				
1(a)	Tariff LTD/Domestic and Non-Commercial				
	First 60 Units	-	1.00	-	1.00/1.50*
	61 to 250 Units	-	1.50	-	1.50
	251 to 500 Units	-	2.20	-	2.80
	Above 500 Units	-	2.50	-	3.00
1(b)	Tariff LTD/Low Income Group	20.00	-	20.00	-
1(c)	Tariff LTD/Domestic Mixed				
	First 400 Units	-	2.30	-	2.70
	Above 400 Units	-	3.00	-	3.70
2	Tariff-LTC/Commercial				
	First 100 Units	-	2.75	-	2.75
	From 101 to 1000 Units	-	3.50	-	3.80
	All Consumption above 1000 Units	-	3.80	-	4.10
3 (a)	Tariff-LTP/Motive Power	-	-		
	Connected Load upto 50 HP	-	2.55	-	2.55
	Connected Load above 50 HP	-	2.95	-	3.50

[13] Rs. per connection/KVA charged on monthly basis
[14] Rs. per KWh
[15] Rs. per connection/KVA charged on monthly basis
[16] Rs. per KWh

S. No.	Category/Consumption Slab	Existing Tariff-FY 11-12		Proposed Tariff-FY 13	
		Fixed Charges[13]	Variable Charges[14]	Fixed Charges[15]	Variable Charges[16]
3 (b)	Tariff-LTP/ Ice Manufacturing				
	Connected Load upto 100 HP	-	2.95	-	3.25
3 c)	Tariff-LTP/Mixed (Hotel Industries)	-	3.50	-	4.50
4	Tariff-LTAG/Agriculture	-	1.00	-	1.00
5	Tariff-LTPL/Public Lighting	-	2.00	-	2.00
6	Tariff-LT PWW/Public Water Works	-	3.00	-	3.00
B	**High Tension Supply**				
7	Tariff HT-Mixed	150.00	3.25	150.00	3.75
8 (a)	Tariff HTI/Industrial	150.00	3.00	150.00	3.30
8 (b)	Tariff HTI/ Hotel Industries	-	-	150.00	3.30
8 c)	Tariff HTI/ Ice Manufacturing	-	2.80	-	3.30
9	H.T. Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)				
	First 300 Units/kVA	700.00	1.00	700.00	2.00
	Next 200 Units/kVA	700.00	2.00	700.00	2.50
	Above 500 Units/kVA	700.00	2.50	700.00	3.00
10	Tariff-HTAG/Agriculture	-	1.25	-	1.25
11	EHTI/Industrial	150.00	3.00	150.00	3.30
12	H.T. PW/Public Water Supply and Sewage	150.00	3.00	150.00	3.00
13	H.T. MES/Defence Establishments	-	3.00	-	3.50
14	H.T. Industrial (Steel Rolling)				
	First 200 Units/kVA	450.00	1.00	450.00	2.00
	Next 100 Units/kVA	450.00	2.00	450.00	2.50
	Above 300 Units/kVA	450.00	3.00	450.00	3.30
15	Tariff HT-Industries (IT High Tech).	150.00	2.25	150.00	2.25
C	**Temporary Supply**				
17	Tariff-LT/Temporary	-	7.00	-	7.00
18	Tariff-HT/Temporary	-	-		

*** only for 3 phase consumers with connected load greater than 3 kW**

Commission's analysis

The Commission has determined the retail tariff for FY 2012-13 in view of the guiding principles as stated in the Electricity Act, 2003 and Tariff Policy, the suggestions/objections of the stakeholders in this regard and the petitioner's submission as discussed in section 8.2 of this Order.

Further keeping in view of the relevant directions given by the Hon'ble APTEL in the judgement in O.P. no. 1 of 2011 as mentioned below. Commission has taken a considerate view in this regard.

Directions given by the Hon'ble APTEL in the Judgement in O.P. no. 1 of 2011:

1) *Every State Commission has to ensure that Annual Performance Review, true-up of past expenses and Annual Revenue Requirement and tariff determination is conducted year to year basis as per the time schedule specified in the Regulations.*

2) *It should be the endeavour of every State Commission to ensure that the tariff for the financial year is decided before 1st April of the tariff year. For example, the ARR & tariff for the financial year 2011-12 should be decided before 1st April, 2011. The State Commission could consider making the tariff applicable only till the end of the financial year so that the licensees remain vigilant to follow the time schedule for filing of the application for determination of ARR/tariff.*

3) *In the event of delay in filing of the ARR, truing-up and Annual Performance Review, one month beyond the scheduled date of submission of the petition, the State Commission must initiate suo-moto proceedings for tariff determination in accordance with Section 64 of the Act read with clause 8.1 (7) of the Tariff Policy.*

4) *In determination of ARR/tariff, the revenue gaps ought not to be left and Regulatory Asset should not be created as a matter of course except where it is justifiable, in accordance with the Tariff Policy and the Regulations. The recovery of the Regulatory Asset should be time bound and within a period not exceeding three years at the most and preferably within Control Period. Carrying cost of the Regulatory Asset should be allowed to the utilities in the ARR of the year in which the Regulatory Assets are created to avoid problem of cash flow to the distribution licensee.*

5) *Truing up should be carried out regularly and preferably every year. For example, truing up for the financial year 2009-10 should be carried out along with the ARR and tariff determination for the financial year 2011-12.*

6) *Fuel and Power Purchase cost is a major expense of the distribution Company which is uncontrollable. Every State Commission must have in place a mechanism for Fuel and Power Purchase cost in terms of Section 62 (4) of the Act. The Fuel and Power Purchase cost adjustment should preferably be on monthly basis on the lines of the Central Commission's Regulations for the generating companies but in no case exceeding a quarter. Any State Commission which does not already have such formula/mechanism in place must within 6 months of the date of this order must put in place such formula/ mechanism.*

The Commission has determined the retail tariff keeping in mind the guiding principles as stated in Section 61 of the Act and after considering the facts mentioned in section 8.2 of this Order. As submitted by the petitioner, *Government of Goa has decided to provide an adequate budgetary support to meet the deficit as may be approved by the Hon'ble Commission during the process of finalizing the ARR and Tariff Petition for the Financial Year 2012-13.* In the instant case, considering the last tariff hike happened in 2002, the tariff hike is inevitable considering the requirement of funds to maintain reliable distribution network to provide a seamless supply of electricity and to cover the revenue gap. Historically, there has been a gap between the actual cost of supply and revenue realized. This gap so far has been borne by the Government of Goa. Therefore keeping this fact in view the assessed gap of Rs. 283.15 Cr for FY 2011-12 and approved deficit for FY 2012-13 will be borne by the Government of Goa. The Commission has therefore considered an average hike of 11.85 % as reasonable and appropriate in the interest of the consumers and the Electricity Department of Goa. It is mentioned that the revised tariff shall be applicable w.e.f. 1st June 2012 which means that for two months, the consumers will be charged at the old tariff and for 10 months at the new tariff. Had the new tariff was made effective from 1st April 2012 then an average tariff hike of 9.88% would have been sufficient.

Further Commission also approves the proposal for introduction of new sub-category of HTI/Hotel Industries (category 8(b)) under HT supply as submitted by the petitioner in order to charge the higher tariff from consumers having higher consumption and having an element of commerciality.

The Commission in the approved tariff for FY 2012-13 has introduced fixed charges for the LT consumers. The Commission is of the view that a two-part tariff is as per the guiding principles of the tariff policy and the Electricity Act, 2003. With the introduction of fixed charges, the Commission has eliminated the minimum charges to be charged from the consumers. Minimum charges, however, have been retained for Temporary Supply category.

The earlier provision of allowing temporary closure for a continuous period of 7 days or more restricted to a maximum 60 days and not recovering demand charges during such shutdown period is not in conformity with the JERC Supply Code Regulations.

The Commission has rationalized the demand charges in respect of the categories (HT Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive) and HT Industrial (Steel Rolling)). In view of this, the earlier provision mentioned above has been withdrawn from the date of implementation of the new tariff order.

The Commission's approved tariff for FY 2012-13 is as given below:

Table 78: Commission's Approved Tariff for FY 2012-13

S. No.	Category/Consumption Slab	Approved Tariff-FY 13 *		K Factor in FPPCA formula
		Fixed Charges[17]	Variable Charges[18]	
A	**Low Tension Supply**			
1(a)	**Tariff LTD/Domestic and Non-Commercial**			
	First 60 Units	5.00	1.20	0.37
	61 to 250 Units	10.00	1.60	0.50
	251 to 500 Units	20.00	2.60	0.81
	Above 500 Units	30.00	3.00	0.95
1(b)	**Tariff LTD/Low Income Group**	25.00	-	0.51
1(c)	**Tariff LTD/Domestic Mixed**			
	First 400 Units	20.00	2.70	0.80
	Above 400 Units	30.00	3.70	1.10
2	**Tariff-LTC/Commercial**			
	First 100 Units	20.00	3.00	0.91
	From 101 to 1000 Units	30.00	3.80	1.16
	All Consumption above 1000 Units	50.00	4.10	1.26
3(a)	**Tariff-LTP/Motive Power**			
	Connected Load upto 50 HP	20.00	2.50	0.98
	Connected Load above 50 HP	20.00	3.00	1.13
3(b)	**Tariff-LTP/ Ice Manufacturing**			
	Connected Load upto 100 HP	20.00	3.00	1.13
3(c)	**Tariff-LTP/Mixed (Hotel Industries)**	25.00	4.00	1.18
4	**Tariff-LTAG/Agriculture**	5.00	1.20	0.49
5	**Tariff-LTPL/Public Lighting**	25.00	3.00	0.92
6	**Tariff-LT PWW/Public Water Works**	20.00	2.50	1.18
	High Tension Supply			
7	**Tariff HT-Mixed**	175.00	3.15	1.24
8 (a)	**Tariff HTI/Industrial**	175.00	3.30	1.23

[17] Rs. per connection or KW or HP or KVA on monthly basis as applicable and detailed in the attached tariff schedule
[18] Rs. per KWh

8 (b)	**Tariff HTI/ Hotel Industries**	175.00	3.30	1.23
8 (c)	**Tariff HTI/ Ice Manufacturing**	175.00	3.00	1.14
9	**H.T.Industrial (Ferro Mettallurgical/ Steel Melting/ Power Intensive)**			
	First 300 Units/kVA	450.00	2.50	1.14
	Next 200 Units/kVA	450.00	2.75	1.21
	Above 500 Units/kVA	450.00	3.00	1.29
10	**Tariff-HTAG/Agriculture**	25.00	1.25	0.56
11	**EHTI/Industrial**	175.00	3.30	1.19
12	**H.T. PW/Public Water Supply and Sewage**	175.00	3.00	1.03
13	**H.T. MES/Defence Establishments**	125.00	3.30	1.04
14	**H.T. Industrial (Steel Rolling)**			
	First 200 Units/kVA	400.00	1.80	1.13
	Next 100 Units/kVA	400.00	2.25	1.26
	Above 300 Units/kVA	400.00	3.00	1.48
15	**Tariff HT-Industries (IT High Tech).**	175.00	2.60	1.15
	Temporary Supply			
17	**Tariff-LT/Temporary**	-	7.50	-
18	**Tariff-HT/Temporary**	**-**	7.50	-

*Applicable from 1st June 2012

8.4 Average Cost of Supply

The Commission observes that the Average Cost of Supply (ACoS) has gone up from Rs 2.93/kWh in FY 2009-10 to Rs 3.46/kWh in FY 2012-13. The Petitioner has sought tariff increase of approximately 11.38% over the existing tariff in FY 2012-13 considering applicability of revised tariff for the entire year (12 months). The Commission is of the view that the approved increase in tariff of 11.85% which will be applicable for 10 months in FY 2012-13 is reasonable and justified.

The Commission observes that the tariff being charged to most of the categories of consumers is below average cost of supply. The Commission has attempted to reduce the cross-subsidy in the consumer categories in this order, by rationalising the tariff for subsidised categories and suitably adjusting the tariff for subsidising categories, vis-à-vis the prevailing average cost of supply, while at the same time, trying to ensure that there is no tariff shock to any consumer category. With the progressive increase in the tariff of the subsidized categories towards ACOS @ 10-15% per year; the tariff may over the years touch ACOS and the burden of the cross subsidy may progressively come down.

The average tariff as a percentage of average cost of supply approved in this tariff order for FY 2012-13 is as shown in the table below.

Table 79: Tariff as a percentage of ACOS for FY 2012-13

S. No.	Category/Consumption Sl ab	EXISTING TARIFF		REVISED TARIFF	
		Avg Revenue Realisation (Rs/kWh)	%age of ACOS	Avg Revenue Realisation (Rs/kWh)	%age of ACOS
1A	**Low Tension Supply**				
1(a)	Tariff LTD/Domestic and Non-Commercial	1.53	44%	1.80	52%
1(b)	Tariff LTD/Low Income Group	1.37	40%	1.71	49%
1(c)	Tariff LTD/Domestic Mixed	2.43	70%	2.89	83%
2	Tariff-LTC/Commercial	3.16	91%	3.52	102%
3 (a)	Tariff-LTP/Motive Power	2.93	85%	3.79	109%
3 (b)	Tariff-LTP/ Ice Manufacturing	2.95	85%	3.81	110%
3 c)	Tariff-LTP/Mixed (Hotel Industries)	3.50	101%	4.00	115%
4	Tariff-LTAG/Agriculture	1.00	29%	1.65	48%
5	Tariff-LTPL/Public Lighting	2.00	58%	3.10	89%
6	Tariff-LT PWW/Public Water Works	3.00	87%	3.99	115%
B	**High Tension Supply**				
7	Tariff HT-Mixed	4.15	120%	4.20	121%
8 (a)	Tariff HTI/Industrial	3.73	108%	4.15	120%
8(b)	Tariff HTI/Hotel Industries	Not existing		4.15	120%
8 c)	Tariff HTI/ Ice Manufacturing	3.73	108%	3.85	111%
9	H.T.Industrial (Ferro Mettallurgical/ Steel Melting/ Power Intensive)	3.59	104%	3.98	115%
10	Tariff-HTAG/Agriculture	1.25	36%	1.88	54%
11	EHTI/Industrial	3.62	104%	4.02	116%
12	H.T. PW/Public Water Supply and Sewage	3.41	98%	3.47	100%
13	H.T. MES/Defence Establishments	3.00	87%	3.53	102%
14	H.T. Industrial (Steel Rolling)	3.61	104%	3.99	115%
15	Tariff HT-Industries (IT High Tech).	3.36	97%	3.90	112%
C	**Temporary Supply**				
17	Tariff-LT/Temporary	7.00	202%	7.50	217%
18	Tariff – HT/Temporary	7.00	202%	7.50	217%

8.5 Applicability of Revised Tariffs

The revised tariffs will be applicable from June 1, 2012. In cases, where there is a billing cycle difference for a consumer with respect to the date of applicability of the revised tariffs, then the revised tariff should be made applicable on a pro-rata basis for the consumption. The bills for the respective periods as per existing tariff and revised tariffs shall be calculated based on the pro-rata consumption (units consumed during respective period arrived at on the basis of average unit consumption per day multiplied by number of days in the respective period falling under the billing cycle).

8.6 Estimated Revenue and Surplus/Deficit at revised Tariff for FY 2012-13

The estimated Revenue at revised tariff for FY 2012-13 works out to be as under.

Table 80: Total Revenue estimated by the Commission at revised tariff for FY 12-13 (Rs Cr)

S. No.	Category/Consumption Slab	Consumers	Sales	Connected load (kW/kVA)*	Total Revenue**
A	**Low Tension Supply**				
1(a)	Tariff LTD/Domestic and Non-Commercial	455345	744	709467	130.31
1(b)	Tariff LTD/Low Income Group	14200	2	1136	0.41
1(c)	Tariff LTD/Domestic Mixed	52	2	111	0.45
2	Tariff-LTC/Commercial	99699	351	269854	121.61
3 (a)	Tariff-LTP/Motive Power	9532	96	325346	34.86
3 (b)	Tariff-LTP/ Ice Manufacturing	696	7	23748	2.57
3 c)	Tariff-LTP/Mixed (Hotel Industries)	85	6	0	2.44
4	Tariff-LTAG/Agriculture	11707	10	75714	1.55
5	Tariff-LTPL/Public Lighting	9180	31	12670	9.09
6	Tariff-LT PWW/Public Water Works	562	2	12743	0.79
B	**High Tension Supply**				
7	Tariff HT-Mixed	215	160	79775	66.98
8 (a)	Tariff HTI/Industrial	416	596	240136	242.93
8(b)	Tariff HTI/Hotel Industries				
8 c)	Tariff HTI/ Ice Manufacturing				
9	H.T.Industrial (Ferro Mettallurgical/ Steel Melting/ Power Intensive)	27	496	123552	194.22
10	Tariff-HTAG/Agriculture	43	4	8450	0.71
11	EHTI/Industrial	4	175	60000	69.05
12	H.T. PW/Public Water Supply and Sewage	32	120	27080	41.61
13	H.T. MES/Defence Establishments	13	44	6675	15.16
14	H.T. Industrial (Steel Rolling)	11	49	20394	19.06
15	Tariff HT-Industries (IT High Tech).	9	5	3188	1.97
C	**Temporary Supply**				-
17	Tariff-LT/Temporary	434	16	2693	11.97
18	Tariff-HT/Temporary	-	-	-	-
	TOTAL	**602262**	**2916**		**967.72**

#All figures mentioned are rounded off to next decimal places.

* Connected load for HT categories is in kVA

**** Note: For working out expected revenue for FY 2012-13, tariff at existing old rate for 2 months and tariff at revised rate for 10 months (applicable from 1st June'12) has been considered.**

The estimated gap/surplus after incorporating impact of revised tariff for FY 2012-13 from 1st June 2012 is as under:

Table 81: Estimation of Revenue Gap/Surplus at revised tariff for FY 12-13 (Rs Cr)

Sr. No.	Particulars	Approved by the Commission (FY 2012-13) (Rs Cr)
1	**Net Revenue Requirement**	**1009.98**
2	Gap for the previous year	0
3	**Total Revenue Requirement (1+2)**	**1009.98**
4	**Revenue from existing tariff**	880.74
5	Total Gap (3 -4)	129.24
6	**Revenue at revised tariff (applicable from 1st June 2012) for FY 2012-13**	**967.72**
7	**Net Gap/(Surplus) (3-6)**	**42.26**

As discussed in earlier para, **this gap shall be borne by the Government of Goa, therefore** the assessed gap of Rs 42.26 Cr shall be funded by the Govt. of Goa to the Electricity Department of Goa through budgetary support. As such the assessed revenue gap will be met through the revised tariffs and rest if any would be covered through the budgetary support by the Government of Goa. Revenue gap of Rs. 42.26 Cr for FY 2012-13 will not be carried forward to the next financial year 2013-14.

9. Conclusion of Commission's Order

Having considered the Petitions of Electricity Department – Goa for approval of Aggregate Revenue Requirement (ARR) and determination of retail tariffs for supply of energy for FY 2011-12 and FY 2012-13, the Commission approves the Aggregate Revenue Requirement (ARR) and the revised tariff schedule for ED- Goa.

1. The break-up of the Aggregate Revenue Requirement approved 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	811.64
2	Employee costs	136.21
3	R&M expenses	18.52
4	Administration and general expenses	21.00
5	Depreciation	11.37
6	Int and Finance Charges	22.38
7	Interest on Working Capital	1.78
8	Interest on Security Deposit	5.94
9	Return on NFA	3.68
10	Provision for Bad Debts	NIL
11	Other Expenses	-
12	**Total Revenue Requirement**	**1,032.51**
13	Less: Non Tariff Income	22.53
14	Less: Revenue from Sale of Power - UI Pool	-
15	Less: Revenue from Sale of Power-Exchanges	-
16	Less: Revenue from Sale / Banking of Power	-
17	**Aggregate Revenue Requirement**	**1,009.98**
18	**Revenue at revised tariff**	**967.72**
19	**Revenue Gap/ (Surplus)**	**42.26**

2. The break-up of the Aggregate Revenue Requirement approved for ED Goa for FY 2011-12 is given below:

S.No.	Particulars	Approved by the Commission (FY 2011-12) (Rs. Cr)
1	Cost of power purchase	1,060.47
2	Employee costs	125.89
3	R&M expenses	17.03
4	Administration and general expenses	19.31
5	Depreciation	3.33
6	Interest and Finance Charges	6.42
7	Interest on Working Capital	3.83
8	Interest on Security Deposit	NIL
9	Return on NFA	-
10	Provision for Bad Debts	NIL
11	Other Expenses	NIL
12	**Total Revenue Requirement**	**1,236.27**
13	Less: Non Tariff Income	21.06
14	Less: Revenue from Sale of Power - UI Pool	52.00
15	Less: Revenue from Sale of Power-Exchanges	57.70
16	Less: Revenue from Sale / Banking of Power	8.71
17	**Aggregate Revenue Requirement**	**1,096.80**
18	Revenue at existing tariff	813.65
19	**Revenue Gap at existing tariff**	**283.15**
20	Less: Budgetary Support from the Govt.	283.15
21	**Net Revenue Gap for FY 2011-12**	**-**

3. The approved retail tariff (as given below) for FY 2012-13 shall be in accordance with the tariff schedule specified in this order.

S. No.	Category/Consumption Slab	Approved Tariff-FY 13 *	
		Fixed Charges[19]	Variable Charges[20]
A	**Low Tension Supply**		
1(a)	**Tariff LTD/Domestic and Non-Commercial**		
	First 60 Units	5.00	1.20
	61 to 250 Units	10.00	1.60
	251 to 500 Units	20.00	2.60
	Above 500 Units	30.00	3.00
1(b)	**Tariff LTD/Low Income Group**	25.00	-
1(c)	**Tariff LTD/Domestic Mixed**		
	First 400 Units	20.00	2.70
	Above 400 Units	30.00	3.70

[19] Rs. per connection or KW or HP or KVA on monthly basis as applicable and detailed in the attached tariff schedule
[20] Rs. per KWh

S. No.	Category/Consumption Slab	Approved Tariff-FY 13 *	
		Fixed Charges[19]	Variable Charges[20]
2	**Tariff-LTC/Commercial**		
	First 100 Units	20.00	3.00
	From 101 to 1000 Units	30.00	3.80
	All Consumption above 1000 Units	50.00	4.10
3(a)	**Tariff-LTP/Motive Power**		
	Connected Load upto 50 HP	20.00	2.50
	Connected Load above 50 HP	20.00	3.00
3(b)	**Tariff-LTP/ Ice Manufacturing**		
	Connected Load upto 100 HP	20.00	3.00
3(c)	**Tariff-LTP/Mixed (Hotel Industries)**	25.00	4.00
4	**Tariff-LTAG/Agriculture**	5.00	1.20
5	**Tariff-LTPL/Public Lighting**	25.00	3.00
6	**Tariff-LT PWW/Public Water Works**	20.00	2.50
	High Tension Supply		
7	**Tariff HT-Mixed**	175.00	3.15
8 (a)	**Tariff HTI/Industrial**	175.00	3.30
8 (b)	**Tariff HTI/ Hotel Industries**	175.00	3.30
8 (c)	**Tariff HTI/ Ice Manufacturing**	175.00	3.00
9	**H.T.Industrial (Ferro Mettallurgical/ Steel Melting/ Power Intensive)**		
	First 300 Units/kVA	450.00	2.50
	Next 200 Units/kVA	450.00	2.75
	Above 500 Units/kVA	450.00	3.00
10	**Tariff-HTAG/Agriculture**	25.00	1.25
11	**EHTI/Industrial**	175.00	3.30
12	**H.T. PW/Public Water Supply and Sewage**	175.00	3.00
13	**H.T. MES/Defence Establishments**	125.00	3.30
14	**H.T. Industrial (Steel Rolling)**		
	First 200 Units/kVA	400.00	1.80
	Next 100 Units/kVA	400.00	2.25
	Above 300 Units/kVA	400.00	3.00
15	**Tariff HT-Industries (IT High Tech).**	175.00	2.60
	Temporary Supply		
17	**Tariff-LT/Temporary**	-	7.50
18	**Tariff-HT/Temporary**	**-**	7.50

*For approved tariff as percentage of ACOS please refer Table 79

4. The approved tariff shall come in force with effect from 1st June 2012 and shall remain valid till 31st March 2013. 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 ($R_{approved}$) for use in the FPPCA formula (paisa per unit) is 246 paisa per unit for FY 2012-13**.

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.

(Dr. V K Garg)
Chairman

Place: Gurgaon
Date: 27th June, 2012

10. 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

Consumption Slab	Fixed Charges (Rs/connection/month)	Energy Charges (Paise/kWh)
(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 X 1.2 + 20 X 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 units X Rs 1.2/kWh + 190 units X Rs 1.6/kWh + 25 units X Rs 2.6/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

Description	Rs/connection/ Month
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

Consumption Slab	Fixed Charges (Rs/connection/month)	Energy Charges (Paise/kWh)
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

Consumption Slab	Fixed Charges (Rs/connection/month)	Energy Charges (Paise/kWh)
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

Fixed Charges Rs/HP/month	Energy Charges (Paise/kWh)
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

Fixed Charges Rs/kW/month	Energy Charges (Paise/kWh)
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

Fixed Charges Rs/HP/month	Energy Charges (Paise/kWh)
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

Fixed Charges Rs/kVA/month	Energy Charges (Paise/kWh)
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

Fixed Charges Rs/kVA/month	Energy Charges (Paise/kWh)
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

Fixed Charges Rs/kVA/month	Energy Charges (Paise/kWh)
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

Fixed Charges Rs/kVA/month	Energy Charges (Paise/kWh)
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

Fixed Charges Rs/kVA/month	Energy Charges (Paise/kWh)
175	260

<u>Tariff Schedule – Temporary Supply</u>

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

Energy Charges Paise/unit	Minimum Charges
750	Rs 50 per kW per day or part thereof subject to a minimum of Rs 300/-

Note:-

a) The above temporary connection shall be released through a proper meter
b) 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
c) 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

Energy Charges Paise/unit	Minimum Charges
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

General Conditions and Definitions

1) These tariffs are applicable from 1st June 2012
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) 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.
4) Power Factor: The monthly average power factor shall not in any case fall below 0.90 lagging for all High tension and Extra High Tension installations. In case the power factor is found to be lower than 0.90 lagging, Power Factor Surcharge at the rate of 0.5% for every 0.01 fall of the power factor below 0.90 lagging shall be levied on the energy charges billed in the month. In case the monthly average power factor is less than 0.7 lagging, the installation is liable to be disconnected.

All High tension and Extra High Tension installations where the monthly average power factor is maintained above 0.95 lagging shall be eligible for an incentive in the form of rebate at the rate of 1% for every 0.01 improvement in power factor above 0.95 lagging in the energy charges billed in the month.

The Power factor value will be rounded of to two decimal places. For example 0.944 shall be treated as 0.94 and .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.**

5) "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.
6) 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.
7) 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".
8) 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.
9) 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.
10) The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with the FPPCA formula to be separately notified by the Commission. Such charges shall be recovered/ paid in accordance with the terms and conditions specified in the FPPCA formula.
11) 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 will 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.

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 X 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.