FORMAT-1

CHANDIGARH ELECTRICITY DEPARTMENT
ANNUAL REVENUE REQUIREMENT FOR THE YEAR 2012-13
ENERGY DEMAND
YEAR 2010-11 (Actual Unaudited)

Sr. No.	Category of Consumer	No. of Consumers at the end of the year (Nos.)	Connected Load at the end of the Year (KW)	Demand (in MW)*		Energy Sale/ Demand (MUs)
				Unrestricted	Restricted	
1	2	3	4	5	6	7
A	**Domestic**	**168,429**	**609,926**	**-**	**-**	**517**
	0-150 kWh	*100,729*	*201,281*	-	-	*74*
	Above 150 kWh	*67,700*	*408,644*	-	-	*444*
B	**Commercial**	**24,837**	**301,758**	**-**	**-**	**398**
	0-20 kW	*22,802*	*98,708*	-	-	*133*
	Above 20 kW	*2,035*	*203,051*	-	-	*265*
C	**Large Supply**	**102**	**65,026**		**-**	**140**
D	**Small Power**	***1,286***	***18,500***	**-**	**-**	**21**
E	**Medium Supply**	**1,042**	**55,564**	**-**		**89**
F	**Agriculture**	**133**	**737**	**-**	**-**	**2**
G	**Public Lighting**	**678**	**5,039**	**-**	**-**	**17**
H	**Bulk Supply**	**286**	**28,745**	**-**		**73**
I	**Others - Temporary Supply****	**751**	**24,741**	**-**	**-**	**27**
J	**Total Demand/ Sale Within State/UT (A+B+C)**	**197,544**	**1,110,035**	**323**	**-**	**1,284**

* The data with respect to category wise demand is unavailable and hence overall demand of the UT is provided.
*** Temporary supply data of last petition was not healthy*
*** Restricted Demand figure not available.

CHANDIGARH ELECTRICITY DEPARTMENT
ANNUAL REVENUE REQUIREMENT FOR THE YEAR 2012-13
ENERGY DEMAND
YEAR 2011-12 (Provisional)

Sr. No.	Category of Consumer	No. of Consumers at the end of the year (Nos.)	Connected Load at the end of the Year (KW)	Demand (in MW)*		Energy Sale/ Demand (MUs)
				Unrestricted	Restricted	
1	2	3	4	5	6	7
A	**Domestic**	**170,527**	**635,239**	**-**	**-**	**543**
	0-150 kWh	*63,490*	*121,530*	-	-	*71*
	Above 150 kWh	*107,037*	*513,709*	-	-	*472*
B	**Commercial**	**25,222**	**319,525**	**-**	**-**	422
	0-20 kW	*23,109*	*102,636*	-	-	*138*
	Above 20 kW	*2,113*	*216,889*	-	-	*284*
C	**Large Supply**	**103**	**64,993**		**-**	**141**
D	**Small Power**	**1,301**	**19,332**	**-**	**-**	**23**
E	**Medium Supply**	**1,118**	**61,116**	**-**		**91**
F	**Agriculture**	**126**	**683**	**-**	**-**	**2**
G	**Public Lighting**	**718**	**5,515**	**-**	**-**	**17**
H	**Bulk Supply**	**327**	**36,232**	**-**		**93**
I	**Others - Temporary Supply****	**949**	**31,278**	**-**	**-**	**35**
J	**Total Demand/ Sale Within State/UT (A+B+C)**	**200,393**	**1,173,913**	**324**	**-**	**1,367**

* The data with respect to category wise demand is unavailable and hence overall demand of the UT is provided.

*** Temporary supply data of last petition was not healthy*

*** Restricted Demand figure not available.

CHANDIGARH ELECTRICITY DEPARTMENT
ANNUAL REVENUE REQUIREMENT FOR THE YEAR 2012-13
ENERGY DEMAND
YEAR 2012-13 (Projected)

Sr. No.	Category of Consumer	No. of Consumers at the end of the year (Nos.)	Connected Load at the end of the Year (KW)	Demand (in MW)*		Energy Sale/ Demand (MUs)
				Unrestricted	Restricted	
1	2	3	4	5	6	7
A	**Domestic**	**172,700**	**661,608**	**-**	**-**	**569**
	0-150 kWh	*64,299*	*126,575*	-	-	*74*
	Above 150 kWh	*108,401*	*535,033*	-	-	*495*
B	**Commercial**	**25,662**	**338,771**	**-**	**-**	**455**
	0-20 kW	*23,512*	*108,818*	-	-	*149*
	Above 20 kW	*2,150*	*229,953*	-	-	*306*
C	**Large Supply**	**103**	**64,489**		**-**	**140**
D	**Small Power**	**1,287**	**20,446**	**-**	**-**	**26**
E	**Medium Supply**	**1,192**	**67,683**	**-**		**91**
F	**Agriculture**	**118**	**623**	**-**	**-**	**2**
G	**Public Lighting**	**769**	**6,162**	**-**	**-**	**18**
H	**Bulk Supply**	**375**	**48,105**	**-**		**120**
I	**Others - Temporary Supply****	**1,196**	**59,462**	**-**	**-**	**44**
J	**Total Demand/ Sale Within State/UT (A+B+C)**	**203,404**	**1,267,349**	**353**	**-**	**1,465**

* The data with respect to category wise demand is unavailable and hence overall demand of the UT is provided.

*** Temporary supply data of last petition was not healthy*

*** Restricted Demand figure not available.

कम्प्यूटर द्वारा मुद्रित होने पर ही वैध VALID ONLY IF COMPUTER PRINTED | केवल छः महिनों के लिये ही वैध VALID FOR SIX MONTHS ONLY

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DEMAND DRAFT

दिनांक /DATE: 23/12/2011
Key: VOMDUQ
Sr. No: 603811

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मांगे जानेपर ON DEMAND PAY SECY, JERC, GURGAON **********

**********SECY, JERC, GURGAON ********** या उनके आदेश पर OR ORDER

रुपये RUPEES

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प्राधिकृत हस्ताक्षरकर्ता / AUTHORISED SIGNATORY
(हस्ताक्षर नमूना क्र० / S.S. NO. 1111110)

शाखा प्रबंधक / BRANCH MANAGER
(हस्ताक्षर नमूना क्र० / S.S. NO. A-3708)

⑈440919⑈ 00000 2000⑆ 000 210⑈ 16

चंडीगढ (संघ राज्यक्षेत्र) CHANDIGARH (U.T.) 03AA 158731

AFFIDAVIT VERIFYING THE PETITION

I, **S. K. Jaitely** son of **Shri Kundan Lal Sharma**, aged **57** years do hereby solemnly affirm and state as follows:

1. That the deponent is the Chief Engineer of Chandigarh Electricity Department and is authorised to sign and submit the said petition, and is acquainted with the facts deposed to below.

2. I say that on behalf of CED, I am now filing this Petition under The Electricity Act, 2003 for approval of the Aggregate Revenue Requirement ("ARR") for FY 2012-13 and determination of tariffs to be charged by CED for its Licensee Area in FY 2012-13.

3. I further say that the statements made and financial data presented in the aforesaid Petition are as per records of the department and on the information received from the concerned officials and believed to be true to the best of my knowledge.

4. Further, to my knowledge and belief, no material information has been concealed in the aforesaid Petition

DEPONENT

Place: Chandigarh
Dated: 28 December 2011

VERIFICATION

I, the above named deponent, do hereby verify on this day the 28 day of December, 2011 at Chandigarh and state that the contents of the foregoing affidavit are true and correct. Nothing stated therein is false and nothing material has been concealed.

DEPONENT

Place: Chandigarh
Dated: 28 December 2011

Seal of the Special Executive Magistrate ★ Chandigarh Distt. ★ सत्यमेव जयते

ATTESTED

(ATUL ARORA)
Special Executive Magistrate
U.T., Chandigarh
28/12/2011

From

The Chief Engineer,
U.T., Chandigarh.

To

The Secretary,
JERC for Goa and UTs,
2nd Floor, HSIDC Office Complex,
Vanliya Nikunj Complex,
Udyog Vihar, Phase-V,
Gurgaon-122016.

Tele Fax No.(s):0124-2342853

Memo No. 11935
Dated Chandigarh, the 29/12/11

Subject **Filling the ARR and tarriff petition for the FY 2012-13.**

Ref: Kinldy refer to Petition No.59/2011 and order dated 02.12.2011 on the subject.

As per above reference the last date of filing the ARR and Tariff Petition for the FY 2012-13 has already been extended upto 30.12.2011.

Accordingly, the ARR and Tariff Petition for the FY 2012-13 has been prepared and hereby forwarded to the Hon'ble Commission along with necessary fee amounting to Rs.6.96 lacs vide Demand Draft No.440919 dated 23.12.2011 for consideration and filing the same before the Hon'ble Commission please.

DA/6 Copies of Petition &
D.D.No.440919 dt.23.12.2011

Chief Engineer,
U.T., Chandigarh.

Petition to
Hon'ble Joint Electricity Regulatory Commission for
Filing of Aggregate Revenue Requirement ("ARR")
and
Determination of Tariff for 2012-13
of
Chandigarh Electricity Department
TARIFF PETITION & FORMATS

Submitted to

Joint Electricity Regulatory Commission,

Gurgaon

By

CHANDIGARH ELECTRICITY DEPARTMENT, UT

CHANDIGARH

DECEMBER 2011

BEFORE THE JOINT ELECTRICITY REGULATORY COMMISSION FOR THE STATE OF GOA, & UNION TERRITORIES, GURGAON

Filing No……

Case No…….

IN THE MATTER OF: Petition for Approval of the Aggregate Revenue Requirement (ARR) and Tariff Proposal for FY 2012-13 for the Chandigarh Electricity Department under Section 45, 46, 61, 62, 64 and 86 of the Electricity Act, 2003

AND

IN THE MATTER OF: Chandigarh Electricity Department
Deluxe Building
Sector – 9D
Chandigarh, UT
.....Petitioner

Chandigarh Electricity Department (hereinafter referred to as "CED"), files petition for approval of Annual Revenue Requirement (ARR) and Tariff Proposal for FY 2012-13 under Section 45, 46, 61, 62, 64 and 86 of the Electricity Act, 2003

AFFIDAVIT VERIFYING THE PETITION

I**, S. K. Jaitely** son of **Shri Kundan Lal Sharma**, aged **57** years do hereby solemnly affirm and state as follows:

1. That the deponent is the Chief Engineer of Chandigarh Electricity Department and is authorised to sign and submit the said petition, and is acquainted with the facts deposed to below.

2. I say that on behalf of CED, I am now filing this Petition under The Electricity Act, 2003 for approval of the Aggregate Revenue Requirement ("ARR") for FY 2012-13 and determination of tariffs to be charged by CED for its Licensee Area in FY 2012-13.

3. I further say that the statements made and financial data presented in the aforesaid Petition are as per records of the department and on the information received from the concerned officials and believed to be true to the best of my knowledge.

4. Further, to my knowledge and belief, no material information has been concealed in the aforesaid Petition

DEPONENT

Place: Chandigarh
Dated: ___December 2011

VERIFICATION

I, the above named deponent, do hereby verify on this day the _____ day of December, 2011 at Chandigarh and state that the contents of the foregoing affidavit are true and correct. Nothing stated therein is false and nothing material has been concealed.

DEPONENT

Place: Chandigarh
Dated: ___December 2011

BEFORE THE JOINT ELECTRICITY REGULATORY COMMISSION FOR THE STATE OF GOA, & UNION TERRITORIES, GURGAON

Filing No……

Case No……

IN THE MATTER OF: Petition for Approval of the Aggregate Revenue Requirement (ARR) and Tariff Proposal for FY 2012-13 for the Chandigarh Electricity Department under Section 45, 46, 61, 62, 64 and 86 of the Electricity Act, 2003

.

AND

IN THE MATTER Of: Chandigarh Electricity Department
Deluxe Building,
Sector 9D
Chandigarh, UT

PETITIONER, UNDER SECTIONS 45, 46, 61, 62 AND 64 OF THE ELECTRICITY ACT, 2003 FILES FOR INITIATION OF PROCEEDINGS BY THE HON'BLE COMMISSION FOR DECIDING ON THE MATTERS CONCERNING THE APPROVAL OF THE ANNUAL REVENUE REQUIRMENT AND TARIFF PETITION OF CHANDIGARH ELECTRICITY DEPARTMENT (herein after referred to as "CED") FOR FY 2012-13.

The Petitioner respectfully submits as under: -

1. The Petitioner, the Chandigarh Electricity Department (CED) has been allowed to function as an integrated Distribution licensee for the license area of Chandigarh UT.

2. Pursuant to the enactment of the Electricity Act, 2003, CED is required to submit its Annual Revenue Requirement (ARR) and Tariff Petition as per the procedures outlined in section 61, 62 & 64 of EA 2003, and the governing regulations thereof.

3. CED has submitted its ARR and Tariff petition for determination of tariff for FY 2012-13 on the basis of the principles outlined in the Tariff Regulations 2009 notified by the Hon'ble Commission.

4. CED prays to the Hon'ble Commission to admit the attached petition for ARR and Tariff Petition for FY 2012-13 and would like to submit that:

Prayers to the Commission:

A. The petition provides, inter-alia, CED's approach for formulating the present petition, the broad basis for projections used, performance of CED in the recent past, and certain issues impacting the performance of CED in the Licensed Area.

B. Broadly, in formulating the ARR and Tariff Petition for the FY 2012-13, the principles specified by the Joint Electricity Regulatory Commission in the notified (Terms and Conditions of Tariff) Regulations 2009 ("Tariff Regulations") have been considered as the basis.

The petitioner respectfully prays that the Hon'ble Commission may:

- Accept the Annual Revenue Requirement and Tariff petition for the FY 2012-13 for CED formulated in accordance with the guidelines outlined as per the regulation of Joint Electricity Regulatory Commission relating to Distribution Licensee and the principles contained in Tariff Regulations;

- Approve the total projected ARR of FY 2012-13;

- Permit the petitioner to recover the unrecovered gap, for FY 2011-12 and the likely gap for FY 2012-13 through the tariffs being proposed to be made applicable to the consumers for the FY 2012-13 and may be determined in line with the principles outlined in the Tariff Proposal submitted by CED and considering various provisions of Electricity Act 2003 and governing tariff regulations of JERC.

- Examine the proposal submitted by the petitioner as detailed in the enclosed proposal for a favourable dispensation.

- The delay in filing this ARR Petition may please be condoned and the Hon'ble Commission is requested to accept this Petition and process the same;

- Pass suitable orders with respect to the ARR for FY 2012-13 for the expenses to be incurred by CED for serving its consumers;

- CED may also be permitted to propose suitable changes to the respective ARRs and the mechanism of meeting the revenue on further analysis, prior to the final approval by the Hon'ble Commission;

- Approve the Fuel & Power Purchase Price adjustment formula submitted by CED for levy to consumers;

- May permit the Petitioner to pass on adjustments due to changes in the cost of power procurement to the consumer on quarterly/ monthly basis as per proposed methodology in the FPPPA chapter;

- Condone any inadvertent omissions/errors/shortcomings and permit CED to add/change/modify/alter this filing and make further submissions as may be required at a future date.

- Pass such further, as the Hon'ble Commission may deem fit and appropriate keeping in view the facts and circumstances of the case.

Chandigarh Electricity Department

Petitioner

Place: _____

Dated: __December 2011

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LIST OF ANNEXURES

LIST OF TABLES

TABLE **DESCRIPTION** **PAGE**

List of Abbreviations	
Abbreviation	**Description**
A&G	Administration and General
ARR	Annual Revenue Requirement
AS	Accounting Standard
NTPC	National Thermal Power Corporation
NPCIL	Nuclear Power Corporation of India Limited
CAGR	Cumulative Average Growth Rate
CAPEX	Capital Expenditure
CERC	Central Electricity Regulatory Commission
Ckt Km	Circuit Kilo Meter
Crs	Crores
CWIP	Capital Works In Progress
DF	Distribution Franchisee
DPS	Delayed Payment Surcharge
DS	Domestic Service
U/G	Underground
DVC	Damodar Valley Corporation
EA 2003	The Electricity Act 2003
F&A	Finance & Accounts
FAS	Financial Accounting System
FY	Financial Year
GFA	Gross Fixed Assets
HP	Horse Power
HR	Human Resources
HT	High Tension
NHPC	National Hydro Power Corporation
BBMB	Bhakhra Beas Management Board
UI	lUnschedule Interchange
IDC	Interest During Construction
O/H	Over Head
IT	Income Tax
IT	Information Technology
JERC	Joint Electricity Regulatory Commission
SJVNL	Satluj Jamuna Vidyut Nigam Limited
CWIP	Capital Work in Progress
KV	Kilo Volt
CED	Chandigarh Electricity Deparmtent
KW	Kilo Watt
kWh	Kilo Watt Hours
LF	Load Factor
LT	Low Tension
COS	Cost of Supply
MD	Maximum Demand
MERC	Maharashtra Electricity Regulatory Commission
MU	Million Units
MVA	Mega Volt Ampere
MW	Megawatt
NCPL	Noida Power Corporation Limited
NDPL	North Delhi Power Limited
PGCIL	Power Grid Corporation of India Limited
O&M	Operation and Maintenance
PF	Power Factor
PLR	Prime Lending Rate
PPA	Power Purchase Agreement
PSD	Power Services Division
R&M	Repairs and Maintenance
RoE	Return on Equity
Rs.	Rupees
SAP	System, Application and Production
SBI	State Bank of India
SERC	State Electricity Regulatory Commission
SLM	Straight Line Method
TOD	Time Of the Day
TPM	Total Productivity Maintenance
APR	Annual performance Review
w.e.f	with effect from
YoY	Year-on-Year

Chapter 1. Introduction

1.1 Preamble

1.1.1 An early entrant to the planning process, Chandigarh has emerged as one of the most developed Union Territories in India and even achieved the ranking of one of the best UT's in India with regards to investment environment, infrastructure and tourism. A very striking feature of Chandigarh is the harmonious relationship among various religious communities, who have lived together peacefully for generations. The total population of the Union Territory is around 10.5 Lakhs as per 2011 census.

1.1.2 The Electricity Department of Engineering Department UT Administration of Chandigarh, is a deemed licensee under section 14 of the Electricity Act 2003, integrated utility and is carrying on the business of distribution and retail supply of electricity in Chandigarh (UT). It operates in the area of 114 sq. Km. CED, for the purpose of better electricity distribution and maintenance is divided into 4 divisions and 1 circle.

1.1.3 The Electricity Department was formed in the year **1967** under the Administration of Union Territory of Chandigarh. It is the only licensee operating in the UT of Chandigarh for transmission and distribution of Electrical Energy. The Chandigarh Electricity Department does not have its own generation. The present unrestricted demand for the UT is around **324** MW. The majority of the power requirement for the UT Chandigarh is met through its share from Central Sector Power Stations of the National Thermal Power Corporation, National Hydro Power Corporation and Nuclear Power Corporation of India Limited as allocated by the Central Government. In addition, the department also purchases power from BBMB, Open market etc through allocated and unallocated quota.

1.1.4 The Chandigarh Electricity Department caters to around 2 Lakhs consumers with an annual energy consumption of approx 1367 MUs. The Consumers of the Chandigarh Electricity Department are classified as under:

- Domestic (40 % of consumption)
- Commercial (31 % of consumption)
- Large Supply (10 % of consumption)
- Small Power (2 % of Consumers)
- Medium Supply (7 % of Consumers)
- Agriculture (0.001% of consumption)

- Public Lighting (1 % of consumption)
- Bulk Supply (7 % of consumption)
- Temporary Others (3 % of consumption)

1.1.5 As seen from the above classification, the energy consumption of domestic consumers is the highest (40 %) amongst all these categories.

1.1.6 All the sectors of Chandigarh are electrified and any intending consumer can avail power supply by submitting requisition in the prescribed form to the appropriate office of the Department subject to fulfilling the required conditions and payment of charges as per conditions of supply of Electrical Energy and miscellaneous charges.

1.1.7 CED is under control of Administration of Union Territory of Chandigarh and the maintenance of the accounts or Income and expenditure statement is on "cash" basis unlike other utilities/ licensees where it is being maintained on "accrual" basis.

1.2 Measures to increase power availability

1.2.1 Till now there have been no future allocations of power from the Ministry of Power (MoP) against the demand made by the UT from Central Sector Generating Stations.

1.2.2 The UT of Chandigarh has executed the PPAs from the following power projects:

Table 1: PPAs Executed

Sr.No.	Power Projects	Installed Capacity (MW)	Expected Allocation (MW)	Likely COD FY
A	**NTPC**			
1	Koldam HE Project	800	6.00	2013-14
2	North Karanpura STPP	1980	15.00	2013-14
3	Barh STPP	1980	15.00	2013-14
4	Barh STPS Stage II	1320	10.00	2013-14
5	Auraiya Stage II	650	6.00	2013-14
6	Anta Stage II	650	6.00	2013-14
7	Rihand STPP Stage III	1000	10.00	2013-14
8	Meja JV	1320	3.00	2014-15

9	Giddarbaha	2640	10.00	2014-15
10	Singrauli III	500	5.00	2014-15
11	Tanda	1320	11.00	2014-15
B	**NHPC**			
12	Uri II	280	2.80	2013-14
13	Pakal dal HEP	1000	10.00	2013-14
14	Parbati HE Project Stage III	520	5.00	2013-14
15	Chamera HE Project Stage III	231	2.00	2013-14
16	Parbati HE Project Stage II	800	8.00	2013-14
17	Bursar HE Project	1020	10.00	2013-14
18	Kotlibhel Stage I A	195	2.00	2013-14
19	Kishanganga HEP	330	3.50	2013-14
20	Kotlibhel Stage I A	320	3.00	2013-14
21	Kotlibhel Stage II	440	4.00	2013-14
22	VIshnugad Pipalkoti HEP	444	4.00	2013-14
C	**NHL**			
23	Lata Tapovan	171	2.00	2014-15
24	Rupsiyabagar	261	2.00	2014-15
25	Tapovan Vishnugad	520	4.00	2014-15
D	**Total Anticipated Power Allocation**		**155.00**	

1.3 JERC Formation

1.3.1 In exercise of the powers conferred by the Electricity Act 2003 the Central Government constituted a Joint Electricity Regulatory Commission for all Union Territories to be known as "Joint Electricity Regulatory Commission for Union Territories" as notified on 2nd May 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 30th May 2008.

1.3.2 The Joint Electricity Regulatory Commission (hereinafter referred to as "JERC" or "the Hon'ble Commission"), an independent statutory body is vested with the

authority of regulating the power sector in the State of Goa and UT's (except Delhi) inter alia including setting of tariff for electricity consumers.

1.3.3 The Hon'ble Commission is a two-member body designated to function as an autonomous authority responsible for regulation of the power sector in the State of Goa and Union Territories of Andaman & Nicobar, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry. The powers and the functions' of the Hon'ble Commission are as prescribed in the Electricity Act 2003. The Head Office of the Commission presently is located in the district town of Gurgaon, Haryana and falls in the National Capital Region.

1.3.4 The Joint Electricity Regulatory Commission for the State of Goa and Union Territories started to function with effect from August 2008 with the objectives and purposes for which the Commission has been established. Presently the Hon'ble Commission is framing various regulations as mandated in the Electricity Act 2003 to facilitate its functioning. Some of the Regulations notified by the Hon'ble Commission include the following:

- JERC Conduct of Business Regulations, 2009
- JERC Establishment of Forum for Redressal of Grievances of Consumers Regulations 2009;
- JERC Appointment and Functioning of Ombudsman Regulations 2009;
- JERC Treatment of other businesses of Transmission Licensees and Distribution Licensees Regulations, 2009.
- JERC Standard of Performance Regulations, 2009.
- JERC State Advisory Committee Regulations, 2009.
- JERC Open Access in Transmission and Distribution Regulations, 2009.
- JERC Terms and Conditions for Determination of Tariff Regulation, 2009.

1.3.5 The Hon'ble Commission had issued the JERC (Terms and Conditions for Determination of Distribution Tariff) Regulations 2009 which was made effective from 08th February 2010 onwards.

1.3.6 Under section 62 of the Electricity Act, 2003 and under the JERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2009, CED had filed its first Annual Revenue Requirement and Determination of Tariff for the FY 2011-12 to the Hon'ble Commission on 13.1.2011. After deliberations, the Tariff Order was issued by the Hon'ble Commission on 16th July 2011 and the new tariff was effective from 1st April 2011.

1.3.7 Under section 62 of the Electricity Act, 2003 and under the subsequent JERC Regulations, CED is required to file for its Annual Performance Review for FY 2011-12 and Annual Revenue Requirement for FY 2012-13.

1.3.8 The determination of ARR has been based on the provisions of the following Acts and Policies of the Government of India and principles outlined in the relevant regulations notified by the Joint Electricity Regulatory Commission:

- Provisions of Electricity Act 2003;
- Provisions of the National Electricity Policy;
- Provisions of the National Tariff Policy;
- Principles laid down in the JERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2009;
- Principles laid down in the JERC (Conduct of Business) Regulations, 2009;
- Principles laid down in the JERC (Procurement of Renewable Energy) Regulations, 2010 ; and other relevant regulations

1.4 Submission by CED to the Hon'ble Commission

1.4.1 CED hereby submits the petition under section 62 of the Electricity Act, 2003 and under the subsequent JERC Regulations for Annual Performance Review for FY 2011-12 and Annual Revenue Requirement for FY 2012-13.

Chapter 2. Overall Approach for present filing

2.1 Annual Revenue Requirement and Tariff Petition for FY 2012-13

2.1.1 CED is filing the petition for the determination of Annual Revenue Requirement and Tariff Petition for the FY 2012-13 based on the past performance and expected changes in each element of cost and revenue for the ensuing year. CED has studied the previous trends and taken cognisance of other internal and external developments to estimate the likely performance for FY 2012-13. In line with the same, CED is filing its ARR and Tariff Petition for consideration of the Hon'ble Commission in the formats laid down for providing information relating to past, current and future performance. The key aspects of the approach to the filing are discussed below:

2.2 Approach for Filing

2.2.1 The present filing for the Annual Revenue Requirement and Tariff Petition for the FY 2012-13 is based on the principles enumerated by the Joint Electricity Regulatory Commission's (JERC) in the Terms and Conditions for determining of Distribution Tariff, Regulations 2009 notified in February 2010. The subsequent sections provide projection for various expenses, the proposed investment plan for the year and the expected revenue projections with existing tariff for FY 2012-13 based on the tariff notifications in force in the area of supply of CED.

2.2.2 Projections of various cost components required for determination of Aggregate Revenue Requirement for FY 2012-13 along with the rationale for estimation of such cost. Further, the philosophy adopted by CED for projecting sales, number of consumers and power purchase cost for FY 2012-13 has been covered in this section.

2.2.3 For the purpose of projecting the financial & technical parameters for FY 2012-13, CED has considered its actual unaudited performance during FY 2010-11 and FY 2011-12 as base and accordingly projected the figures for FY 2012-13 with supporting rationales.

2.2.4 CED has considered 6 months actual data/ information for power purchase and sales for the purpose of projection of ARR for FY 2012-13. Further the capital expenditure works/ schemes are also considered based on actual progress till September 2011 for the purpose of capital expenditure and capitalisation.

2.3 Approach for Projection of Sales, Connected Load and No of Consumers

2.3.1 It has been observed from past experience that the historical trend method has proved to be a reasonably accurate and well accepted method for estimating the load, number of consumers and energy consumption. In light of the above, CED has estimated the above for various customer categories primarily based on the Cumulative Average Growth Rate (CAGR) trends during past years. Wherever the trend has seemed unreasonable or unsustainable, the growth factors have been corrected by the CED, to arrive at more realistic projections.

2.3.2 The Break-up of the past sales, connected load and no of Consumers for different 5 year period thereof are as follows. It may be noted that the 5 year base is for the period between FY 2006-07 & FY 2010-11.

Table 2: No of Consumers

Sr. No.	Category of Consumer	Categorywise Consumer Base (Nos)				
		FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11
A	Domestic	160,292	162,105	165,121	167,208	168,429
B	Commercial	23,354	23,536	24,066	24,420	24,837
C	Large Supply	99	102	103	102	102
D	Small Power	1,226	1,359	1,371	1,409	1,286
E	Medium Supply	786	865	879	884	1,042
F	Agriculture	164	163	163	167	133
G	Public Lighting	538	546	554	568	678
H	Bulk Supply	167	190	219	258	286
I	Others - Temporary Supply	294	261	265	266	751
J	Total	**186,920**	**189,127**	**192,741**	**195,282**	**197,544**

Table 3: Sales

Sr. No.	Category of Consumer	Sales (MUs)				
		FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11
A	Domestic	425	450	433	489	517
B	Commercial	313	313	318	332	398
C	Large Supply	138	142	145	141	140
D	Small Power	14	16	17	19	21
E	Medium Supply	83	91	101	107	89
F	Agriculture	2	1	1	1	2
G	Public Lighting	16	15	14	15	17
H	Bulk Supply	28	33	39	58	73
I	Others - Temporary Supply	46	95	124	115	27
J	Total	**1,065**	**1,156**	**1,192**	**1,277**	**1,284**

Table 4: Connected Load

Sr. No.	Category of Consumer	Connected Load (kW)				
		FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11
A	Domestic	518,366	539,862	588,925	609,933	609,926
B	Commercial	240,035	252,872	260,796	274,628	301,758
C	Large Supply	65,160	67,049	64,321	65,937	65,026
D	Small Power	15,513	15,452	17,398	18,484	18,500
E	Medium Supply	37,961	40,631	51,222	53,566	55,564
F	Agriculture	998	987	986	1,006	737
G	Public Lighting	3,511	3,540	3,845	2,966	5,039
H	Bulk Supply	11,388	11,659	27,119	42,977	28,745
I	Others - Temporary Supply	-	-	8,654	8,763	24,741
J	Total	**892,932**	**932,052**	**1,023,266**	**1,078,260**	**1,110,035**

The tariff formats as outlined in the Tariff Regulations 2009 and as applicable to CED are provided at the end of this petition.

Chapter 3. Annual Performance Review of FY 2011-12

3.1 Performance of CED in FY 2011-12

3.1.1 This Section captures the Annual Performance Review of CED for FY 2011-12 which takes into consideration:

i. Actual Performance in FY 2010-11 (Actual Un-audited Figures);
ii. Provisional figures for FY 2011-12 based on the performance of FY 2010-11 and actual data / information from April 2011 to September 2011;
iii. Principles outlined in Tariff Regulations 2009 of JERC;

3.1.2 Past trends have been taken into cognizance in case of certain elements as deemed necessary. The figures discussed/ presented in subsequent sections for FY 2011-12 should be read as Actual Unaudited. The present section has been structured in the following manner:

- Determination of Energy Requirement
  - Sales Projections
  - Loss Trajectory
  - Energy Balance
  - Power Purchase Sources
- Determination of the Annual Revenue Requirement
  - Power Purchase Costs & Transmission Charges;
  - Operation and Maintenance Expenses;
    - Employee Expenses
    - Administration & General expenses
    - Repairs & Maintenance Expenses
  - Proposed Capital Expenditure and capitalization
  - Scheme wise details
    - Capital Expenditure
    - Asset Capitalisation
- Gross Fixed Assets;
- Depreciation;
- Interest on Long Term Loans;
- Interest on Working Capital & Security Deposits;
- Return on Capital Base/ Net Fixed Assets;
- Provision for Bad and Doubtful Debts
- Other expenses.

3.1.3 In this section, CED outlines its performance for FY 2011-12 based on provisional figures available in its records and books of accounts for first six months (H1) of FY 2011-12. These provisional figures have also been compared with the projections submitted in the previous petition for FY 2011-12 and corresponding approval by the Hon'ble Commission in its last Tariff Order dated 16th July 2011.The Cumulative Average Growth Rate (%) for No of Consumers, Connected Load and Sales (MUs) has been derived on the base as shown in **Chapter 2** is shown below:

Table 5: CAGR for FY 2011-12

S.No.	Category	Sales	Consumer Base	Connected Load
1	**Domestic**	5.03%	1.25%	4.15%
2	**Commercial**	6.16%	1.55%	5.89%
3	**Large Supply**	0.39%	0.75%	-0.05%
4	**Small Power**	10.80%	1.20%	4.50%
5	**Medium Supply**	1.82%	7.30%	9.99%
6	**Agriculture**	-4.82%	-5.10%	-7.31%
7	**Public Lighting**	1.58%	5.95%	9.45%
8	**Bulk Supply**	27.07%	14.40%	26.05%

3.2 Number of Consumers

3.2.1 CED has projected number of consumers for FY 2011-12 based on the actual increase in number of consumers in first half of the year and also considering the applications received & being processed during the balance half of the year. The details of number of consumers as on FY 2011-12 are provided in the table below:

Table 6: Number of Consumers

S.No.	Category	FY 2011-12 Approved	H1 FY 12 (Actual)	H2 FY 12 (Estimates)	FY 2011-12 Provisional
A	**Domestic**	176,060	169,559	968	170,527
B	**Commercial**	25,604	25,053	169	25,222
C	**Large Supply**	124	103	(0)	103
D	**Small Power**	1560	1293	8	1301
E	**Medium Supply**	1053	1060	58	1118
F	**Agriculture**	202	131	(5)	126
G	**Public Lighting**	602	721	(3)	718
H	**Bulk Supply**	310	308	19	327
I	**Others - Temporary Supply**	288	901	48	949
J	**Total Demand/ Sale Within UT (A to I)**	205,801	199,129	1,264	200,393

3.2.2 The numbers of consumers approved by Hon'ble Commission was **205,801** in the last tariff order which has been revised to **200,393** based on applications received and pending for processing.

3.3 Connected Load

3.3.1 Based on the actual addition of new consumers in FY 2011-12 in first half and pending load for release, the category wise connected load is provided in the table below for FY 2011-12.

Table 7: Connected Load/Contract Demand- (H1+H2)

KW

Sr. No.	Category of Consumer	Approved	FY 2011-12 (H1) Actual	FY 2011-12 (H2) Estimated	FY 2011-12 (H1+H2) Provisional
A	Domestic	658,227	621,509	13,730	635,239
	0-150 kWh	108,147	118,903	2,627	121,530
	Above 150 kWh	550,080	502,606	11,103	513,709
B	Commercial	303,507	309,640	9,885	319,525
	0-20 kW		99,461	3,175	102,636
	Above 20 kW		210,179	6,710	216,889
C	Large Supply	68,978	65,327	(334)	64,993
D	Small Power	20,387	18,656	676	19,332
E	Medium Supply	58,207	56,664	4,452	61,116
F	Agriculture	1,028	722	(39)	683
G	Public Lighting	4,190	5,232	283	5,515
H	Bulk Supply	69,455	28,831	7,400	36,232
I	Others - Temporary Supply	8,899	27,840	3,437	31,278
J	Total Demand/ Sale Within UT (A to I)	**1,192,878**	**1,134,423**	**39,490**	**1,173,913**

3.3.1.1 The connected load now projected by CED for FY 2011-12 is **1,173,913** which is slightly lower than that approved by the Commission made in last year.

3.4 Energy Sales

3.4.1 CED has estimated sales based on the actual sales for first half of FY 2011-12 and also considering the applications received and being processed for balance period of FY 2011-12.

3.4.2 CED has estimated the sales for various customer categories primarily based on the Cumulative Average Growth Rate (CAGR) trends during past years. Wherever the trend has seemed unreasonable or unsustainable, the growth factors have been corrected by the company, to arrive at more realistic projections. Based on the above assumption of CAGR, the category wise sales consumption as worked out by CED for FY 2011-12 is presented in the table below:

Table 8: Energy Sales- (H1+H2)

MUs

Sr. No.	Category of Consumer	Approved	FY 2011-12 (H1) Actual	FY 2011-12 (H2) Estimated	FY 2011-12 (H1+H2) Provisional
A	**Domestic**	545	272	272	543
	0-150 kWh	26	35	35	71
	Above 150 kWh	519	236	236	472
B	**Commercial**	420	212	210	422
	0-20 kW		69	69	138
	Above 20 kW		143	141	284
C	**Large Supply**	142	64	77	141
D	**Small Power**	23	12	12	23
E	**Medium Supply**	92	53	38	91
F	**Agriculture**	2	1	1	2
G	**Public Lighting**	18	8	10	17
H	**Bulk Supply**	80	39	54	93
I	**Others - Temporary Supply**	27	6	29	35
J	**Total Demand/ Sale Within UT (A to I)**	**1,349**	**665**	**691**	**1,367**

3.4.3 The table above shows comparison of category-wise energy sales figure for FY 2011-12 as approved by Hon'ble Commission in preceding Tariff Order and the revised sales estimation for FY 2011-12.

3.4.4 The revised energy sales are in line with the amount approved by Hon'ble Commission in its last order. It is also submitted that the actual sales for first half of FY 2011-12 has been **665** MUs which also an indication for consumption growth in license area.

3.4.5 Accordingly, the petitioner requests the Commission to approve the Number of Consumers, Connected Load and Sales for FY 2011-12 as per revised projections in this petition.

3.5 Distribution Loss & Energy Requirement

3.5.1 The overall collection efficiency of the petitioner is in the range of 99%. The Government of India (GoI) has set the target to reduce the AT&C losses to a level of 15% by the end of 11th 5-year plan i.e. by the end of FY 2011-12. Accordingly, the petitioner has also initiated steps to bring down the AT&C loss level to the target set by GoI in the near future.

3.5.2 CED has estimated distribution loss and energy requirement for FY 2011-12 in line with the methodology adopted by Hon'ble Commission in the previous tariff for FY 2011-12. The petitioner expects to achieve the T&D loss level of **17.00%** as approved by the Hon'ble Commission for FY 2011-12 and corresponding AT&C loss level of **17.83%,** by targeting the average collection efficiency of **99.00%** during FY 2011-12. The Inter-state transmission losses have been projected to be **3.89%** for FY 2011-12 by considering the recent 52-week moving average of regional losses, whereas the same was approved by the Hon'ble Commission in its last Tariff order.

3.5.3 CED has been and shall continue to be committed towards taking the best possible measures to minimise its distribution losses by adopting pro-active approach and adopting best practices prevalent in the distribution sector in India. However, CED submits that decrease in distribution losses below this level shall involve huge capital investments.

3.6 Energy Balance

3.6.1 The Energy Balance of CED for FY 2011-12 based on the Energy Sales, T&D Loss % and Source-wise Energy purchase being projected by CED in its preceding Tariff Petition, approved by the Hon'ble Commission and provisional figures being recorded now by CED is depicted under the table below:

Table 9: Energy Balance for FY 2011-12

MUs

S.No	Particulars	Projected	Approved	Provisional
A)	ENERGY REQUIREMENT			
1	Energy Sales	1,428.00	1,348.00	1,366.69
2	T&D Losses	293.00	276.00	279.93
3	T&D Losses (%)	17.00%	17.00%	17.00%
4	Energy required at the periphery of Chandigarh	1,721.00	1,625.00	1,646.62
5	Add: Sales to common pool consumers/ UI	-	-	162.48
6	Inter-State Transmission Loss (%)	3.89	3.89	3.89%
7	Total Energy Requirement for State	1,721.00	1,624.61	1,809.10
8	Pool Losses in PGCIL Network	58.00	58.00	64.59
9	Energy Required to be purchased	1,779.00	1,682.61	1,873.69
B)	Energy Available from CGS and other sources	1,782.00	1,682.61	1,873.69
1	Central Generating Stations	-	927.81	896.94
2	Other Sources	-	754.80	976.74
3	Energy Surplus/Deficit	3.00	-	-
4	AT&C Loss (%)	17.42%	-	17.83%

** Breakup of Energy Avilability not available and in approved other sources include PTC Purchase

3.6.2 CED requests the Hon'ble Commission to approve the estimated Energy Balance for FY 2011-12 as presented in the table above.

3.7 Power Purchase Quantum

3.7.1 The petitioner has no power generation of its own. The major sources from which the petitioner procures power are:

- Central Generating Stations (CGS) viz. NTPC, NHPC, NPCIL
- Other sources viz., BBMB, SJVNL etc

3.7.2 The occasional shortage in supply due to excess demand is met through the short term power purchase, UI and other trading sources. The petitioner receives the fixed allocated share from CGS to meet its energy requirements. Moreover, a variable quantum of power from the unallocated share is also allotted in various CGS at different intervals during a year. CED has taken the same quantum of power purchased as approved by the Hon'ble Commission for FY 2011-12 except in UI, power purchase from PTC/Open market/Bilateral Trade, additional power viz. Beas I & II (BBMB – Due to Supreme Court order) and Jhajjar etc to maintain supply and service at the desired level.

3.7.3 Considering the availability of actual power purchase detail from April 2011 to September 2011, the estimation of power availability for FY 2011-12 has been done in the steps to include:

3.7.3.1 Power purchase estimation from April 2011 to September 2011 based on actual power purchase details.

3.7.3.2 Power purchase estimation for the FY 2011- 12 after estimating annual availability based on the following:

- Actual quantum approved by the Hon'ble Commission for FY 2011-12 Tariff order;
- Weighted Average share (including unallocated share) of the petitioner in various generating stations as per latest revised allocation orders of Govt of India during FY 2011-12;
- Load generation balance report;
- For plants whose CERC order on fixed cost is not available similar plants fixed cost has been assumed;
- Additional power viz. Beas I & II (BBMB – Due to Supreme Court order) and Jhajjar etc from 01st November 2011;

3.7.3.3 It is pertinent to mention here that, since the unallocated share of the petitioner keeps on changing year on year, the projection of quantum of power purchase has not been done based on past trends. Instead weighted average allocation for the FY 2011-12 has been considered to arrive at projected power availability.

3.7.3.4 In case of CED since most of the power is tied-up through long term PPAs it has to purchase all the power that is available at its disposal. It is submitted that the above power is available to CED on Round the Clock (RTC) basis and in case of less requirement for the State in projection period, CED will schedule less power from high cost power stations to reduce power purchase burden on consumers. Also, in the obligation of meeting requirement, as maximum power of CGS is scheduled and there are other commitments of BBMB etc, the department is surplus during off-peak hours which is diverted again to pool / sold to power exchanges.

3.7.3.5 The petitioner would make every endeavour to avoid UI over-drawl in order to maintain grid discipline. However, due to unpredictable demand, sometimes it becomes necessary to overdraw power during few of the time slots based on

demand supply gap and hence licensee considers that such over-drawl shall be balanced by under drawl in specific timeslots considering adequate bilateral arrangements.

3.7.3.6 As per the energy requirement, the energy availability falls short by around **285.50** MUs for FY 2011-12. This shortfall is proposed to be met through the short-term purchases through open market.

3.7.3.7 On the basis of the above mentioned projections from external and internal sources, the energy to be purchased from various CGHS and other long-term sources by the petitioner, after intra state losses of **3.89%,** has been projected to be **1,874** MUs for FY 2011-12.

3.8 Power Purchase Cost

3.8.1 Considering the availability of actual power purchase average cost detail from April 2011 to September 2011, the estimation of power purchase cost for FY 2011-12 has been done in the steps to include:

- Average fixed and variable cost for first six months of FY 2011-12;
- Approved fixed cost for CGS & other similar stations as per CERC Order;
- Actual average energy charges for first six months and price escalation on variable component of the power purchase cost for next six months;
- Escalation of Coal and Transportation price as per Clause 5.6 (vi) of Ministry of Power (MOP) Notification dated 19.1.2005 (as amended from time to time) on *"Guidelines for Determination of Tariff by Bidding Process for procurement of Power by Distribution Licensees";*
- Other Cost comprises of Income tax, incentives and other charges;

3.8.2 Note on Escalation of Coal and Transportation Price

3.8.2.1 In pursuance of Clause 5.6 (vi) of Ministry of Power (MOP) Notification dated 19.1.2005 (as amended from time to time) on *"Guidelines for Determination of Tariff by Bidding Process for procurement of Power by Distribution Licensees",* the CERC notifies various escalation factors and other parameters, every six months, for the purpose of bid evaluation and payment.

3.8.2.2 Under the above notification CERC determines escalation factors and other parameters for coal, gas, transportation etc. Ministry of Commerce and

Industry has, in the month of April 2011, come up with "Revised new WPI series (2004-05 as base)". It is this "Revised new WPI series (2004-05 as base)" that has been used for computing the escalation factors for domestic coal, inland handling charges for coal and gas, inflation rate to be applied to indexed capacity charge and indexed energy charge in case of captive fuel in this current Notification.

3.8.2.3 The annual escalation factors and other parameters for bid evaluation have been computed based on the time series data for latest twelve calendar years i.e. for the period from 1999 to 2010. The basic formula used is:

e: *annual escalation rate in percent =g*100, where:*
g: *escalation factor =* ***[exp{{(6 x Σn t=2 (t-1) x LnRt}/{(n-1)x n x (2n-1)}}]-1***
Rt *= (Yt/Y1)*
Yt *= '"t" th observation*
Y1 *= initial observation*
n *= number of observations*

3.8.2.4 The annual escalation rate for parameters that require combining of two or more series in pre-determined proportion has been determined by combining each data point of two or more series in the pre-determined proportion to arrive at a composite new single series and then the annual escalation rate has been determined based on this composite new single series.

3.8.3 Escalation Rate for Domestic Role

3.8.3.1 The escalation rate for domestic coal has been computed based on the time series data on Wholesale Price Index (WPI) for non-coking coal for the period from 1999 to 2010. The data on WPI for non-coking coal for the period 2005-09 has been taken from the website of Ministry of Commerce & Industry and the data for the period prior to that has been arrived at by using conversion factor. The escalation rate for domestic coal has been computed as under:

Table 10: Escalation Rate for Domestic Coal

Escalation rate for domestic coal						
Sr. No	Year	WPI for Non Coking Coal	Yt/Y1= Rt	Ln Rt	Year - 1 (t-1)	Product <(t-1)*(Ln Rt)>
1	1999	64.77				
2	2000	67.07	1.04	0.03	1	0.03
3	2001	80.19	1.24	0.21	2	0.43
4	2002	81.38	1.26	0.23	3	0.68
5	2003	85.31	1.32	0.28	4	1.10
6	2004	96.50	1.49	0.40	5	1.99
7	2005	102.60	1.58	0.46	6	2.76
8	2006	102.50	1.58	0.46	7	3.21
9	2007	104.01	1.61	0.47	8	3.79
10	2008	112.70	1.74	0.55	9	4.98
11	2009	116.53	1.80	0.59	10	5.87
12	2010	131.20	2.03	0.71	11	7.76
A = Sum of Product Column						**32.63**
B = 6 times *A						**195.76**
C= (n-1)*n*(2n-1); n = no of years = 12						**3,036**
D= B/C						**0.06**
g (Exponential Factor)= Exponential (D)-1						**0.07**
e= Annual Escalation Rate (%)= g*100%						**6.66%**

3.8.4 Escalation rate for inland transportation charges for coal

3.8.4.1 The escalation rate for inland transportation charges for coal has been computed based on the time series data on coal freight rates for the period from 1999 to 2010. The data has been collected from Ministry of Railways. The escalation rate for inland transportation charges for coal has been taken keeping in mind the distance for coal linkage of CGS and other sources assuming it to be in the range of 500 kms for power generation. The escalation rate for inland transportation charges for coal has been computed as under:

Table 11: Escalation Rate for Transportation

Escalation rate for inland transportation charges for coal (upto 500 km)						
Sr. No	Year	Coal Freight Rate (Rs/Tonne)	Yt/Y1= Rt	Ln Rt	Year - 1 (t-1)	Product <(t-1)*(Ln Rt)>
1	1999	373.08				
2	2000	382.33	1.02	0.02	1	0.02
3	2001	389.98	1.05	0.04	2	0.09
4	2002	393.78	1.06	0.05	3	0.16
5	2003	394.40	1.06	0.06	4	0.22
6	2004	417.20	1.12	0.11	5	0.56
7	2005	424.80	1.14	0.13	6	0.78
8	2006	429.83	1.15	0.14	7	0.99
9	2007	431.50	1.16	0.15	8	1.16
10	2008	454.60	1.22	0.20	9	1.78
11	2009	462.30	1.24	0.21	10	2.14
12	2010	462.55	1.24	0.21	11	2.36
A = Sum of Product Column						**10.28**
B = 6 times *A						**61.67**
C= (n-1)*n*(2n-1); n = no of years = 12						**3,036**
D= B/C						**0.02**
g (Exponential Factor)= Exponential (D)-1						**0.02**
e= Annual Escalation Rate (%)= g*100%						**2.05%**

3.8.5 Total Escalation Rate

3.8.5.1 The escalation rate including domestic coal and transportation is shown below:

Table 12: Total Escalation Rate for Coal and Transportation

Particulars	Domestic Coal	Transportation	Total
Semi Annual Escalation Rate	3.33%	1.03%	4.36%
Annual Escalation rate	6.66%	2.05%	8.71%

3.8.6 Power Purchase from Central Generating Stations

3.8.6.1 As mentioned in preceding paragraphs on energy availability from central sector stations, the power purchase and cost from April 2011 to September 2011 has been taken on the actual basis and for the period from October 2011 to March 2011 the figures as per LGBR are considered. A semi annual escalation rate of 4.36% as stated above has been done on the next 6 months on NTPC stations actual six months average variable cost. For NHPC and NPCIL stations 3% escalation has been assumed on actual six months average variable cost. The cost of power purchase from NTPC, NHPC and NPCIL works out to be Rs **269.05** Crores for **896.94** MUs for FY 2011-12.

3.8.7 Power Purchase from other Sources

3.8.7.1 CED apart from CGS purchase power from BBMB, Koteshwar, Tehri, SJVNL, Beas I & II, Open market and UI. For these stations 3% escalation has been assumed on actual six months average variable cost except in Bilateral Trade/Open Market. For Open Market (PTC, Others), CED has considered the same rate as approved by the Hon'ble Commission. Also CED has been receiving power from Beas I & II from 01st Nov 2011. Out of allocated quota of 48.51 MW it is receiving only 11-12 MW due to some shutdown problem in the unit. The cost of power purchase from other sources works out to be Rs **306.33** Crores for **976.74** MUs for FY 2011-12.

3.8.7.2 Power Purchase cost (Rs/kWh) station wise has increased slightly as approved by the Hon'ble Commission due to the escalation factor projected as above on the first six months actual average variable cost and for the following reasons as below:

- Increase in BBMB rate (Due to increase in O&M and RMU expenses);
- Outstanding liability of BBMB due to above rise;
- Supplementary bills as received from NHPC and other generating stations due to tax and tariff revisions as per CERC directives;
- The arrears of last year liability paid in the FY 2011-12 due to non availability of fund in the last FY 2010-11;
- Implementation of Point of Connection (POC) charges as per CERC directives w.e.f. 01/07/2011.

3.8.8 Renewable Purchase Obligations

3.8.8.1 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.

Table 13: Renewable Purchase Obligation

Financial Year	Minimum quantum of purchase (in %) from renewable energy sources (in kWh)		
	Solar	Non Solar	Total
2010-11	0.25%	0.75%	1.00%
2011-12	0.30%	1.70%	2.00%
2012-13	0.40%	2.60%	3.00%

3.8.9 CED will purchase Renewable Energy Certificates as approved by the Hon'ble Commission in its last Tariff Order for FY 2011-12. The total cost for the same has been projected at Rs *16.03* Crores.

3.8.10 Transmission Charges

3.8.10.1 CED has considered the transmission charges payable to PGCIL as per 3 months average of FY 2010-11 for the period from April to June 2011 and projected from July 2011 to March 2012 as per new Point of Connection (POC) regime. As per new regime the transmission charges are levied per MW basis and for the energy drawn on per unit basis.

3.8.10.2 The Part-A transmission charges for drawal of power for Northern & Eastern Region is given in the table below:

Table 14: Transmission Charges - Part A

Regions	Rates Rs/Mw/Month	Average MW (Aug 11 to Nov 11 MW	July 2011 to March 2012 (9 months) - MW	Total Charges from July to March (Rs.Crs)
Northern Region	70000	190.73	1,716.53	12.02
Eastern Region (Kahalgaon II) **	80000			0.18
Total				12.19

***For Kahalgaon II Amount has been taken from ERPC August figure as base*

3.8.10.3 The Part-B transmission charges payable based on the generation of energy corresponding to the share of CED for the month of August 2011 is given below. The same is then computed for balance 9 months to project transmission charges for part B:

Table 15: Transmission Charges - Part B

Stations	August Amount (Rs)
Anta	642767
Auraiya	671578
Chamera I	1602161
Chamera II	415375
Dadri GPP	621171
Dadri II TPP	643228
Dhauliganga	355731
Dulhasti	421309
Jhajar	157080
NAPS	590779
Naptha Jhakri	1326402
RAPP B	188364
RAPP C	636443
Rihand I	1592443
Rihand II	1460353
Sewa II	162827
Singrauli	1572808
Salal	142016
Tehri	935735
Tanakpur	91720
Unchahar I	219115
Unchahar II	466322
Unchahar III	199451
Uri HPS	226402
Kahalgaon II	250346
Total - August (Rs.)	15591926
Total for 9 Months (Rs.Crs) - July 2011- March 2012	14.03

3.8.10.4 The total transmission charges paid/ payable to PGCIL, NRLDC, reactive energy etc are provided in the table below:

Table 16: Total Transmission Charges

Rs in Crores

Particulars	FY 2011-12
Part - A Transmission Charges (July-Mar 2012)	12.19
Part - B Transmission Charges (July-Mar 2012)	14.03
Actual Bill Payment for FY 2010-11 to PGCIL , NRLDC, Reactive Energy etc	25.70
Transmission Charges for April 11 to June 11 (on base of actual payment to PGCIL etc)	6.43
Reactive Energy	0.62
NRLDC	0.17
MUs Purchased	1,874
Total Excluding NRLDC and Reactive energy Charge	**32.65**
Total Including NRLDC and Reactive Energy Charge	**33.44**

3.8.11 Summary of Power Purchase Cost

3.8.11.1 The actual six months power purchase quantum MUs and cost for the same is tabulated below:

Table 17: Power Purchase Cost for FY 2011-12 (H1)

S.No.	Particulars	Actual (H1)			
		Units Purchased (MU's)	Average Fixed Cost (Rs/Kwh)	Average Variable Cost (Rs/Kwh)	Power Purchase Cost (Rs.Crs)
	NTPC				
1	*Singrauli*	60.69	0.74	1.11	11.23
2	*Rihand I*	72.21	1.13	1.10	16.15
3	*Rihand II*	55.90	1.30	1.23	14.19
4	*Unchahar I*	7.80	6.78	1.65	6.58
5	*Unchahar II*	16.04	1.81	1.57	5.42
6	*Unchahar III*	7.73	5.05	1.67	5.19
7	*Anta- G*	13.57	2.06	1.70	5.10
8	*Anta - RLNG*	0.25	-	2.80	0.07
9	*Auriya-G*	28.63	0.85	0.80	4.72
10	*Auriya - RLNG*	3.18	-	0.16	0.05
11	*Dadri-G*	16.07	1.65	1.54	5.12
12	*Dadri -RLNG*	0.18	-	2.78	0.05
13	*Kahalgaon II*	4.97	16.50	2.19	9.29
14	*Jajjar*	2.30	6.70	3.00	2.23
15	*Dadri II*	23.86	1.27	2.56	9.14
16	*Supplementary Bill*				0.60
	Less: Rebate				(3.76)
	NHPC				
14	*Salal*	6.51	0.37	0.40	0.50
15	*Tanakpur*	3.49	1.06	1.00	0.72
16	*Chamera I*	83.34	0.34	0.78	9.32
17	*Chamera II*	17.28	1.09	1.61	4.66
18	*Uri*	11.07	0.78	0.69	1.62
19	*Dhauliganga*	14.60	1.01	1.34	3.44
20	*Dulhasti*	21.20	1.99	2.74	10.03
21	*Sewa II*	6.39	1.71	1.78	2.23
	Supplementary Bill				20.26
	Less: Rebate				(1.02)
	NPCIL				
22	*NAPS*	15.69	0.26	2.01	3.56
23	*RAPP (Unit 3 & 4)*	9.75	2.47	2.40	4.75
24	*RAPP (Unit 5 & 6)*	33.26	-	3.03	10.08
	Less: Rebate				(0.37)
	Other Sources				
25	*Koteshwar*	1.63	3.13	2.21	0.87
26	*Tehri*	32.14	1.11	2.50	11.61
27	*SJVNL*	66.85	1.02	1.14	14.45
28	*Bhakra/BBMB*	314.43	0.40	2.64	95.57
29	*Beas I & II (dehar & Pong)#*	-	-	-	-
30	*Bilateral Trade*	126.81	-	4.23	53.60
31	*PGCIL*	-	-		26.20
32	*RPO*	-	-		1.37
33	*UI*	3.15	-	8.06	2.54
34	*PXIL*	0.93		3.12	0.28
35	*NRLDC F&C*				0.17
	Reactive Energy				0.62
	Less: Rebate				
	Total	**1,081.90**			**366.99**

3.8.11.2 The summary of total provisional power purchase expenses vs approved by the Hon'ble Commission along with power purchase quantum for the above mentioned sources for FY 2011-12 is tabulated below:

Table 18: Power Purchase Cost for FY 2011-12

Rs.Crs

FY 2011-2012		Approved				Provisional			
S.No	Particulars	Units Purchased (MU's)	Average Fixed Cost (Rs/Kwh)	Average Variable Cost (Rs/Kwh)	Power Purchase Cost (Rs.Crs)	Units Purchased (MU's)	*Average Fixed Cost (Rs/Kwh)	Average Variable Cost (Rs/Kwh)	Power Purchase Cost (Rs.Crs)
	NTPC								
1	Singrauli	118.85	0.79	0.74	18.14	118.55	0.54	1.15	20.12
2	Rihand I	115.26	1.28	0.73	23.17	115.26	1.08	1.15	25.67
3	Rihand II	110.91	1.51	0.81	25.73	110.91	1.04	1.29	25.85
4	Unchahar I	17.16	1.73	1.07	4.80	17.16	3.56	1.73	9.07
5	Unchahar II	35.46	1.89	1.07	10.50	35.46	1.34	1.64	10.58
6	Unchahar III	15.13	2.04	1.29	5.04	15.13	3.30	1.74	7.63
7	Anta- G	36.01	2.27	0.86	11.27	35.36	1.31	1.78	10.93
8	Anta - RLNG	-	-	-	-	0.65	-	2.92	0.19
9	Auriya-G	39.61	2.13	0.86	11.84	35.65	1.09	0.83	6.85
10	Auriya - RLNG	-	-	-	-	3.96	-	0.16	0.06
11	Dadri-G	40.58	2.13	0.87	12.17	40.13	1.44	1.60	12.20
12	Dadri -RLNG	-	-	-	-	0.45	-	2.90	0.13
13	Kahalgaon II	14.68	2.01	1.51	5.17	14.68	5.15	2.29	13.01
14	Jajjar	-	-	-	-	13.40	0.60	3.13	5.00
15	Dadri II	-	-	-	-	49.45	1.39	2.68	20.11
16	Supplementary Bill								0.60
	Less: Rebate								(3.76)
	NHPC								
14	Salal	9.43	0.38	0.32	0.66	9.43	0.68	0.41	1.03
15	Tanakpur	5.74	0.86	0.64	0.86	5.74	1.83	1.00	1.62
16	Chamera I	95.87	2.23	0.47	25.88	95.87	1.04	0.80	17.66
17	Chamera II	27.58	1.45	1.37	7.78	27.58	1.59	1.66	8.97
18	Uri	18.89	0.81	0.73	2.91	18.89	1.09	0.71	3.39
19	Dhauliganga	20.35	1.16	1.28	4.97	20.35	1.86	1.38	6.60
20	Dulhasti	32.60	2.43	2.00	14.44	32.60	3.43	2.82	20.39
21	Sewa II	5.39	1.82	1.25	1.65	5.39	5.46	1.84	3.93
	Supplementary Bill								20.26
	Less: Rebate								(1.02)
	NPCIL								
22	NAPS	22.44	0.47	1.30	3.97	22.44	-	2.27	5.05
23	RAPP (Unit 3 & 4)	-	-	-	-	22.93	-	2.57	8.08
24	RAPP (Unit 5 & 6)	29.52	0.71	2.29	8.86	29.52	-	1.18	9.21
	Less: Rebate								(0.37)
	Other Sources								
25	Koteshwar	-	-	-	-	2.80	1.87	2.27	1.16
26	Tehri	34.06	2.36	1.94	14.65	34.06	1.23	2.57	12.95
27	SJVNL	82.59	1.01	2.56	29.48	82.59		1.18	9.71
28	Bhakra/BBMB	548.66		2.65	145.39	548.66		2.73	149.76
29	Beas I & II (dehar & Pong)#	-	-	-	-	17.51		0.38	0.67
30	Bilateral Trade	206.14		4.50	92.76	285.50		4.50	128.48
31	PGCIL				22.35		32.65		32.65
32	RPO				16.00				16.03
33	UI	-	-	-	-	3.15		8.06	2.54
34	PXIL					2.47			1.06
35	NRLDC F&C								0.17
	Reactive Energy								0.62
	Less: Rebate								(1.62)
	Total	**1,682.61**			**520.45**	**1,873.69**			**623.24**

*Note: Average Fixed Cost includes **Others Charges**

3.8.11.3 The Hon'ble Commission is kindly requested to approve the total power purchase cost of Rs **623.24** Crores including transmission charges for FY 2011-12 as against Rs **520.45** Crores approved by the Hon'ble Commission as shown in table above.

3.8.11.4 It is submitted that any changes in the power purchase expenses during the year may be allowed to be recovered by CED from it consumers through a FPPPA Mechanism that may be notified by the Hon'ble Commission. The formula proposed by CED is discussed in detail in **Chapter 6.**

3.9 Operation and Maintenance Expenses

3.9.1 The Operation and maintenance (O&M) expenses comprise of three components namely:

a. Employee cost
b. Repairs & Maintenance expenses and
c. Administrative and General Expenses

3.9.2 As mentioned earlier in chapter 1, CED maintains its accounts on cash basis. Further CED 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 ARR.

3.9.3 JERC under its (Terms and Condition for Determination of Distribution Tariff) Regulations, 2009 has stated that

> *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;*

Table 19: Wholesale Price Index

WPI Data												
Month/Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2011	148.00	148.10	149.50	152.10	152.40	153.10	154.20	154.90	155.80			
2010	135.20	135.20	136.30	138.60	139.10	139.80	141.00	141.10	142.00	142.90	143.80	146.00
2009	124.40	123.30	123.50	125.00	125.90	126.80	128.20	129.60	130.30	131.00	132.90	133.40
2008	117.50	119.00	121.50	123.50	124.10	127.30	128.60	128.90	128.50	128.70	126.90	124.50
WPI as on 1st April 2011			9.68%									
WPI as on 1st April 2010			10.36%									

3.9.4 Number of Employees

3.9.4.1 The following table gives the details of number of Employees projected in preceding tariff petition, approved by Hon'ble Commission in last tariff order and provisional figures for FY 2011-12.

Table 20: No. of Employees

Sl.No	Particulars	Projected	Approved	Provisional
1	Total employees as on 1st April	1246	1178	1130
2	No of employees retired/retiring during the year	65	65	44
3	No of employees recruited	150	161	2
4	No of employees at the end of year	**1331**	**1274**	**1088**

3.9.4.2 The category wise break-up for employees for FY 2011-12 has been provided in **Annexure-2.**

3.9.5 Employee cost

3.9.5.1 The employee cost is the most important constituent of the O&M expenses. The employee cost includes the cost incurred on present employees as well as on the retired employees. The cost of present employees includes salary, dearness allowance payable to employees and other allowances such as bonus, HRA, LTC, and medical reimbursement etc.

3.9.5.2 The cost of pensioners includes, pension, encashment of leave salary, terminal benefits. The employees who retire are eligible for terminal benefits of Leave Encashment, Pension and Gratuity.

3.9.5.3 The Details of the salary expenses projected in preceding tariff petition, approved by Hon'ble Commission in last tariff order and provisional figures for FY 2011-12 are given in the below table. It also includes an allowance given to employees on account of electricity allowance. The same have been escalated taking into the account the WPI factor on the base of FY 2010-11 actual employee expenses of Rs **51.52** Crores excluding arrears on account of Vth Pay Commission Payment.

Table 21: Employee Expenses

Rs.Crs

S.No	Particulars	Projected	Approved*	Provisional
A	Salaries & Allowances			
1	Basic pay	37.60		33.08
2	Dearness pay	0.00		3.21
3	Dearness allowances	12.40		9.12
4	House rent allowances	3.23		2.95
5	Fixed medical allowances	0.86		0.41
6	Medical reimbursement charges	0.33		0.32
7	Other allowances	0.80		1.37
8	General incentive	0.00		0.04
9	Electricity Allowance			0.81
10	Total	55.23		**51.32**
B	Terminal Benefits			
11	Leave encashment	1.55		1.68
12	Gratuity	0.64		2.87
13	Communication of pension	0.44		1.16
14	Workmen compensation	0.04		0.04
15	Ex-gratia	0.03		0.03
16	Total	2.70		**5.78**
17	Any other expenses	0.00		0.20
18	Total	0.00		**0.20**
19	Total (9 +15+17)	57.92		57.30
20	Amount capilized	0.00		
21	Net amount	57.92		57.30
22	Add prior period expenses(Arrears of VI PayCommission)	0.00		0.00
23	Grand Total	**57.92**	**48.04**	**57.30**

**No details of Breakup for Approved Employee Expenses in Last Order*

3.9.5.4 It is therefore kindly requested to Hon'ble Commission to approve the employee expenses of Rs **57.30** Crores for FY 2011-12 as against Rs **48.04** Crores approved by the Hon'ble Commission.

3.9.6 Administration and General Expenses

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

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

3.9.6.2 The details of A&G expenses estimated for FY 2011-12 are provided in the table below:

Table 22: A&G Expenses

Rs.Crs

S.NO	Particulars	Projected	Approved	Provisional
1	Telephone, postage&telegrams/office	0.24	0.24	0.49
2	Consultancy fees	0.00	0.00	0.18
3	Technical fees/Regulatory Fees	1.71	1.71	0.48
4	Other professional charges	0.07	0.07	0.02
5	Conveyance& travel expenses	0.13	0.13	0.00
6	Electricity & water charges	0.11	0.11	0.11
7	Others	0.63	0.63	0.16
8	Other material related expenses	0.17	0.17	0.00
9	Total	**3.06**	**3.06**	**1.44**
10	Add/Deduct share of others	0.00	0.00	0.00
11	Total expenses	**3.06**	**3.06**	**1.44**
12	Less capitalized	0.00	0.00	0.00
13	Net expenses	**3.06**	**3.06**	**1.44**
14	Add prior period	0.00	0.00	0.00
15	Total expenses charged to revenue	**3.06**	**3.06**	**1.44**

3.9.6.3 It is therefore kindly requested to Hon'ble Commission to approve the net A&G expenses of Rs **1.44** Crores as against Rs **3.06** Crores approved by the Hon'ble Commission for FY 2011-12.

3.9.7 Repairs and Maintenance Expenses

3.9.7.1 CED 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 details of the provisional R&M expenses for FY 2011-12 are given in the table below:

Table 23: R&M Expenses

Rs.Crs

Sl.No	Particulars	Projected	Approved	Provisional
1	Plant and Machinery	3.65	3.65	4.74
2	Building	0.04	0.04	0.44
3	Hydraulic /Civil works	0.36	0.36	0.16
4	Lines Cables and network	2.75	2.75	3.32
5	Vehicles	0.77	0.77	0.88
6	Minor R&M Works	0.00	0.00	0.11
7	Furniture and Fixtures	0.01	0.01	0.00
8	Total R&M cost	**7.58**	**7.58**	**9.65**

3.9.7.2 It is therefore kindly requested to Hon'ble Commission to approve the net R&M expenses of Rs **9.65** Crores as against Rs **7.58** Crores approved by the Hon'ble Commission for FY 2011-12.

3.9.7.3 The overall summary of O&M Expenditure for FY 2011-12 is estimated to be about Rs **68.40** Crores as against Rs **58.68** Crores approved by the Hon'ble Commission and is tabulated below:

Table 24: O&M Expenses - Approved Vs Provisional

Rs.Crs

S.No	Particulars	Projected	Approved	Provisional
1	Employee Expenses	57.92	48.04	57.30
2	A&G Expenses	3.06	3.06	1.44
3	R&M Expenses	7.58	7.58	9.65
4	Sub-Total	68.56	58.68	68.40
5	Less:Expenses Capitalised	-	-	-
6	Total O&M expenses	**68.56**	**58.68**	**68.40**

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

3.10 Capital Expenditure and Capitalization

3.10.1 The prevailing infrastructure of CED is insufficient to cater to the present load and hence to meet the increasing demand from different categories of

Consumers, it is absolutely necessary to undertake significant capital expenditure.

3.10.2 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 UT Chandigarh.

3.10.3 Majority of CED capex schemes are on annual ongoing basis. The various types of capital expenditure schemes carried by CED under different heads are as follows:

3.10.3.1 220 kV Works

- The Scheme is for extending the network and providing distribution transformer centres and releasing of service connections and load demand to all categories of consumers. The laying of underground cable for releasing connection to major consumers will also be taken up.
- Regular maintenance of Transmission lines etc.
- Erection of Transformer centres, metering structure, equipment for releasing of power supply to the intending consumers;
- Releasing of power supply and providing of metering to the intending consumers at different voltage levels.

3.10.3.2 66 kV Works

- To meet the rising load demand and to provide better and reliable service to the consumers
- To meet the increase in commercial load because of the modernization;
- To maintain the power factor, automatic power factor control relays to be installed etc;

3.10.3.3 33 kV Works

- Extension of 33 KV, 11 KV and LT lines for arranging power supply to individual and group of consumers;

- To meet the increase in commercial load; etc

3.10.3.4 11 kV and below Works

- 11 kV and below works constitute of which are undertaken on continuous basis to maintain/upgrade system. These are expenditure which constitute numerous works at lower level which constitutes of:

  - To improve voltage at the tail end of each distribution system
  - Better power transformation
  - Less line losses
  - Less electrical accidents and breakdowns
  - Avoiding overloading of transformers and lines

3.10.3.5 The details of the capital expenditure and capitalization of major schemes are summarized as under:

Table 25: Capital Expenditure and Capitalization

Rs in Crores

S.No	Particulars	Estimated	Approved	Projected
A	**220 kV Works:**			
1	Prov O&M of 220/66 kV Nalagarh Manimajra Transmission Line			0.75
2	Turnkey Execution of Prov. Addl. 1*100 MVA(2) 220/66 kV T/F at existing 220 kV S/S Kishangarh Manimajra			
3	Prov 2nd ckt of 220 kV spply on the existing D/C from nalagarh to 220 kV S/S Kishangarh			
4	Providing 3rd 100 MVA 220/66KV T/F at 220KV S/Stn. Manimajra	1.45	1.45	3.95
B	**66 kV Works:**			
1	Conversion and rerouting of 3 no. existing 66 kV O/H line on U/G cables on turnkey basis RGTP Chandigarh			0.07
2	Prov 5 No 66KV outgoing feeders from 220/66 kV Grid S/S. Manimajra to various Grid S/S in UT Chandigarh			
3	Prov 2*20 MVA 66/11 kV G/S/S at Manimajra along with 66 kV line from 220 kVA S/S Manimajra			
4	Prov 1*20 MVA T/F 66/11 kV at existing 66 kV G/S/S Indl. Area Phase II Chd			
5	Prov 1*20 MVA T/F 66/33 kV & 2*10/12.5 MVA S/S Sec 18A Chd			
6	Re routing of OPGW at 66 kV Pinjore, Chd			
7	Prov. 11 kV automatic capacitor banks at various esisitng 66 kV G/S/S	3.35	3.35	2.50
8	Turnkey Execution of addl. 66/11 kV 1*20 MVA T/F at existing 66/11 kV at IT park S/S	1.00	1.00	0.50
9	Upgradation of T/F capacity at 66/11 kV G/S/S IT Park by replacing existing 2*12.5 MVA 66/11 kV T/F with 2*20 MVA 66/11Kv Transformers and shifting of 2*12.5 MVA T/Fs at existing 66/11KV substations at Civil Sectt Sec1 and Sec 12	1.00	1.00	0.40
10	Turnkey execution of 66 kV S/S Sec 56, Chd			
11	Prov. Addl. 1*20 MVA T/F 66/11 kV at existing 66 kV G/S/S indl Area Phase I Chd			
12	Turnkey execution of 2*20 MVA 66/11 G/S/S, Raipr Kalan	3.45	3.45	2.00
13	Turnkey execution 1*30 MVA 66/11 kV addl T/F at 66/11 kV G/S/S Sec 52	2.50	2.50	1.00
14	Turnkey Execution of new 66/11 kV 2*20 MVA G/S/S in institution area of village sarangpur, Chd	3.50	3.50	2.50
15	Upgradation of existing 33 kV G/S/S to 66 kV voltage level by providing 1*30 MVA, 66/11 kV power transformer alongwith associated transmission line in sector 34 C	1.00	1.00	0.60
16	Turnkey Execution of new1*20 MVA 66/11 kV power T/F on existing bay at 66/11 kV G/S/S s 47, Chd	0.50	0.50	0.35
C	**New Works-66 KV**			
1	Providing 66KV Transmission line from 66KV Sub-Station Industrial Area, Phase-I to proposed 66KV Sub-Station Raipur Kalan.	0.50	0.50	0.76
2	Providing D/C 66KV Overhead Transmission line on Mono Tubular Poles from T-off point to proposed 66KV Sub-Station Village Sarangpur	0.50	0.50	0.77
3	Conversion of existing 66 KV S/C transmission line and underground cable from 220 kV S/Stn. Kishangarh to sector–12, Chandigarh to D/C transmission line	0.50	0.50	0.76
D	**33 kV Works:**			
1	Providing 1*20 MVA, 33/11 kVA T/F with allied equipment at existing 33 kV S/S Sector 17 Chd			1.00
E	**11 kV and below works:**			
1	Other Infrastructure improvement, T/F etc	5.00	5.00	7.09
	Total	**24.25**	**24.25**	**25.00**

3.10.4 Capital Work in Progress

3.10.4.1 The details of the opening capital works-in-progress, investments during the year and investments capitalised for the year are summarised in the below table:

Table 26: Capital Work in Progress

Rs.Crs

S.No.	Particulars	Projected	Approved	Provisional
1	**Opening Balance**	-	-	-
2	**Capital Investments during the year**	24.25	24.25	25.00
3	**Less investment capitalized**	24.25	24.25	25.00
4	**Closing Balance**	-	-	-

3.10.4.2 CED proposes to capitalize the whole capital expenditure. The works during the year will be fully capitalized by the end of the year and transferred to into GFA leaving no balance under CWIP. It is therefore kindly requested to Hon'ble Commission to approve the capital expenditure of Rs **25.00** Crores as against Rs **24.25** Crores approved by the Hon'ble Commission for FY 2011-12.

3.11 GFA and Depreciation

3.11.1 CED submits that the funding for the capital expenditure is normally through the internal reserves/ equity contribution from GOI. According to 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.

3.11.2 The Regulation 22 (2) of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 reads as follows:

"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".

3.11.3 The Hon'ble Commission has disallowed the GFA and depreciation on the absence of Fixed Asset register. The Petitioner submits that in the absence of fixed asset register (FAR), the asset-wise detail is currently not available and thereby requests the Hon'ble Commission to approve the above GFA &

depreciation charges. The petitioner submits that the asset-wise details are being assimilated and will be made available with the future filings.

3.11.4 Gross Fixed Assets (GFA) and the depreciation on GFA for FY 2011-12 are discussed hereunder. The computation of depreciation is based on Straight Line Method of computation. Further it is confirmed that the depreciation on assets beyond 90% of the assets value is not provided / claimed by CED. The table below summarises the Gross Fixed Assets and Depreciation for the FY 2011-12 projected by CED in the preceding Tariff Petition, approved by the Hon'ble Commission in its Tariff Order for FY 2011-12 and the provisional figures based on the unaudited books of accounts

Table 27 : GFA and Depreciation

Rs.Crs

Sl.No	Particulars	Projected	Approved	Provisional
1	Opening GFA	358.20		359.74
2	Closing GFA	385.70	8.91	384.74
3	Average GFA	371.90	4.46	372.24
4	Average Rate of Depreciation	4.14%	5.28%	5.28%
5	Depreciation Charges	**15.41**	**0.24**	**19.65**

3.11.5 It is therefore kindly requested to Hon'ble Commission to approve the closing GFA and Depreciation of Rs **384.74** and Rs **19.65** Crores respectively.

3.12 Interest on Loan

3.12.1 The entire capital expenditure incurred by CED had been funded through equity infusion by GOI through budgetary support without any external borrowings. The Hon'ble Commission has disallowed the GFA and depreciation on the absence of Fixed Asset register, as a result Interest on loan was disallowed as well.

3.12.2 However as per JERC Regulations, 2009 Clause 25 for the purpose of determining the ARR, the CED had considered debt equity ratio of 70:30 for projecting normative loan. CED has considered repayment to be equal to 1/10th of the opening loan. The interest at the SBI PLR rate was applied on the average normative debt in order to project the normative interest on long term loans for FY 2011-12.

Table 28 : Interest on Loan

Rs.Crs

S.No.	Particulars	Projected	Approved	Provisional
1	Opening balance	162.62	NIL	217.84
2	Add: Loan during the year	19.25		17.50
3	Less: Normative Repayment	15.41		21.78
4	Closing Normative Loan	166.46		213.56
5	Average Normative Loan	164.54		215.70
6	Rate of Interest	12.25%		12.25%
7	Interest on Normative Loan	**20.16**		**29.22**

3.12.3 It is therefore kindly requested to Hon'ble Commission to approve the Interest on loan of Rs **29.22** Crores for FY 2011-12.

3.13 Interest on Working Capital

3.13.1 In accordance with Clause 29 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 the interest on working capital shall be allowed to meet the shortfall in collections over and above the target approved by the Hon'ble Commission. The rate of interest on working capital has been considered as SBI Prime lending rate as on 1st April of the respective years, which was 13.25% as on 1st April 2011. Accordingly, CED requests the Hon'ble Commission to approve Interest on Normative Working Capital at Rs. **7.64** Crs as against which the Hon'ble Commission approved an amount of Rs **5.67** Crs in its last Tariff Order.

Table 29: Interest on Working Capital

Rs.Crs

S.NO.	Particulars	Projected	Approved	Provisional
1	Power Purchase Cost	59.82	43.37	51.94
2	Employees Cost	4.83	4.00	4.78
3	Administration & General Expenses	0.26	0.26	0.12
4	Repair & Maintenance Expenses	0.63	0.63	0.80
5	Total Working Capital	65.53	48.26	57.64
6	SBI PLR	12.25%	11.75%	13.25%
7	Interest on Working Capital	**8.03**	**5.67**	**7.64**

3.14 Interest on Security Deposit

3.14.1 In accordance with Clause 47(4) of Electricity Act 2003, 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. However CED did

not ask for the same in last petition due to unavailability of information of amount of security deposit collected from consumer. The below table provides the Provisional figures of FY 2011-12.

Table 30: Interest on Security Deposit

Rs.Crs

S.No	Particulars	Projected	Approved	Provisional
1	Opening Security Deposit			31.11
2	Add: Deposits during the Year			1.62
3	Less: Deposits refunded			(0.02)
4	Closing Security Deposit			32.74
5	Bank Rate			0.06
6	Interest on Security Deposit	N.A	N.A	**1.96**

3.14.2 It is therefore kindly requested to Hon'ble Commission to approve the Interest on security deposit of Rs **1.96** Crores for FY 2011-12.

3.15 Return on Equity

3.15.1 CED, in its earlier petition had projected return on equity at Rs. **18.51** Crores for FY 2011-12, on normative basis. However, Commission did not consider return on equity as CED did not maintained the asset and depreciation registers. As stated above, the asset-wise details are being assimilated and will be made available with the future filings. The provision of Regulation 23 (2) and Regulation 24 of Tariff Regulations 2009 provides for entitlement for Returns on Capital Base/ Net Fixed Assets by utility / licensee. The below table provides the Provisional figures of FY 2011-12. .

Table 31 : Return on Equity

Rs.Crs

S.No	Particulars	Provisional
1	Gross block at beginning of the year	359.74
2	Less accumulated depreciation	90.43
3	Net block at beginning of the year	269.31
4	Less accumulated consumer contribution	-
5	Net fixed assets at beginning of the year	269.31
6	Reasonable return @3% of NFA	**8.08**

3.15.2 It is therefore kindly requested to Hon'ble Commission to approve the Return on Equity of Rs **8.08** Crores for FY 2011-12.

3.16 Advance Against Depreciation

3.16.1 In accordance with Clause 26 (2) of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 a licensee can claim AAD if the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year. In case of inadequacy of cash for repayment of debt, only in extreme cases, the Commission may allow Advance against Depreciation (AAD) in addition to the allowable Depreciation. CED hasn't claimed the same in its last tariff petition.

Table 32: Advance against Depreciation

Rs.Crs

S.No	Particulars	Projected	Approved	Provisional
1	1/10th of the Loan(s)			21.36
2	Repayment of the Loan(s) as considered for working out Interest on Loan			21.78
3	Minimum of the Above			21.36
4	Less: Depreciation during the year			19.65
	A			
5	Cumulative Repayment of the Loan(s) as considered for working out Interest on Loan			55.76
6	Less: Cumulative Depreciation			38.11
7	Advance Against Depreciation (minimum of A or B)	Nil	Nil	**17.65**

3.16.2 It is therefore kindly requested to Hon'ble Commission to approve the Advance against Depreciation of Rs **17.65** Crores.

3.17 Provision for Bad Debts

3.17.1 CED had projected the amount of Rs. **2.44** Crores for FY 2011-12, however due to lack of details of debts, the Hon'ble Commission approved the amount of Rs **0.02** Crores. The details have been furnished in below table:

Table 33 : Provision for Bad Debts

Rs.Crs

Sl.No	Particulars	Projected	Approved	Provisional
1	Total Receivable Doubtful Debts	487.11		563.60
2	Provision for Bad & Doubtful Debts (%)	0.50%		1.00%
3	Provision for Bad & Doubtful Debts	**2.44**	**0.02**	**5.64**

3.17.2 In accordance with Clause 28 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009:

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

3.17.3 CED submits that the asset-wise details are being assimilated and will be made available with the future filings.CED submits to the Hon'ble Commission that provisioning for bad debts is a standard business practise and the same is allowed to be recovered from the consumers through the ARR as a legitimate expense by most of the Regulatory Commission's across the country like MERC, UPERC, etc ranging from 0.50% to 2.0%.

3.17.4 It is therefore kindly requested to Hon'ble Commission to approve the Provision for Bad Debt of Rs. **5.64** Crores as against Rs **0.02** Crores approved by the Hon'ble Commission for FY 2011-12.

3.18 Non Tariff Income

3.18.1 The Non-tariff income comprises of metering, late payment charges, interest on staff loans, reconnection fee, miscellaneous revenue etc.

3.18.2 CED had projected Rs. **12.15** Crores as its Non-Tariff Income for FY 2011-12 in its previous Tariff Petition; however Hon'ble Commission approved Rs. **15.34** Crores in its last Tariff Order for FY 2011-12. As against the same the provisional NTI is Rs **10.87** Crores, which the licensee requests the Hon'ble Commission to approve.

Table 34 : Non Tariff Income

Rs.Crs

Sl.No	Particulars	Projected	Approved	Provisional
1	Meter/Service rent			5.11
2	Late Payment Surcharge			1.36
3	Theft/Pillage of energy			0.32
4	Wheeling charges under open access			
5	Interest on Staff loans & Advances			
6	Income from Trading			
7	Income Staff Welfare Actives			
8	Investment & bank balances			
9	Misc Receipt/income			4.09
10	Total income			10.87
11	Add prior period income			
12	Total non tariff income	12.15	15.34	10.87

Note:-Breakup for Projected & Approved NTI not availaible in Last Order

3.19 Revenue from sale of Surplus Power

3.19.1 CED has estimated that there will be surplus available during off-peak hours which will be sold to Pool / Power Exchanges / UI as this year season has been good. The revenue earned by CED from actual sale of surplus power till November FY 2011- 12 through exchanges is Rs **22.46** Crores for **77.43** MUs and UI is Rs **15.36** Crores for **85.05** MUs.

3.20 Revenue from Existing Tariff for FY 2011-12

3.20.1 The consumer category-wise Revenue from Existing Tariff for FY 2011-12 as per provisional figures in the books of accounts is given under the table below.

Table 35: Revenue from Existing Tariff for FY 2011-12

Category	Sales (MU)	Revenue from Sale of Power (Rs. Crores)				Average tariff (Rs/Kwh)
		Fixed Charges	Energy Charges	Others	Total Revenue	
Domestic	170,526.99	0.00	194.41	0.00	194.41	3.58
0-150 kWh	63,490.40	0.00	14.87	0.00	14.87	2.10
Above 150 kWh	107,036.59	0.00	179.54	0.00	179.54	3.80
Commercial	25,222.24	16.23	173.04	0.00	189.27	4.48
0-20 kW	23,109.06	0.62	56.64	0.00	57.26	4.14
Above 20 kW	2,113.18	15.62	116.40	0.00	132.02	4.65
Large Supply	102.76	4.68	57.70	0.00	62.38	4.43
Small Power	1,301.45	0.12	9.58	0.00	9.70	4.15
Medium Supply	1,118.10	4.40	37.25	0.00	41.65	4.58
Agriculture	126.21	0.00	0.33	0.00	0.33	2.10
Public Lighting	718.36	0.40	7.10	0.00	7.49	4.33
Bulk Supply	327.17	2.61	38.04	0.00	40.65	4.38
Others - Temporary Supply	949.43	0.00	17.72	0.00	17.72	5.10
Total	**200,392.72**	**28.43**	**535.17**	**0.00**	**563.60**	**4.12**

3.21 ARR and Revenue Gap for FY 2011-12

3.21.1 CED now estimates its revised provisional Annual Revenue Requirement for FY 2011-12 at Rs **732.77** Crs and its Revenue from Existing Tariff at Rs **563.60** Crs.

3.21.2 Based on the discussions in the preceding paras of this chapter, the table below summarizes ARR for FY 2011-12 as projected by CED in preceding Tariff Petition, ARR approved by the Hon'ble Commission in its Tariff Order for FY 2011-12 and revised provisional ARR computed for FY 2011-12.

Table 36: Revised ARR for FY 2011-12

Rs in Crores

S.NO.	Particulars	FY 2011-2012		
		Projected	Approved	Provisional
1	Power Purchase Cost	717.80	520.45	623.24
2	Employee costs	57.92	48.04	57.30
3	R&M expenses	7.58	7.58	9.65
4	Administration and general expenses	3.07	3.06	1.44
5	Depreciation	15.41	0.24	19.65
6	Interest charges (including Security Deposit , WC)	28.19	5.67	38.82
7	Return on NFA /Equity	18.51	0.00	8.08
8	Provision for Bad Debt	2.44	0.02	5.64
9	Advance Against Depreciation	0.00	0.00	17.65
10	Total Revenue Requirement	**850.93**	**585.06**	**781.47**
11	Less: Non Tariff Income	12.15	15.47	10.87
12	Less: Revenue from Sale through UI	0.00	0.00	15.36
13	Less: Revenue from Sale through Power Exchange	0.00	0.00	22.46
14	Net Revenue Requirement	**838.77**	**569.59**	**732.77**
15	Revenue from Retail Sales at Existing Tariff	487.11	463.87	563.60
16	Net Gap	**351.66**	**105.72**	**169.17**
17	Gap for the previous year			
18	Total gap	**351.66**	**105.72**	**169.17**
19	Budgetary Support from Government			
20	Net Final Revenue Gap/ (Surplus)	**351.66**	**105.72**	**169.17**
21	Energy sales (MU)	**1428.28**	**1348.89**	**1367.00**

3.21.3 Accordingly, the petitioner requests the Hon'ble Commission to kindly approve the Net revenue requirement of Rs. **732.77** Crs for revenue gap/ (surplus) of Rs. **169.17** Crs for FY 2011-12 to be added in revenue gap / (surplus) of FY 2012-13.

Chapter 4. ARR Determination for FY 2012-13

4.1 Introduction

4.1.1 In this section CED outlines its projections for the FY 2012-13 considering the performance for FY 2011-12 which is based on provisional figures available in the books of CED. Though the figures of FY 2011-12 have already been presented in detail in the previous chapter however, for the purpose of explaining the basis of projections for FY 2012-13 in a better way, the same have been reproduced along with the projected figures of FY 2011-12 wherever applicable and felt necessary.

4.2 CAGR for FY 2012-13

4.2.1 It has been observed from past experience that the historical trend method has proved to be a reasonably accurate and well accepted method for estimating the load, number of consumers and energy consumption. In light of the above, CED has estimated the above for various customer categories primarily based on the Cumulative Average Growth Rate (CAGR) trends during past years. Wherever the trend has seemed unreasonable or unsustainable, the growth factors have been corrected by the CED, to arrive at more realistic projections.

4.2.2 The Cumulative Average Growth Rate (%) for No of Consumers, Connected Load and Sales (MUs) has been derived on the base as shown in **Chapter 2** is shown below:

Table 37: CAGR for FY 2011-12 Vs FY 2012-13

S.No.	Category	FY 2011-2012 (Provisional)			FY 2012-13 (Projected)		
		Sales	Consumer Base	Connected Load	Sales	Consumer Base	Connected Load
1	Domestic	5.03%	1.25%	4.15%	4.82%	1.27%	4.15%
2	Commercial	6.16%	1.55%	5.89%	7.76%	1.74%	6.02%
3	Large Supply	0.39%	0.75%	-0.05%	-0.22%	0.19%	-0.78%
4	Small Power	10.80%	1.20%	4.50%	9.94%	-1.08%	5.76%
5	Medium Supply	1.82%	7.30%	9.99%	-0.04%	6.63%	10.75%
6	Agriculture	-4.82%	-5.10%	-7.31%	11.80%	-6.19%	-8.80%
7	Public Lighting	1.58%	5.95%	9.45%	3.64%	7.10%	11.72%
8	Bulk Supply	27.07%	14.40%	26.05%	29.49%	14.55%	32.77%

4.3 Number of Consumer's and Load Projections

4.3.1 The numbers of consumers as at March 2012 as well as the projected number of consumers at the end of FY 2012-13 are depicted in the table below. The number of consumers expected to be added are being projected based on the number of applications for new connections already being processed, applications received but not yet processed and new application expected during the course of FY 2012-13. CED expects that approximately **3,011** number of Consumer would be added up in FY 2012-13, increasing the total number of consumer from **200,393** to **203,404** .

Table 38: Number of Consumers

Consumer Category	FY 2011-12	FY 2012-13
	Provisional	Projected
Domestic	170,527	172,700
0-150 kWh	63,490	64,299
Above 150 kWh	107,037	108,401
Commercial	25,222	25,662
0-20 kW	23,109	23,512
Above 20 kW	2,113	2,150
Large Supply	103	103
Small Power	1,301	1,287
Medium Supply	1,118	1,192
Agriculture	126	118
Public Lighting	718	769
Bulk Supply	327	375
Others - Temporary Supply	949	1,196
Total	**200,393**	**203,404**

4.3.2 Accordingly, the growth projection in Connected Load / Contract Demand has been depicted in the table below, based on the corresponding increase in number of consumers. In respect of new applications, the corresponding load enhancement has been projected based upon CAGR taking into consideration the past trends.

Table 39: Connected Load

KW

Consumer Category	FY 2011-12	FY 2012-13
	Provisional	Projected
Domestic	635,239	661,608
0-150 kWh	121,530	126,575
Above 150 kWh	513,709	535,033
Commercial	319,525	338,771
0-20 kW	102,636	108,818
Above 20 kW	216,889	229,953
Large Supply	64,993	64,489
Small Power	19,332	20,446
Medium Supply	61,116	67,683
Agriculture	683	623
Public Lighting	5,515	6,162
Bulk Supply	36,232	48,105
Others - Temporary Supply	31,278	59,462
Total	**1,173,913**	**1,267,349**

4.3.3 Accordingly, CED requests the Hon'ble Commission to kindly approve number of consumers and connected load for FY 2012-13.

4.4 Energy Sales Projections

4.4.1 After finalising connected load for each of the consumer category, energy sales has been projected by CAGR taking into consideration the past trends of each of the consumer category. The consumption/ sales from new consumers are estimated based on the period of application to be processed.

4.4.2 The provisional sales for FY 2011-12 as well as the projected Energy Sales for FY 2012-13 based on the methodology explained in the previous paras for each consumer category is shown below.

Table 40: Energy Sales

Mus

Consumer Category	FY 2011-12	FY 2012-13
	Provisional	Projected
Domestic	543	569
0-150 kWh	71	74
Above 150 kWh	472	495
Commercial	422	455
0-20 kW	138	149
Above 20 kW	284	306
Large Supply	141	140
Small Power	23	26
Medium Supply	91	91
Agriculture	2	2
Public Lighting	17	18
Bulk Supply	93	120
Others - Temporary Supply	35	44
Total	**1,367**	**1,465**

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4.4.3 Accordingly, CED requests the Hon'ble Commission to kindly approve sales of **1,465** MUs for FY 2012-13. ***The figures of Number of Consumers, Connected Load and Sales for FY 2010-11 & FY 2011-12 & FY 2012-13 are provided in Format 1 of Tariff Filing Formats.***

4.5 Distribution Losses and Energy Balance

4.5.1 The distribution loss has been fluctuating every year due to operational level changes in power system network with additions of each consumer pending stabilisation of the network system. Since the inception of its operations, CED has been committed to take the best possible measures to minimise its distribution losses. CED shall continue to demonstrate its total commitment towards minimising its distribution losses to the best possible level approaching technical limits.

4.5.2 With the increase in network spread, increase in load on the existing distribution system and increase in number of low tension consumers in the system, the Distribution Losses are likely to increase. The Distribution Losses of the preceding years shall not be considered as a performance benchmark while projecting for the future energy requirements till the system is reasonably stabilised and consists of reasonable representation from all categories of consumers throughout the spread of the licensed area.

4.5.3 The overall collection efficiency of the petitioner is in the range of 99%. The Government of India (GoI) has set the target to reduce the AT&C losses to a level of 15% by the end of 11th 5-year plan i.e. by the end of FY 2011-12. Accordingly, the petitioner has also initiated steps to bring down the AT&C loss level to the target set by GoI in the near future.

4.5.4 The petitioner expects to achieve the T&D loss level of **17.00%** for FY 2012-13 as against provisional figures of **17.00%** for FY 2011-12 and corresponding AT&C loss level of **17.83%**, by targeting the average collection efficiency of **99.00%** during FY 2012-13. The Inter-state transmission losses have been projected to be **3.89%** for FY 2012-13 in line with FY 2011-12 losses which was approved by the Hon'ble Commission in its last Tariff order.

4.5.3 CED has been and shall continue to be committed towards taking the best possible measures to minimise its distribution losses by adopting pro-active approach and adopting best practices prevalent in the distribution sector in India. However, CED submits that decrease in distribution losses below this level shall involve huge capital investments. CED submits that it shall continue its endeavour towards operating at the lowest loss levels feasible and accordingly the actual losses reported may be considered at the time of true – up of FY 2011-12 figures. ***The figures of AT&C loss for FY 2010-11 & FY 2011-12 & FY 2012-13 are provided in Format 2 of Tariff Filing Formats.***

4.6 Loss Reduction/Demand Side Management

4.6.1 CED submits that apart from normal / routine measures to reduce the losses, following measures are planned under Loss Reduction Programme/ DSM for FY 2012-13:

4.6.1.1 CED, as a part of the Demand Side Efficiency initiative, intends to implement the energy efficiency programme for promotion of energy efficiency in lighting system of the residential household consumers in its area based on the parameters laid down by Bureau of Energy Efficiency, Govt. of India under "Bachat Lamp Yojna" (BLY);

4.6.1.2 As per Section 4.13(2) of Electricity Supply Code regulation 2010 notified by JERC, Electricity Department has launched "Self Declaration of connected load" Scheme. This was launched to enable the department to upgrade its Electricity

Distribution System and approx 5000 applications has been received. This process will be repeated after every six month;

4.6.1.3 Load flow Study – To help in better distribution planning and network optimization;

4.6.1.4 New Substations and Renovation and modernization of Sub stations have also been carried out;

4.6.1.5 In order to improve voltage profile and reactive power management, DNIT for the installation of capacitor banks on distribution transformers is under progress;

4.6.1.6 In order to increase the reliability of power supply , the existing single circuit transmission feeder is under planning stage to make it double circuit;

4.6.1.7 For theft prevention:

- Regular connection checking by field staff as well as Enforcement team.
- Energy meters are being installed outside the premise.
- Energy audit is being carried out for Industrial consumers.
- Regular kundi connection removal drive in colonies as well as in villages.
- Electro-mechanical meters are being replaced with Electronic meters.
- In the case of 8448 no. of CHB houses developed by Chandigarh Housing Board in village Dhanas, electrification scheme has been approved with the provision of 11 kV line network, 45 nos. of 200 kVA distribution transformers star rated and reduced length of LT underground network to prevent the possible electricity theft and to curb losses.
- Tender has been called for O&M of Electricity distribution, meter reading, bill distribution and collection of arrears to residents outside Lal Dora of Village Daria;

- Replacement of bare conductor with arial bunched conductor wherever required;
- Installation of suitable /appropriate meters to detect theft under R-APDRP;
- Intensify the connection checking drive;
- Energy audit up to distribution transformer under R-APDRP.

4.7 Energy Balance

4.7.1 On the other hand, the Energy Availability from its various sources of power has been projected by CED duly taking into account the endeavour to supply 24 hours uninterrupted power supply to the consumers in its licensed area. The power availability from the main and cheapest source has been projected based upon the projections made by it in its last Tariff Petition for FY 2011-12. The Energy Balance of CED for FY 2012-13 based on the Energy Sales, T&D Loss % and Source-wise Energy purchase being projected by CED is given below:

Table 41: Energy Balance

Mus

S.No	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
A	ENERGY REQUIREMENT		
1	Energy Sales	1,367	1,465
2	T&D Losses	280	300
3	T&D Losses (%)	17.00%	17.00%
4	Energy required at the periphery of Chandigarh	1,647	1,765
5	Add: Sales to common pool consumers/ UI	162	162
6	Inter-State Transmission Loss (%)	3.89%	3.89%
7	Total Energy Requirement for State	1,809	1,927
8	Pool Losses in PGCIL Network	65	68
9	Energy Required to be purchased	1,874	1,995
B	Energy Available from CGS and other sources	1,874	1,995
1	Central Generating Stations	897	897
2	Other Sources	977	1,098
3	Energy Surplus/Deficit	-	-
4	AT&C Loss (%)	17.83%	17.83%

4.7.2 Accordingly, CED requests the Hon'ble Commission to kindly approve the distribution loss, AT&C losses as discussed above. ***The figures of Energy Balance***

for 2010-11 & FY 2011-12 & FY 2012-13 are provided in Format 3 of Tariff Filing Formats.

4.8 Annual Revenue Requirement for Chandigarh Electricity Department

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

- Power Purchase Costs
- Transmission Charges
- Operation and Maintenance Expenses
- Depreciation
- Interest charges
- Interest on working capital
- Interest on security deposit
- Return on Capital Base/ NFA
- Provision for Bad and Doubtful Debts
- Less: Non Tariff Income

4.9 Power Purchase Quantum

4.9.1 The petitioner has no power generation of its own. The major sources from which the petitioner procures power are:

- Central Generating Stations (CGS) viz. NTPC, NHPC, NPCIL
- Other sources viz., BBMB, SJVNL etc

4.9.2 The occasional shortage in supply due to excess demand is met through the short term power purchase, UI and other trading sources. The petitioner receives the fixed allocated share from CGS to meet its energy requirements. Moreover, a variable quantum of power from the unallocated share is also allotted in various CGS at different intervals during a year. CED has taken the same quantum of power purchased as projected in FY 2011-12 to maintain supply and service at the desired level except in bilateral trade/open market/PTC etc where it has been increased to meet the demand.

4.9.3 Considering the availability of provisional power purchase detail for FY 2011-12, the estimation of power availability for FY 2012-13 has been done in the steps to include:

4.9.3.1 Power purchase estimation for FY 2012-13 based on provisional power purchase details of FY 2011-12.

4.9.3.2 Power purchase estimation for the FY 2011- 12 after estimating annual availability based on the following:

- Actual quantum approved by the Hon'ble Commission for FY 2011-12 Tariff order
- Weighted Average share (including unallocated share) of the petitioner in various generating stations as per latest revised allocation orders of Govt of India during FY 2011-12.
- Additional power viz. Beas I & II (BBMB – Due to Supreme Court order) and Jhajjar etc from 01st November 2011;

4.9.3.3 It is pertinent to mention here that, since the unallocated share of the petitioner keeps on changing year on year, the projection of quantum of power purchase has not been done based on past trends. Instead weighted average allocation for the FY 2011-12 has been considered to arrive at projected power availability.

4.9.3.4 In case of CED since most of the power is tied-up through long term PPAs it has to purchase all the power that is available at its disposal. It is submitted that the above power is available to CED on Round the Clock (RTC) basis and in case of less requirement for the State in projection period, CED will schedule less power from high cost power stations to reduce power purchase burden on consumers. Also, in the obligation of meeting requirement, as maximum power of CGS is scheduled and there are other commitments of BBMB etc, the department is surplus during off-peak hours which is diverted again to pool / sold to power exchanges.

4.9.3.5 The petitioner would make every endeavour to avoid UI over-drawl in order to maintain grid discipline. However, due to unpredictable demand, sometimes it becomes necessary to overdraw power during few of the time slots based on demand supply gap and hence licensee considers that such over-drawl shall be balanced by under drawl in specific timeslots considering adequate bilateral arrangements.

4.9.3.6 As per the energy requirement, the energy availability falls short by around **260.34** MUs for FY 2012-13. This shortfall is proposed to be met through the short-term purchases through open market.

4.9.3.7 On the basis of the above mentioned projections from external and internal sources, the energy to be purchased from various CGHS and other long-term sources by the petitioner, after intra state losses of **3.89%** as approved and projected in FY 2011-12 Tariff order based on weekly moving average of transmission loss, has been projected to be **1,995.38** MUs for FY 2012-13.

4.10 Power Purchase Cost

4.10.1 Considering the availability of provisional power purchase average cost detail for FY 2011-12, the estimation of power purchase cost for FY 2012-13 has been done in the steps to include:

- Average fixed and variable cost for FY 2011-12;
- Approved fixed cost for CGS & other similar stations as per CERC Order;
- Actual average energy charges for FY 2011-12 and price escalation on variable component of the power purchase cost for next year;
- Escalation of Coal and Transportation price as per Clause 5.6 (vi) of Ministry of Power (MOP) Notification dated 19.1.2005 (as amended from time to time) on *"Guidelines for Determination of Tariff by Bidding Process for procurement of Power by Distribution Licensees";*
- For plants whose CERC order on fixed cost is not available similar plants fixed cost has been assumed;
- Other Cost comprises of Income tax, incentives and other charges remaining the same;

4.10.2 Note on Escalation of Coal and Transportation Price

4.10.2.1 In pursuance of Clause 5.6 (vi) of Ministry of Power (MOP) Notification dated 19.1.2005 (as amended from time to time) on *"Guidelines for Determination of Tariff by Bidding Process for procurement of Power by Distribution Licensees",* the CERC notifies various escalation factors and other parameters, every six months, for the purpose of bid evaluation and payment.

4.10.2.2 Under the above notification CERC determines escalation factors and other parameters for coal, gas, transportation etc. Ministry of Commerce and Industry has, in the month of April 2011, come up with "Revised new WPI series (2004-05 as base)". It is this "Revised new WPI series (2004-05 as base)" that has been used for computing the escalation factors for domestic coal, inland handling charges for coal and gas, inflation rate to be applied to indexed

capacity charge and indexed energy charge in case of captive fuel in this current Notification.

4.10.2.3 The annual escalation factors and other parameters for bid evaluation have been computed based on the time series data for latest twelve calendar years i.e. for the period from 1999 to 2010. The basic formula used is:

e: *annual escalation rate in percent =g*100, where:*
g: *escalation factor =* ***[exp{{(6 x Σn t=2 (t-1) x LnRt}/{(n-1)x n x (2n-1)}}]-1***
Rt *= (Yt/Y1)*
Yt *= '"t" th observation*
Y1 *= initial observation*
n *= number of observations*

4.10.2.4 The annual escalation rate for parameters that require combining of two or more series in pre-determined proportion has been determined by combining each data point of two or more series in the pre-determined proportion to arrive at a composite new single series and then the annual escalation rate has been determined based on this composite new single series.

4.10.3 Escalation Rate for Domestic Role

4.10.3.1 The escalation rate for domestic coal has been computed based on the time series data on Wholesale Price Index (WPI) for non-coking coal for the period from 1999 to 2010. The data on WPI for non-coking coal for the period 2005-09 has been taken from the website of Ministry of Commerce & Industry and the data for the period prior to that has been arrived at by using conversion factor. The escalation rate for domestic coal has been computed as under:

Table 42: Escalation Rate for Domestic Coal

Escalation rate for domestic coal						
Sr. No	Year	WPI for Non Coking Coal	Yt/Y1= Rt	Ln Rt	Year - 1 (t-1)	Product <(t-1)*(Ln Rt)>
1	1999	64.77				
2	2000	67.07	1.04	0.03	1	0.03
3	2001	80.19	1.24	0.21	2	0.43
4	2002	81.38	1.26	0.23	3	0.68
5	2003	85.31	1.32	0.28	4	1.10
6	2004	96.50	1.49	0.40	5	1.99
7	2005	102.60	1.58	0.46	6	2.76
8	2006	102.50	1.58	0.46	7	3.21
9	2007	104.01	1.61	0.47	8	3.79
10	2008	112.70	1.74	0.55	9	4.98
11	2009	116.53	1.80	0.59	10	5.87
12	2010	131.20	2.03	0.71	11	7.76
A = Sum of Product Column						32.63
B = 6 times *A						195.76
C= (n-1)*n*(2n-1); n = no of years = 12						3,036
D= B/C						0.06
g (Exponential Factor)= Exponential (D)-1						0.07
e= Annual Escalation Rate (%)= g*100%						6.66%

4.10.4 Escalation rate for inland transportation charges for coal

4.10.4.1 The escalation rate for inland transportation charges for coal has been computed based on the time series data on coal freight rates for the period from 1999 to 2010. The data has been collected from Ministry of Railways. The escalation rate for inland transportation charges for coal has been taken keeping in mind the distance for coal linkage of CGS and other sources assuming it to be in the range of 500 kms for power generation. The escalation rate for inland transportation charges for coal has been computed as under:

Table 43: Escalation Rate for Transportation

Escalation rate for inland transportation charges for coal (upto 500 km)						
Sr. No	Year	Coal Freight Rate (Rs/Tonne)	Yt/Y1= Rt	Ln Rt	Year - 1 (t-1)	Product <(t-1)*(Ln Rt)>
1	1999	373.08				
2	2000	382.33	1.02	0.02	1	0.02
3	2001	389.98	1.05	0.04	2	0.09
4	2002	393.78	1.06	0.05	3	0.16
5	2003	394.40	1.06	0.06	4	0.22
6	2004	417.20	1.12	0.11	5	0.56
7	2005	424.80	1.14	0.13	6	0.78
8	2006	429.83	1.15	0.14	7	0.99
9	2007	431.50	1.16	0.15	8	1.16
10	2008	454.60	1.22	0.20	9	1.78
11	2009	462.30	1.24	0.21	10	2.14
12	2010	462.55	1.24	0.21	11	2.36
A = Sum of Product Column						10.28
B = 6 times *A						61.67
C= (n-1)*n*(2n-1); n = no of years = 12						3,036
D= B/C						0.02
g (Exponential Factor)= Exponential (D)-1						0.02
e= Annual Escalation Rate (%)= g*100%						2.05%

4.10.5 Total Escalation Rate

4.10.5.1 The escalation rate including domestic coal and transportation is shown below:

Table 44: Total Escalation Rate for Coal and Transportation

Particulars	Domestic Coal	Transportation	Total
Semi Annual Escalation Rate	3.33%	1.03%	4.36%
Annual Escalation rate	6.66%	2.05%	8.71%

4.10.6 Power Purchase from Central Generating Stations

4.10.6.1 As mentioned in preceding paragraphs on energy availability from central sector stations, the power purchase and cost for FY 2011-12 has been considered. An annual escalation rate of 8.71% as stated above has been done on NTPC stations average variable cost of FY 2011-12. For NHPC, NPCIL, BBMB and other stations 5% escalation has been assumed on their average variable cost of FY 2011-12. The cost of power purchase from NTPC, NHPC and NPCIL works out to be Rs **281.54** Crores for **896.94** MUs for FY 2012-13.

4.10.7 Power Purchase from other Sources

4.10.7.1 CED apart from CGS will purchase power from BBMB, Koteshwar, Tehri, SJVNL, Beas I & II and Open market/ Bilateral. For these stations 5% escalation has been assumed on provisional FY 2011-12 average variable cost. The cost of power purchase from other sources works out to be Rs **317.98** Crores for **1,098.43** MUs for FY 2012-13.

4.10.8 Renewable Purchase Obligations

4.10.8.1 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.

Table 45: Renewable Purchase Obligation

Financial Year	Minimum quantum of purchase (in %) from renewable energy sources (in kWh)		
	Solar	Non Solar	Total
2010-11	0.25%	0.75%	1.00%
2011-12	0.30%	1.70%	2.00%
2012-13	0.40%	2.60%	3.00%

4.10.9 CED will purchase Renewable Energy Certificates for FY 2012-13 as per the new CERC order on 23rd August 2011 on "Determination of Forbearance and Floor Price for REC Framework" to be applicable from 01st April 2012. The total cost for the same has been projected at Rs *20.42* Crores.

4.10.10 Transmission Charges

4.10.10.1 CED has considered the transmission charges payable to PGCIL as per new Point of Connection (POC) regime. As per new regime the transmission charges are levied per MW basis and for the energy drawn on per unit basis. CED has projected an increase of 5.39% over the charges payable to PGCIL in FY 2011-12 keeping in mind energy to be purchased in FY 2012-13.

4.10.10.2 The total transmission charges paid/ payable to PGCIL, NRLDC, reactive energy etc arrives at Rs **35.56** Crs.

4.10.11 Summary of Power Purchase Cost

4.10.11.1 The total power purchase cost has not increase in FY 2012-13 as much as in FY 2011-12 because of availability of Beas I & II at full allocation of 48.51 MW and at the rate of Rs **0.4031**/kWh. As a result, the average power purchase cost in FY 2012-13 has decreased to Rs **3.28**/ kWh from Rs **3.33**/kWh in FY 2011-12.

4.10.11.2 The projected power purchase quantum MUs and cost for the same for FY 2012-13 vis a vis FY 2011-12 is tabulated below:

Table 46: Power Purchase Quantum - FY 2011-12 Vs FY 2012-13

Rs.Crs

S.No.	Particulars	Provisional (FY 2011-12)			Projected (FY 2012-13)		
		Units Purchased (MU's)	Per Unit Price (Rs/Kwh)	Power Purchase	Units Purchased (MU's)	Per Unit Price (Rs/Kwh)	Power Purchase Cost (Rs.Crs)
A	***NTPC***						
1	*Singrauli*	118.55	1.70	20.12	118.55	1.84	21.81
2	*Rihand I*	115.26	2.23	25.67	115.26	2.36	27.23
3	*Rihand II*	110.91	2.33	25.85	110.91	2.44	27.04
4	*Unchahar I*	17.16	5.29	9.07	17.16	5.46	9.37
5	*Unchahar II*	35.46	2.98	10.58	35.46	3.14	11.13
6	*Unchahar III*	15.13	5.04	7.63	15.13	5.18	7.84
7	*Anta- G*	35.36	3.09	10.93	35.36	3.27	11.55
8	*Anta - RLNG*	0.65	2.92	0.19	0.65	3.18	0.21
9	*Auriya-G*	35.65	1.92	6.85	35.65	2.20	7.84
10	*Auriya - RLNG*	3.96	0.16	0.06	3.96	0.18	0.07
11	*Dadri-G*	40.13	3.04	12.20	40.13	3.22	12.91
13	*Dadri -RLNG*	0.45	2.90	0.13	0.45	3.15	0.14
14	*Kahalgaon II*	14.68	7.43	13.01	14.68	9.13	13.40
15	*Jajjar*	13.40	3.73	5.00	13.40	4.02	5.38
16	*Dadri II*	49.45	4.07	20.11	49.45	4.33	21.43
17	*Supplementary Bill*			0.60			0.60
18	*Less: Rebate*			-			(3.76)
B	***NHPC***						
1	*Salal*	9.43	1.09	1.03	9.43	1.13	1.07
2	*Tanakpur*	5.74	2.83	1.62	5.74	2.95	1.70
3	*Chamera I*	95.87	1.84	17.66	95.87	1.91	18.30
4	*Chamera II*	27.58	3.25	8.97	27.58	3.34	9.20
5	*Uri*	18.89	1.80	3.39	18.89	1.85	3.49
6	*Dhauliganga*	20.35	3.24	6.60	20.35	3.31	6.74
7	*Dulhasti*	32.60	6.25	20.39	32.60	6.36	20.73
8	*Sewa II*	5.39	7.30	3.93	5.39	7.27	3.92
9	*Supplementary Bill*			20.26			20.26
10	*Less: Rebate*			-			(1.02)
C	***NPCIL***						
1	*NAPS*	22.44	2.27	5.05	22.44	2.35	5.28
2	*RAPP (Unit 3 & 4)*	22.93	2.57	8.08	22.93	3.65	8.36
3	*RAPP (Unit 5 & 6)*	29.52	1.18	9.21	29.52	3.28	9.68
4	*Less: Rebate*			(0.37)			(0.37)
D	***Other Sources***						
1	*Koteshwar*	2.80	4.15	1.16	2.80	4.36	1.22
2	*Tehri*	34.06	3.80	12.95	34.06	3.99	13.60
3	*SJVNL*	82.59	1.18	9.71	82.59	1.23	10.19
4	*Bhakra/BBMB*	548.66	2.73	149.76	548.66	2.87	157.24
5	*Beas I & II (dehar & Pong)#*	17.51	0.38	0.67	169.98	0.40	6.85
6	*Bilateral Trade*	285.50	4.50	128.48	260.34	4.95	128.87
7	*PGCIL*			32.65			34.77
8	*RPO*			16.03			20.42
9	*UI*	3.15	8.06	2.54			-
10	*PXIL*	2.47		1.06			-
11	*NRLDC F&C*			0.17			0.17
12	*Reactive Energy*			0.62			0.62
13	*Less: Rebate*			(1.62)			(1.62)
14	***Total***	**1,873.69**		**623.24**	**1,995.38**		**653.88**

Per Unit Price includes -Fixed,Variable and Other Costs

4.10.11.3 The Hon'ble Commission is kindly requested to approve the total power purchase cost of Rs **654** Crores including transmission charges for FY 2012-13 as shown in table above.

4.10.11.4 It is submitted that any changes in the power purchase expenses during the year may be allowed to be recovered by CED from it consumers through a FPPPA Mechanism that may be notified by the Hon'ble Commission. The formula proposed by CED is discussed in detail in chapter 6. ***The details of the Power Purchase Expenses for FY 2010-11, FY 2011-12 & FY 2012-13 are provided in Format 4 of Tariff Filing Formats.***

4.11 Operation and Maintenance Expenses

4.11.1 The Operation and maintenance (O&M) expenses comprise of three components namely:

- Employee cost
- Repairs & Maintenance expenses and
- Administrative and General Expenses

4.11.2 As mentioned earlier in chapter 1, CED maintains its accounts on cash basis. Further CED 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 ARR.

4.11.3 JERC under its (Terms and Condition for Determination of Distribution Tariff) Regulations, 2009 has stated that

> *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;*

4.11.4 CED has assumed the same WPI of 9.68% for calculating the O&M for FY 2012-13.

Table 47: Wholesale Price Index

WPI Data												
Month/Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2011	148.00	148.10	149.50	152.10	152.40	153.10	154.20	154.90	155.80			
2010	135.20	135.20	136.30	138.60	139.10	139.80	141.00	141.10	142.00	142.90	143.80	146.00
2009	124.40	123.30	123.50	125.00	125.90	126.80	128.20	129.60	130.30	131.00	132.90	133.40
2008	117.50	119.00	121.50	123.50	124.10	127.30	128.60	128.90	128.50	128.70	126.90	124.50
WPI as on 1st April 2011			9.68%									
WPI as on 1st April 2010			10.36%									

4.11.5 Number of Employees

4.11.5.1 The following table gives the details of number of Employees projected for FY 2012-13.

Table 48: No of Employees

S.No	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
1	Total employees as on 1st April	1,130	1,088
2	No of employees retired/retiring during the year	44	36
3	No of employees recruited	2	207
4	No of employees at the end of year	1,088	1,259

4.11.6 The numbers of employees as on 31st March ***for FY 2010-11, FY 2011-12 & FY 2012-13*** are ***provided in Format 15 of the Tariff Filing Formats.***

4.11.7 The category wise breakup for employees for FY 2012-13 has been provided in **Annexure-3.**

4.11.8 Employee cost

4.11.8.1 The employee cost is the most important constituent of the O&M expenses. The employee cost includes the cost incurred on present employees as well as on the retired employees. The cost of present employees includes salary, dearness allowance payable to employees and other allowances such as bonus, HRA, LTC, and medical reimbursement etc.

4.11.8.2 The cost of pensioners includes, pension, encashment of leave salary, terminal benefits. The employees who retire are eligible for terminal benefits of Leave Encashment, Pension and Gratuity.

4.11.8.3 The Details of the salary expenses projected in FY 2012-13 are given in the below table. Other allowance also includes electricity allowance given to CED employees. The same have been escalated taking into the account the WPI factor on the base of FY 2011-12 actual employee expenses of Rs **57.30** Crores.

Table 49: Employee Expenses

Rs.Crs

S.No	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
A	Salaries & Allowances		
1	Basic pay	33.08	36.29
2	Dearness pay	3.21	3.52
3	Dearness allowances	9.12	10.01
4	House rent allowances	2.95	3.24
5	Fixed medical allowances	0.41	0.45
6	Medical reimbursement charges	0.32	0.35
7	Other allowances	1.39	3.30
8	General incentive	0.04	0.04
9	Total	**50.53**	**57.20**
B	Terminal Benefits		
10	Leave encashment	1.68	1.84
11	Gratuity	2.87	3.15
12	Communication of pension	1.16	1.27
13	Workmen compensation	0.04	0.04
14	Ex-gratia	0.03	0.03
15	Total	**5.78**	6.34
16	Any other expenses	0.20	0.22
17	Total	**0.20**	0.22
18	Total (9+15+17)	**57.30**	**63.75**
19	Amount capilized		
20	Net amount	**57.30**	**63.75**
21	Add prior period expenses (Arrears of VI Pay Commission)	-	
22	Grand Total	**57.30**	**63.75**

4.11.8.4 It is therefore kindly requested to Hon'ble Commission to approve the employee expenses of Rs **63.75** Crores for FY 2012-13. ***The details of employee expenses for FY 2010-11, FY 2011-12 & FY 2012-13 are provided in Format 16 of the Tariff Filing Formats.***

4.11.9 Administration and General Expenses

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

- Domestic Travelling Expenses, Office Expenses
- Legal, Regulatory & Consultancy Fees
- Insurance, R-APDRP initial expenses like Computers, softwares etc

4.11.9.2 The details of A&G expenses estimated for FY 2012-13 are provided in the table below:

Table 50: A&G Expenses

Rs.Crs

S.No	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
1	Telephone, postage&telegrams/office	0.49	0.54
2	Consultancy fees	0.18	0.85
3	Technical fees/Regulatory Fees	0.48	0.53
4	Other professional charges	0.02	0.02
5	Conveyance& travel expenses	0.00	0.00
6	Electricity & water charges	0.11	0.12
7	Others	0.16	0.17
8	Other material related expenses	0.00	0.01
9	Total	**1.44**	**2.24**
10	Add/Deduct share of others	0.00	0.00
11	Total expenses	**1.44**	**2.24**
12	Less capitalized	0.00	0.00
13	Net expenses	**1.44**	**2.24**
14	Add prior period	0.00	0.00
15	Total expenses charged to revenue	**1.44**	**2.24**

4.11.9.3 It is therefore kindly requested to Hon'ble Commission to approve the net A&G expenses of Rs **2.24** Crores for FY 2012-13. ***The details of the A&G expenses for FY 2010-11, FY 2011-12 & FY 2012-13 are provided in Format 17 of the Tariff Filing Formats***

4.11.10 Repairs and Maintenance Expenses

4.11.10.1 CED 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 details of the provisional R&M expenses for FY 2012-13 are given in the table below:

Table 51: R&M Expenses

Rs.Crs

S.No	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
1	Plant and Machinery	4.74	5.20
2	Building	0.44	0.48
3	Hydraulic /Civil works	0.16	0.18
4	Lines Cables and network	3.32	3.64
5	Vehicles	0.88	0.97
6	Furniture and Fixtures	0.00	0.00
7	Minor R&M Works	0.11	0.12
8	Total R&M cost	**9.65**	**10.59**

4.11.10.2 It is therefore kindly requested to Hon'ble Commission to approve the net R&M expenses of Rs **10.59** Crores for FY 2012-13. ***The details of the R&M expenses for FY 2010-11, FY 2011-12 & FY 2012-13 are provided in Format 14 of the Tariff Filing Formats.***

4.11.10.3 The overall summary of O&M Expenditure for FY 2012-13 is estimated to be about Rs **76.58** Crores is tabulated below:

Table 52: O&M Expenses

Rs.Crs

S.No	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
1	Employee Expenses	57.30	63.75
2	A&G Expenses	1.44	2.24
3	R&M Expenses	9.65	10.59
4	Sub-Total	68.40	76.58
5	Less:Expenses Capitalised	0.00	0.00
6	Total O&M expenses	**68.40**	**76.58**

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

4.12 Capital Expenditure and Capitalization

4.12.1 The prevailing infrastructure of CED is insufficient to cater to the present load and hence to meet the increasing demand from different categories of Consumers, it is absolutely necessary to undertake significant capital expenditure.

4.12.2 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 UT Chandigarh.

4.12.3 Majority of CED capex schemes are on annual ongoing basis. The various types of capital expenditure schemes carried by CED under different heads are as follows:

4.12.3.1 220 kV Works

- The Scheme is for extending the network and providing distribution transformer centres and releasing of service connections and load demand to all categories of consumers. The laying of underground cable for releasing connection to major consumers will also be taken up.
- Regular maintenance of Transmission lines etc.
- Erection of Transformer centres, metering structure, equipment for releasing of power supply to the intending consumers;
- Releasing of power supply and providing of metering to the intending consumers at different voltage levels.

4.12.3.2 66 kV Works

- To meet the rising load demand and to provide better and reliable service to the consumers
- To meet the increase in commercial load because of the modernization;
- To maintain the power factor, automatic power factor control relays to be installed etc;

4.12.3.3 33 kV Works

- Extension of 33 KV, 11 KV and LT lines for arranging power supply to individual and group of consumers;

- To meet the increase in commercial load; etc

4.12.3.4 11 kV and below Works

- 11 kV and below works constitute of which are undertaken on continuous basis to maintain/upgrade system. These are expenditure which constitute numerous works at lower level which constitutes of:

  - To improve voltage at the tail end of each distribution system
  - Better power transformation
  - Less line losses
  - Less electrical accidents and breakdowns
  - Avoiding overloading of transformers and lines

4.12.4 R- APRDP Schemes

4.12.4.1 The Restructured Accelerated Power Development and Reforms Programme (R-APDRP) during the Eleventh Plan period has been put in place by the Government of India and the funding pattern has been restructured. It consists of Part A and Part B and it is mandatory to take up Part A, IT related works prior to taking up the Part B works. The Part A consists of Projects for establishment of baseline data and IT applications for energy accounting/auditing and IT based consumer service centres.

4.12.4.2 It includes preparation of Base-line data for the project area covering Consumer Indexing, GIS Mapping, Metering of Distribution Transformers and Feeders, and Automatic Data Logging for all Distribution Transformers and Feeders and SCADA / DMS system. It would include Asset Mapping of the entire distribution network at and below the 11Kv transformers and include the Distribution Transformers and Feeders, Low Tension lines, poles and other distribution network equipment.

4.12.4.3 It also includes adoption of IT applications for meter reading, billing & collection; energy accounting & auditing; MIS; redressal of consumer

grievances; establishment of IT enabled consumer service centers etc. The base line data and required system shall be verified by an independent agency appointed by the Ministry of Power.

For PART-A

- M/S NDPL has been appointed as IT Consultant through competitive bidding process.

- DPR has been prepared by M/S NDPL and vetted by PFC. Accordingly, loan of Rs 33.34 Cr vide PFC Loan no. 01133001 dated 6.7.2010 has been sanctioned.

- Quadripartite agreement has been signed by Secy Engineering, CE UT , PFC and MoP for proper implementation of R-APDRP.

- The Steering committee of MoP, GOI has revised and approved the loan of 14.72 Crores on dated 11.11.2011 and LOI will be issued to M/S SPANCO (Punjab ITIA) shortly after the approval by the Distribution Reform Committee (DRC).

- Quadripartite agreement need to be signed by CED, PSPCL, M/S SPANCO and PFC for facilitation of work by M/S SAPNCO at Data Center (Patiala) and Data Recovery Center (Jalandhar) and for further FMS by PSPCL.

- Further, Technical bid to appoint consultant for SCADA (Supervisory Control and Data Acquit ion) system has been opened on 5.10.2011 and is under approval.

For PART-B

- Technical bid for appointment of consultant has been opened and is under approval.

4.12.4.4 The details of the capital expenditure and capitalization of major schemes are summarized as under:

Table 53: Capital Expenditure and Capitalization

Rs.Crs

S.No	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
A	**220 kV Works:**		
1	Prov O&M of 220/66 kV Nalagarh Manimajra Transmission Line	0.75	1.00
2	Turnkey Execution of Prov. Addl. 1*100 MVA(2) 220/66 kV T/F at existing 220 kV S/S Kishangarh Manimajra	0.00	
3	Prov 2nd ckt of 220 kV spply on the existing D/C from nalagarh to 220 kV S/S Kishangarh	0.00	
4	Providing 3rd 100 MVA 220/66KV T/F at 220KV S/Stn. Manimajra	3.95	3.95
B	**66 kV Works:**	0.00	
1	Conversion and rerouting of 3 no. existing 66 kV O/H line on U/G cables on turnkey basis RGTP	0.07	0.00
2	Prov 5 No 66KV outgoing feeders from 220/66 kV Grid S/S. Manimajra to various Grid S/S in UT Chandigarh	0.00	0.00
3	Prov 2*20 MVA 66/11 kV G/S/S at Manimajra along with 66 kV line from 220 kVA S/S Manimajra	0.00	0.00
4	Prov 1*20 MVA T/F 66/11 kV at existing 66 kV G/S/S Indl. Area Phase II Chd	0.00	0.00
5	Prov 1*20 MVA T/F 66/33 kV & 2*10/12.5 MVA S/S Sec 18A Chd	0.00	0.00
6	Re routing of OPGW at 66 kV Pinjore, Chd	0.00	0.00
7	Prov. 11 kV automatic capacitor banks at various esisitng 66 kV G/S/S	2.50	0.00
8	Turnkey Execution of addl. 66/11 kV 1*20 MVA T/F at existing 66/11 kV at IT park S/S	0.50	0.50
9	Upgradation of T/F capacity at 66/11 kV G/S/S IT Park by replacing existing 2*12.5 MVA 66/11 kV T/F with 2*20 MVA 66/11Kv Transformers and shifting of 2*12.5 MVA T/Fs at existing 66/11KV substations at Civil Sectt Sec1 and Sec 12	0.40	0.55
10	Turnkey execution of 66 kV S/S Sec 56, Chd	0.00	0.00
11	Prov. Addl. 1*20 MVA T/F 66/11 kV at existing 66 kV G/S/S indl Area Phase I Chd	0.00	0.00
12	Turnkey execution of 2*20 MVA 66/11 G/S/S, Raipr Kalan	2.00	1.80
13	Turnkey execution 1*30 MVA 66/11 kV addl T/F at 66/11 kV G/S/S Sec 52	1.00	1.00
14	Turnkey Execution of new 66/11 kV 2*20 MVA G/S/S in institution area of village sarangpur, Chd	2.50	2.40
15	Upgradation of existing 33 kV G/S/S to 66 kV voltage level by providing 1*30 MVA, 66/11 kV power transformer alongwith associated transmission line in sector 34 C	0.60	0.10
16	Turnkey Execution of new1*20 MVA 66/11 kV power T/F on existing bay at 66/11 kV G/S/S s 47, Chd	0.35	1.50
C	**New Works-66 KV**	0.00	
1	Providing 66KV Transmission line from 66KV Sub-Station Industrial Area, Phase-I to proposed 66KV Sub-Station Raipur Kalan.	0.76	0.50
2	Providing D/C 66KV Overhead Transmission line on Mono Tubular Poles from T-off point to proposed 66KV Sub-Station Village Sarangpur	0.77	0.50
3	Conversion of existing 66 KV S/C transmission line and underground cable from 220 kV S/Stn.	0.76	0.50
D	**33 kV Works:**	0.00	
1	Providing 1*20 MVA, 33/11 kVA T/F with allied equipment at existing 33 kV S/S Sector 17 Chd	1.00	
E	**11 kV and below works:##**	0.00	
1	Other Infrastructure improvement, T/F etc	7.09	6.20
	Total	**25.00**	**20.50**

4.12.5 Capital Work in Progress

4.12.5.1 The details of the opening capital works-in-progress, investments during the year and investments capitalised for the year are summarised in the below table:

Table 54: Capital Work in Progress

S.No	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
1	Opening balance	0.00	0.00
2	Add: New investments	25.00	20.50
3	**Total**	25.00	20.50
4	Less investment capitalized	25.00	20.50
5	**Closing balance**	0.00	0.00

4.12.5.2 CED proposes to capitalize the whole capital expenditure. The works during the year will be fully capitalized by the end of the year and transferred to into GFA leaving no balance under CWIP. It is therefore kindly requested to Hon'ble Commission to approve the capital expenditure of Rs **20.50** Crores for FY 2012-13. ***The details of the Investment Plan/ Capital Expenditure are provided in Format 5 of the Tariff Filing Formats.***

4.13 GFA and Depreciation

4.13.1 CED submits that the funding for the capital expenditure is normally through the internal reserves/ equity contribution from GOI. According to 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.

4.13.2 The Regulation 22 (2) of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 reads as follows:

"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".

4.13.3 The Hon'ble Commission has disallowed the GFA and depreciation on the absence of Fixed Asset register. The Petitioner submits that in the absence of fixed asset register (FAR), the asset-wise detail is currently not available and thereby requests the Hon'ble Commission to approve the above GFA & depreciation charges. The petitioner submits that the asset-wise details are being assimilated and will be made available with the future filings.

4.13.4 Gross Fixed Assets (GFA) and the depreciation on GFA for FY 2012-13 are discussed hereunder. The computation of depreciation is based on Straight Line Method of computation. Further it is confirmed that the depreciation on assets beyond 90% of the assets value is not provided / claimed by CED. The table below summarises the Gross Fixed Assets and Depreciation for the FY 2012-13 projected by CED based on the unaudited books of accounts

Table 55 : GFA and Depreciation

Rs.Crs

S.No	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
1	Opening GFA	359.74	384.74
2	Closing GFA	384.74	405.24
3	Average GFA	372.24	394.99
4	Average Rate of Depreciation	5.28%	5.28%
5	Depreciation Charges	**19.65**	**20.85**

4.13.5 It is therefore kindly requested to Hon'ble Commission to approve the closing GFA and Depreciation of Rs **405.24** Crores and Rs **20.85** Crores respectively. ***The details of the GFA and Depreciation for FY 2010-11, FY 2011-12 & FY 2012-13 are provided in Format 7 & 12 of the Tariff Filing Formats.***

4.14 Interest on Loan

4.14.1 The entire capital expenditure incurred by CED had been funded through equity infusion by GOI through budgetary support without any external borrowings. The Hon'ble Commission has disallowed the GFA and depreciation on the absence of Fixed Asset register, as a result Interest on loan was disallowed as well.

4.14.2 However as per JERC Regulations, 2009 Clause 25 for the purpose of determining the ARR, the CED had considered debt equity ratio of 70:30 for projecting

normative loan. CED has considered repayment to be equal to 1/10th of the opening loan. The interest at the SBI PLR rate was applied on the average normative debt in order to project the normative interest on long term loans for FY 2011-12.

Table 56 : Interest on Loan

Rs.Crs

S.No.	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
1	Opening balance	217.84	213.56
2	Add: Loan during the year	17.50	14.35
3	Less: Normative Repayment	21.78	21.36
4	Closing Normative Loan	213.56	206.55
5	Average Normative Loan	215.70	210.05
6	Rate of Interest	13.25%	13.25%
7	Interest on Normative Loan	**29.22**	**28.53**

4.14.3 It is therefore kindly requested to Hon'ble Commission to approve the Interest on loan of Rs **28.53** Crores for FY 2012-13. ***The details of Interest on loan for FY 2010-11, FY 2011-12 & FY 2012-13 are provided in Format 10 of the Tariff Filing Formats.***

4.15 Interest during Construction (IDC)

4.15.1 CED would request the Hon'ble Commission to consider the principles and methodology discussed in the subsequent sections on IDC.

4.15.2 The Tariff Regulations 2009 also provides for Interest during Construction to be part of capital cost. The Regulation 22 (3) is extracted for reference as under:

(3) Scrutiny of the capital cost estimates by the Commission shall include the reasonableness, financing plan, interest during construction, use of efficient technology, gestation period and such other matters relevant for determination of tariff.

4.15.3 Further the 2nd proviso to Regulations 25 (3) also mentions of interest & finance charges on works in progress for consideration as part of capital cost.

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

4.15.4 CED in the current petition has not considered any IDC on capital works in progress and accordingly submits the following methodology to Hon'ble Commission for consideration of IDC computation in APR/ True-up as the case may be.

I. Computation of Interest During Construction Charges on (a) Opening CWIP for the entire year and (b) Investment during the year for half year and the same is included in Investment for the current year;

II. Capitalisation of this IDC for the year in the ratio of Capitalisation/(Opening GFA plus Investment During the Year);

III. Based on i and ii, the amount of IDC during the year not capitalized in that year will be included in the Closing WIP and will be capitalized in the future years when the asset is capitalised

IV. No Interest during construction to be accounted for the schemes which get initiated and completed in the same year.

4.15.5 The same has been explained by way of sample calculation as under:

Table 57: IDC Calculation

Particulars	(i)- Scheme Carried forward to the next year			(ii)- Scheme Capitalised during the year	
CWIP Movement during the year					
Opening CWIP of the Scheme	a	100		a	100
Investment during the year	b	10		b	10
Capitalisation	c	0		c	110
Closing CWIP	d=a+b-c	110		d=a+b-c	0
Interest Computation					
(a) Interest for the year on Opening CWIP					
Rate of Interest	f	9%		f	9%
Principal for Interest	g=0.7xa	70		g=0.7xa	70
Time Period for Interest (Years)	h	1		h	0.5
Interest Amt	j=fxgxi	6.3		j=fxgxi	3.15
(a) Interest for the year on Investment during the year					
Rate of Interest	k	9%		k	
Principal for Interest	l=0.7xb	7		l=0.7xb	
Time Period for Interest (Years)	m	0.5		m	
Interest Amt	n=kxlxm	0.32		n=kxlxm	0
Total IDC for the year	**o= j+n**	**6.62**		**o= j+n**	**3.15**

4.16 Interest on Working Capital

4.16.1 In accordance with Clause 29 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 the interest on working capital shall be allowed to meet the shortfall in collections over and above the target approved by the Hon'ble Commission. The rate of interest on working capital has been considered as SBI Prime lending rate as on 1st April of the respective years, which was 13.25% as on 1st April 2011.

Table 58: Interest on Working Capital

Rs.Crs

S.No	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
1	Power Purchase Cost	51.94	54.49
2	Employees Cost	4.78	5.31
3	Administration & General Expenses	0.12	0.19
4	Repair & Maintenance Expenses	0.80	0.88
5	Total Working Capital	57.64	60.87
6	SBI PLR	13.25%	13.25%
7	Interest on Working Capital	**7.64**	**8.07**

4.16.2 Accordingly, CED requests the Hon'ble Commission to approve Interest on Normative Working Capital at Rs. **8.07** Crores for FY 2012-13. ***The details of Interest on working capital for FY 2010-11, FY 2011-12 & FY 2012-13 are provided in Format 18-19 of the Tariff Filing Formats.***

4.17 Interest on Security Deposit

4.17.1 The provision of Regulation 25 (4) of Tariff Regulations 2009 & in accordance with Clause 47(4) of Electricity Act 2003, 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.

Table 59: Interest on Security Deposit for FY 2012-13

Rs.Crs

S.No	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
1	Opening Security Deposit	31.11	32.74
2	Add: Deposits during the Year	1.62	1.62
3	Less: Deposits refunded	-0.02	-0.02
4	Closing Security Deposit	32.74	34.38
5	Bank Rate	0.06	0.06
6	Interest on Security Deposit	**1.96**	**2.01**

4.17.2 It is therefore kindly requested to Hon'ble Commission to approve the Interest on Security Deposit of Rs **2.01** Crores for FY 2012-13. ***The details of Interest on Security Deposit for FY 2010-11, FY 2011-12 & FY 2012-13 are provided in Format 18 &19 of the Tariff Filing Formats.***

4.18 Return on Equity

4.18.1 The Hon'ble Commission did not consider return on equity for FY 2011-12 in its last TO, as CED did not maintained the asset and depreciation registers. As stated above, the asset-wise details are being assimilated and will be made available with the future filings. The provision of Regulation 23 (2) and Regulation 24 of Tariff Regulations 2009 provides for entitlement for Returns on Capital Base/ Net Fixed Assets by utility / licensee. The below table provides the details of provisional figures for FY 2011-12 and projected figures for FY 2012-13.

Table 60 : Return on Equity

Rs.Crs

S.No	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
1	Gross block at beginning of the year	359.74	384.74
2	Less accumulated depreciation	90.43	110.08
3	Net block at beginning of the year	269.31	274.66
4	Less accumulated consumer contribution	0.00	0.00
5	Net fixed assets at beginning of the year	269.31	274.66
6	Reasonable return @3% of NFA	**8.08**	**8.24**

4.18.2 It is therefore kindly requested to Hon'ble Commission to approve the Return on Equity of Rs **8.24** Crores for FY 2012-13. ***The details of Return on Equity for FY 2010-11, FY 2011-12 & FY 2012-13 are provided in Format 6 of the Tariff Filing Formats.***

4.19 Advance Against Depreciation

4.19.1 In accordance with Clause 26 (2) of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 a licensee can claim AAD if the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year. In case of inadequacy of cash for repayment of debt, only in extreme cases, the Commission may allow Advance against Depreciation (AAD) in addition to the allowable Depreciation. CED hasn't claimed the same in its last tariff petition.

Table 61: Advance against Depreciation

Rs.Crs

S.No.	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
1	1/10th of the Loan(s)	21.36	20.65
2	Repayment of the Loan(s) as considered for working out Interest on Loan	21.78	21.36
3	Minimum of the Above	21.36	20.65
4	Less: Depreciation during the year	19.65	20.85
5	A		
6	Cumulative Repayment of the Loan(s) as considered for working out Interest on Loan	55.76	77.11
7	Less: Cumulative Depreciation	38.11	58.96
8	B		
9	Advance Against Depreciation (minimum of A or B)	17.65	18.15

4.19.2 It is therefore kindly requested to Hon'ble Commission to approve the Advance Against Depreciation of Rs **18.15** Crores. ***The details of AAD for FY 2010-11, FY 2011-12 & FY 2012-13 are provided in Format 13 of the Tariff Filing Formats.***

4.20 Provision for Bad Debts

4.20.1 In accordance with Clause 28 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009:

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

4.20.2 CED submits that the asset-wise details are being assimilated and will be made available with the future filings. CED submits to the Hon'ble Commission that provisioning for bad debts is a standard business practise and the same is allowed to be recovered from the consumers through the ARR as a legitimate expense by most of the Regulatory Commission's across the country like MERC, UPERC, etc ranging from 0.50% to 2.0%.

Table 62 : Provision for Bad Debts

Rs.Crs

S.No.	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
1	Revenue from existing tariff	563.60	605.66
2	Provision for Bad & Doubtful Debts (%)	1.00%	1.00%
3	Provision for Bad & Doubtful Debts	**5.64**	**6.06**

4.20.3 It is therefore kindly requested to Hon'ble Commission to approve the Return on Equity of Rs 6.06 Crores for FY 2012-13. ***The details of provision for bad debt for FY 2010-11, FY 2011-12 & FY 2012-13 are provided in Format 18-19 of the Tariff Filing Formats***

4.21 Non Tariff Income

4.21.1 The Non-tariff income comprises of metering, late payment charges, interest on staff loans, reconnection fee, miscellaneous revenue etc.

4.21.2 CED projects the NTI at Rs **10.87** Crores, which the licensee requests the Hon'ble Commission to approve. ***The details of NTI for FY 2010-11, FY 2011-12 & FY 2012-13 are provided in Format 20-21 of the Tariff Filing Formats***

Table 63 : Non Tariff Income

Rs.Crs

SI.No	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
1	Meter/Service rent	0.00	0.00
2	Late Payment Surcharge	0.00	0.00
3	Theft/Pillage of energy	0.32	0.32
4	Wheeling charges under open access	0.00	0.00
5	Interest on Staff loans & Advances	0.00	0.00
6	Income from Trading	0.00	0.00
7	Income Staff Welfare Actives	0.00	0.00
8	Investment & bank balances	0.00	0.00
9	Misc Receipt/income	4.09	4.09
10	Total income	5.11	5.11
11	Add prior period income	1.36	1.36
12	Total non tariff income	**10.87**	**10.87**

4.22 Revenue from Existing Tariff for FY 2012-13

4.22.1 The consumer category-wise Revenue from Existing Tariff for FY 2012-13 as per provisional figures in the books of accounts is given under the table below.

Table 64: Revenue from Existing Tariff for FY 2012-13

Rs.Crs

Particulars	Sales	Revenue from Sale of Power (Exisiting)				Average Tariff
	MU's	Fixed Charges	Energy Charges	Others	Total Revenue	(Rs/Kwh)
Domestic	569.50	0.00	203.79	0.00	203.79	3.58
0-150 kWh	74.23	0.00	15.59	0.00	15.59	2.10
Above 150 kWh	495.26	0.00	188.20	0.00	188.20	3.80
Commercial	454.81	17.21	186.47	0.00	203.68	4.48
0-20 kW	148.86	0.65	61.03	0.00	61.69	4.14
Above 20 kW	305.94	16.56	125.44	0.00	141.99	4.64
Large Supply	140.42	4.64	57.57	0.00	62.22	4.43
Small Power	25.70	0.12	10.54	0.00	10.66	4.15
Medium Supply	90.81	4.87	37.23	0.00	42.10	4.64
Agriculture	1.75	0.00	0.37	0.00	0.37	2.10
Public Lighting	17.94	0.44	7.35	0.00	7.80	4.35
Bulk Supply	120.14	3.46	49.26	0.00	52.72	4.39
Others - Temporary Supply	43.77	0.00	22.32	0.00	22.32	5.10
Total	**1464.82**	**30.76**	**574.90**	**0.00**	**605.66**	**4.13**

4.23 ARR and Revenue from existing tariff for FY 2012-13

4.23.1 CED now projects its Annual Revenue Requirement for FY 2012-13 at Rs **769.43** Crores and its Revenue from Existing Tariff at Rs **605.66** Crores. ***The details of ARR and Revenue Gap for FY 2010-11, FY 2011-12 & FY 2012-13 are provided in Format 27-28 of the Tariff Filing Formats***

4.23.2 Based on the discussions in the preceding paras of this chapter, the table below summarizes ARR for FY 2012-13.

Table 65: Annual Revenue Requirement

Rs.Crs

S.NO.	Particulars	FY 2011-12	FY 2012-13
		Provisional	Projected
1	Power Purchase Cost	623.24	653.88
2	Employee costs	57.30	63.75
3	R&M expenses	9.65	10.59
4	Administration and general expenses	1.44	2.24
5	Depreciation	19.65	20.85
6	Interest charges (including Security Deposit , WC)	38.82	39.30
7	Return on NFA /Equity	8.08	8.24
8	Provision for Bad Debt	5.64	6.06
9	Other Expenses	17.65	18.15
10	Total Revenue Requirement	**781.47**	**823.05**
11	Less: Non Tariff Income	10.87	10.87
12	Less: Revenue from Sale through UI	15.36	7.24
13	Less: Revenue from Sale through Power-Exchanges	22.46	35.52
14	Net Revenue Requirement	**732.77**	**769.43**
15	Revenue from Retail Sales at Existing Tariff	563.60	605.66
16	Net Gap	**169.17**	**163.77**
17	Gap for the previous year	-	169.17
18	Total gap	**169.17**	**332.94**
19	Budgetary Support from Government	-	-
20	Net Final Revenue Gap/ (Surplus)	**169.17**	**332.94**
21	Energy sales (MU)	1,367.00	1,464.82

4.23.3 ***Accordingly, the petitioner requests the Hon'ble Commission to kindly approve the revenue gap/ (surplus) of Rs* 163.77 *Crores for FY 2012-13 to be added in revenue gap / (surplus) of FY 2011-12 of Rs* 169.17 *Crores. The Total Cumulative Gap to be recovered through tariff hike is Rs* 332.94 *Crores***.

Chapter 5. Tariff Principles, Design, Revenue Gap and its Recovery

5.1 Preamble

5.1.1 CED for its revenue requirement for the year 2012-13 and the retail tariff supply has been guided by the provisions of the Electricity Act, 2003, the National Tariff Policy (NTP), Regulations on Terms and Conditions of Tariff issued by the Central Electricity Regulatory Commission (CERC) and Regulations on Terms and Conditions of Tariff notified by the JERC. Section 61 of the Act lays down the broad principles, which shall guide determination of retail tariff.

5.1.2 The Tariff has been fixed in such a way that the cross subsidy is within plus / minus 20% of the average cost of supply.

5.1.3 Section 8.3 of National Tariff Policy lays down the following principles for tariff design:

> *"(1) In accordance with the National Electricity Policy, consumers below poverty line who consume below a specified level, say 30 units per Month, may receive a special support through cross subsidy. Tariffs for such designated group of consumers will be at least 50% of the average cost of supply. This provision will be re-examined after five years.*
>
> *(2) For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the SERC would notify the roadmap, within six Months with a target that latest by the end of the year 2010-11 tariffs are within ± 20% of the average cost of supply. The road map would have intermediate milestones, based on the approach of a gradual reduction in cross subsidy.*
>
> *For example if the average cost of service is 3 per unit, at the end of year 2011-12 the tariff for the cross subsidized categories excluding those referred to in para-1 above should not be lower than 2.40 per unit and that for any of the cross subsidizing categories should not go beyond 3.60 per unit.*
>
> *(3) While fixing tariff for agricultural use, the imperatives of the need of using ground water resources in a sustainable manner would also need to be kept in mind in addition to the average cost of supply. The tariff for agricultural use may be set at different levels for different parts of the State depending on the condition of the ground water table to prevent excessive depletion of ground water."*

5.1.4 The provisions of the Electricity Act, 2003, National Tariff Policy and the JERC Tariff Regulations require that there should be a gradual movement towards

reduction of cross subsidy. The Tariff aims at bringing down cross subsidy to + 20% of the average cost of supply by the year 2010-11.

5.1.5 Regulation 6 of JERC (Terms and Conditions for Determination of Tariff Regulations specifies –

Cross subsidy as:

"(1) 'Cross subsidy for a consumer category in the first phase (as defined in sub regulation 2 below) means the difference between the average realization per unit from that category and the combined average cost of supply per unit expressed in percentage terms as a proportion of the combined average cost of supply. In the second phase(as defined in sub-regulation 2 below) means the difference between the average realization per unit from that category and the combined per unit cost of supply for that category expressed in percentage terms as a proportion of the combined cost of supply of that category.

(2) CED 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 CED has determine tariff so that it progressively reflects combined average unit cost of supply in accordance with National Tariff Policy. In the second phase, the CED will consider moving towards the category-wise cost of supply as a basis for determination of tariff."

5.1.6 Keeping view of the above, CED has designed the tariff in such a way that cross subsidy between different categories of consumers remains within + / - 20% limit and that even for BPL category consumers tariff rates shall be 50% of the average cost of supply.

5.2 Provisional Revenue Gap / (Surplus) for FY 2011-12

5.2.1 CED in its earlier petition had filed ARR for FY 2011-12 with a revenue gap of Rs **351.66** Crs. The Hon'ble Commission had provisionally computed surplus of Rs **105.72** Crs in tariff order dated July 2011.The revised revenue gap / (surplus) for FY 2011-12 based on yearly projections works out to Rs **169.17** Crs.

5.3 Projected Revenue Gap / (Surplus) for FY 2012-13

5.3.1 Based on the projections for FY 2012-13, the cumulative revenue gap / (surplus) for FY 2012-13 along with past gap is presented in the table below:

Table 66: Cumulative Revenue Gap for FY 2012-13

S.No.	Revenue Gap in FY 2012-13	
	Particulars	Gap
1	Annual revenue requirement for FY 2012-13	769.43
2	Revenue from Sale of Power at existing Tariff	605.66
3	Pure Gap for FY 2012-13	163.77
4	Add: Provisional Revenue Gap/(Surplus) for FY 2011-12	169.17
5	Total Gap (3+4)	332.94

5.3.2 As can be seen from the above table, the total cumulative revenue gap / (surplus) for FY 2012-13 amounts to Rs **332.94** Crs.

5.4 Treatment to Revenue Gap / (Surplus) for FY 2012-13

5.4.1 The petitioner requests Hon'ble Commission that the entire gap including past recoveries may be approved through tariff recovery.

5.5 Average Tariff for FY 2012-13

5.5.1 The average cost of supply for CED works out to Rs 5.25 /kWh for FY 2012-13. The same is without considering the past recoveries of FY 2011-12. Against this, the average revenue from existing tariff from all the consumer categories computes to Rs **4.13** /kWh as depicted in the table below.

Table 67: Average Cost Vs Average Revenue for FY 2012-13

Category	Average unit rate as per existing tariff (Rs/Kwh)	Average cost of supply per unit (Rs/Kwh)	Tariff as a percentage of average cost of supply %	Under/(Over) Recovery (Rs/Kwh)
Domestic	3.58	5.25	68%	1.67
0-150 kWh	2.10	5.25	40%	3.15
Above 150 kWh	3.80	5.25	72%	1.45
Commercial	4.48	5.25	85%	0.77
0-20 kW	4.14	5.25	79%	1.11
Above 20 kW	4.64	5.25	88%	0.61
Large Supply	4.43	5.25	84%	0.82
Small Power	4.15	5.25	79%	1.10
Medium Supply	4.64	5.25	88%	0.62
Agriculture	2.10	5.25	40%	3.15
Public Lighting	4.35	5.25	83%	0.91
Bulk Supply	4.39	5.25	84%	0.86
Others - Temporary Supply	5.10	5.25	97%	0.15
Total Demand/ Sale Within State/UT (A+B+C)	**4.13**	**5.25**	**79%**	**1.12**

5.5.2 This above table would be revisited once we finalise the tariff proposal. The provisions of the Section 61 (g) of the Electricity Act, 2003 mentions that the Appropriate Commission should be guided by the objective that the tariff progressively reflects the efficient and prudent cost of supply of electricity.

Table 68: Existing Vs Proposed Tariff for FY 2012-13

Sr No	Categories	Fixed Charge (Rs/kW/Month)		Energy Charge (Rs/kWh)	
		Existing	Proposed	Existing	Proposed
A	**Domestic**				
	0-150 kWh	0.00	15.00	2.10	3.50
	Above 150 kWh	0.00	15.00	3.80	5.00
B	**Commercial**				
	0-20 kW	5.00	100.00	4.10	5.50
	Above 20 kW	60.00	100.00	4.10	6.00
C	**Large Supply**	60.00	150.00	4.10	6.50
D	**Small Power**	5.00	110.00	4.10	6.00
E	**Medium Supply**	60.00	125.00	4.10	6.00
F	**Agriculture**	0.00	15.00	2.10	5.00
G	**Public Lighting**	60.00	110.00	4.10	6.00
H	**Bulk Supply**	60.00	150.00	4.10	6.25
I	**Others - Temporary Supply**	0.00	100.00	5.10	6.50

5.6 Revenue at Proposed Tariff for FY 2012-13

5.6.1 Based on the above tariff proposal, the revenue from sale of power from various consumer categories is summarised in the table below:

Table 69: Revenue at Proposed Tariff for FY 2012-13

S.No.	Category	Sales	Revenue from Sale of Power (Proposed)				Average Tariff (Rs/Kwh)
			Fixed	Energy Charges	Others	Total Revenue (Rs.Crs)	
1	**Domestic**	569.50	11.91	273.61	-	285.52	5.01
2	*0-150 kWh*	74.23	2.28	25.98	-	28.26	3.81
3	*Above 150 kWh*	495.26	9.63	247.63	-	257.26	5.19
4	**Commercial**	454.81	40.65	265.44	-	306.09	6.73
5	*0-20 kW*	148.86	13.06	81.88	-	94.93	6.38
6	*Above 20 kW*	305.94	27.59	183.57	-	211.16	6.90
7	**Large Supply**	140.42	11.61	91.27	-	102.88	7.33
8	**Small Power**	25.70	2.70	15.42	-	18.12	7.05
9	**Medium Supply**	90.81	10.15	54.48	-	64.64	7.12
10	**Agriculture**	1.75	0.01	0.87	-	0.88	5.06
11	**Public Lighting**	17.94	0.81	10.76	-	11.58	6.45
12	**Bulk Supply**	120.14	8.66	75.08	-	83.74	6.97
13	**Others - Temporary Supply**	43.77	7.14	28.45	-	35.58	8.13
14	**Total**	**1,464.82**	**93.64**	**815.40**	**-**	**909.04**	**6.21**

5.6.2 The table below summarizes the revenue from Existing Tariff vis-a-vis Proposed Tariff for different consumer categories.

Table 70: Existing Vs Proposed Revenue for FY 2012-13

S.No.	Category	Sales	Revenue from Existing Tariff (Rs.Crs)	Average Tariff (existing) Rs./Kwh	Revenue from Proposed Tariff (Rs.Crs)	Average Tariff (proposed) Rs./Kwh
1	**Domestic**	569.50	203.79	3.58	285.52	5.01
2	*0-150 kWh*	74.23	15.59	2.10	28.26	3.81
3	*Above 150 kWh*	495.26	188.20	3.80	257.26	5.19
4	**Commercial**	454.81	203.68	4.48	306.09	6.73
5	*0-20 kW*	148.86	61.69	4.14	94.93	6.38
6	*Above 20 kW*	305.94	141.99	4.64	211.16	6.90
7	**Large Supply**	140.42	62.22	4.43	102.88	7.33
8	**Small Power**	25.70	10.66	4.15	18.12	7.05
9	**Medium Supply**	90.81	42.10	4.64	64.64	7.12
10	**Agriculture**	1.75	0.37	2.10	0.88	5.06
11	**Public Lighting**	17.94	7.80	4.35	11.58	6.45
12	**Bulk Supply**	120.14	52.72	4.39	83.74	6.97
13	**Others - Temporary Supply**	43.77	22.32	5.10	35.58	8.13
14	**Total**	**1,464.82**	**605.66**	**4.13**	**909.04**	**6.21**

5.6.3 Accordingly the summary of the ARR Revenue Gap and Proposed recovery for FY 2012-13 is depicted in table below. The Hon'ble Commission is requested to approve the proposed increase in tariff and revenue gap recovery proposal. The revenue gap after tariff increase amounts to Rs 29.55 Crores. The same is being requested to carried forward as regulatory asset.

Table 71: Revenue Gap and its Recovery Proposal

Particulars	Figures
Total Sales for FY 2012-13 (Mus)	1,464.82
Figures (Rs.in Crs)	
Revenue Requirement for FY 2012-13	769.43
Provisional Gap for Past FY 2011-2012	169.17
Total ARR including Past FY's Gap	938.60
Revenue at Existing Tariff	605.66
Total Gap at Existing Tariff	332.94
Total ARR including Past FY's Gap	938.60
Revenue at Proposed Tariff	909.04
Remaining Gap (Rs in Crores)	29.55
Figures (in Rs.per KWh)	
Average Cost of Service in FY 2012-13	5.25
Per Unit Gap for For FY 2011-12 (based on FY 2012-13 Sales)	1.15
Total Average Cost including Past FY 's Gap Component	6.41
Average Revenue at Existing Tariff	4.13
Per unit Gap at Existing Tariff for FY 2012-13	2.27
Total Average Cost including Past FY 's Gap Component	6.41
Average Revenue at Proposed Tariff	6.21
Per Unit Remaining Gap	0.20
Per Unit increase in Average Tariff	2.07
% increase in Average Tariff	50.09%

Chapter 6. Fuel & Power Purchase Adjustment Petition Formulae

6.1 Background of Fuel & Power Purchase Price Adjustment (FPPPA)

6.1.1 As per Section 62(4) of the Electricity Act 2003,

*(4) No tariff or part of any tariff may ordinarily be amended more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any **fuel surcharge formula** as may be specified."*

6.1.2 A reference can be drawn to the provisions of the Tariff Policy notified by the Government of India specifying that the uncontrollable costs be recovered speedily to ensure that the future consumers are not burdened with past costs. The *uncontrollable costs include fuel cost, cost on account of inflation, variations in power purchase unit cost on account of adverse natural events* etc.

6.1.3 CED has adopted the principles of Terms and Conditions for Determination of Tariff Regulations 2009 (Tariff Regulations 2009) notified by the Joint Electricity Regulatory Commission where JERC has provided for recovery of variation in fuel / power purchase costs from consumers as per the formula to be approved by Hon'ble Commission.

6.1.4 As per Regulation 4 of JERC Tariff Regulations 2009,

4. Periodicity of Tariff Determination
*No tariff or part of any tariff may ordinarily be amended, more frequently than once in any year, except in respect of any changes expressly permitted under the terms of the **fuel surcharge formula** specified by the Commission.*

6.1.5 As per Regulation 7 of JERC Tariff Regulations 2009,

7. Fuel Surcharge Formula
(1) The fuel cost revisions for the generating companies/units owned by the licensee that are due to reasons beyond the control of the generating companies / the licensee be in accordance with the fuel surcharge formula as may be decided by the Commission from time to time.
(2) The generating company or the licensee may determine such charge in accordance with the specified formula and recover the same from such categories of consumers or the licensees, as the case may be after following procedure and the terms and conditions attached thereto.

6.1.6 Accordingly, CED is proposing the present Fuel & Power Purchase Price Adjustment (FPPPA) formula for the approval of Hon'ble Commission.

6.2 Approach for suggesting Formula

6.2.1 CED is proposing Fuel & Power Purchase Price Adjustment (FPPPA) Formula in order to recover the additional costs on account of changes in fuel price and power purchase cost of generating stations. The Fuel & Power purchase price adjustment formula adopted by other states mainly the western regions of India has been studied and is provided in **Annexure – 1**.

6.2.2 Further to the view & the principles enshrined in the Electricity Act, 03 and the National Tariff Policy, many SERCs in the country have adopted suitable mechanisms to speedily recover the variations in power purchase costs through retail tariffs. This ensures that the future consumers are not burdened with costs of the past and also allows the utilities to economically & efficiently recover the power purchase costs.

6.3 Frequency of exercising Fuel Cost/ Power Purchase Cost adjustment in other States

6.3.1 To evolve a more realistic retail pricing system that is market reflective, most of the states have introduced a Fuel Cost Adjustment factor in the retail tariffs which is also in line with the provisions laid down in the Electricity Act, 03 & Tariff Policy. The frequency of exercise to adjust the power purchase costs within a financial year carried out by different states is tabulated below:

Table 72: FPPPA Adjustment frequency in other States

Sr. No.	State	Frequency of adjusting Power Purchase Cost
1	Assam	Quarterly
2	Andhra Pradesh	Quarterly
3	Bihar	Half Yearly
4	Chhatisgarh	Half Yearly
5	Gujarat	Quarterly
6	Haryana	Quarterly
7	Jharkhand	Quarterly
8	Kerela	Quarterly
9	Madhya Pradesh	Half Yearly
10	Maharashtra	Quarterly
11	Orissa	Quarterly
12	Punjab	Quarterly
13	Uttar Pradesh	Quarterly

6.4 Glimpse of FCA/FPPPA formula approved in other States

6.4.1 Interpretations by other Regulators of similar provisions in their respective Reform Acts may be helpful in analyzing the scope and coverage of cost variances under the cost pass-through framework.

- ✓ In Gujarat, the Regulator has included both the fixed and variable costs of power purchase in the formula.
- ✓ In Maharashtra, the Regulator has further expanded the formula to include the associated working capital cost (carrying cost) and a differential FSA exists among various consumer categories.
- ✓ Andhra Pradesh Electricity Regulatory Commission (APERC) has approved a Fuel and Power Purchase Adjustment formula that distributes Fuel surcharge among all categories of consumers except agriculture.

6.5 Rationale of FPPPA Formula

6.5.1 The increase in fuel price is one of the major risks faced by the distribution licensees, which may affect their financial position adversely. As per the Act, in order to recover the additional burden on account of changes in fuel price, a fuel surcharge formula is to be specified. This formula intends to achieve the above objective. The basic rationale has been to devise a formula that would permit mid course corrections in recovery/reimbursement due to uncontrollable cost changes in fuel price, hydel-thermal mix, power purchase costs and retail load.

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6.6 Characteristic of FPPPA Formula

6.6.1 The formula required to compensate CED on account of variations in Fuel & Power Purchase Price Adjustment should basically meet the following characteristics:

- *Transparency:* The formula should clearly reflect the dis-aggregated quantification of uncontrollable factors.
- *Efficiency*: The formula should encourage and incentivise efficiency of operations and the utility should not be allowed to take advantage of its pass through characteristics to pass inefficient costs on to the consumers. Accordingly the formula should internalise the efficiency targets set by the Commission and should automatically trigger recovery beyond prescribed norms.

- *Ensure financial viability*: The formula should ensure financial stability of the department by allocating and sharing the risks in an equitable manner and should not be designed in such a way so as to unduly favour any of the stakeholders.
- *Cost Adjustment*: The formula should take care of accounting for both the increment and reduction of cost and give its adjustment to the appropriate beneficiaries within the parameters determined by the Hon'ble Commission.
- *Stability*: The formula should not impart undue shocks in the tariffs. The formula should include features to spread the variation in cost over a sufficiently longer period by applying frequent adjustment rather than a one-time adjustment.
- *Simplicity*: On top of everything, the formula should incorporate administrative simplicity through automatic approval without having to go through the elaborate regulatory approval process each time during the period of its implementation. It should also provide ease of Regulatory supervision.

The formula thus has been devised taking into consideration all the above factors.

6.7 Suggested FPPPA Formula

6.7.1 CED has proposed the formula to be applicable for a control period of a quarter, with appropriate adjustment in each quarter, based on the past quarter (or the quarter before that, as the case may be) to be applicable, rather than as an advance. In doing so, there is clearly a cost of carrying these additional liabilities and therefore, the formula would also provide an interest cost at the working capital rate of interest for such recovery or reimbursement as the case may be.

6.7.2 Variations would be determined with respect to the parameters determined in JERC Tariff Order or any other related order

6.7.3 The formula for Fuel & Power Purchase Price Adjustment (FPPPA) suggested by CED is given below:

$$\textbf{FPPPA (Rs/kWh)} = [V_F + V_{PP} + V_Z + I + B] / S.E$$

Where, FPPPA is the Fuel & Power Purchase Price Adjustment Charge.

V_F	Variation on account of fuel cost from own generation (for future use)
V_{PP}	Variation on account of differential cost of Power purchase (Rs.)/ Average Power Purchase Price variable cost of power purchase
V_z	Variation on account of Unpredictable factors- e.g. Variation in Water charges/ Tax structure, Electricity Duty, Cess & Other Levies
I	Carrying cost / Interest Cost for FPPPA due to additional working capital required corresponding to lagged recovery
B	Adjustment factor for over-recovery / under-recovery

SE is the Energy sold in the previous "Control Period" in Million Units (The Control Period shall mean to be the period comprising of a Quarter)

S.E. (in MU) or Saleable Energy (in MU) = [(Total Sales in MU + Excess T & D loss in MU)]

Where, **Total Sales = Actual Sales Metered + Sales Unmetered (estimated on the basis of the norms approved in the tariff order, in MU)**

Where, **Excess T & D loss in MU = (Energy Input in MU – Total sales in MU) - (Energy Input in MU X % T&D loss Approved)**

Energy Input (MU) = Total energy Input, i.e. the sum of total net energy generated and energy purchased
T&D Loss Approved = approved by the Commission in its Tariff order in %

Hence FPPPA is reduced to the extent of excess T&D loss;

6.8 The proposed components of FPPPA cost are further described in detail as below:

6.8.1 Variation on account of Fuel Cost from own generation plants (V_F)

6.8.1.1 CED has no self generating plants; hence the variation on account of Fuel Cost from own generation plants is not applicable at present.

6.8.1.2 However for future if CED develops own generating plants, then the formula proposed will be applicable. The adjustment on account of variations in the Unit cost of CED own thermal stations will be calculated in the following manner.

$$V_F = \sum_{n=1}^{k} [OGD_B \times VC_B \times (FuelC_A \div FuelC_B - 1)]$$

Where

V	Adjustment on account of variations in delivered cost of Fuel at CED's Thermal Power Station in Rs Crs
N	1 to k, the thermal power stations in CED.
OGD_B	Is the Approved base level of delivered energy at the bus bar from CED's thermal plants in million units
VC_B	Is the base variable cost per unit in Rs./kWh calculated on the net output using permitted auxiliary consumption as per the tariff order
$FuelC_A$	is the actual landed price of fuel at relevant CED's generation stations, expressed in Rs./Kcal calculated using the actual fuel cost for each of the stations and the heat value at the base SHR
$FuelC_B$	is the base landed price of fuel at relevant CED's generation stations, expressed in Rs./Kcal calculated using the base fuel cost for each of the stations and the heat value at the base SHR

6.8.1.3 The formula envisages capturing the efficiency parameters of the generation through retaining the auxiliary consumption and the Station Heat Rate at the level of CED tariff order. Further, the formula considers normalizing the costs of fuel for the heat values so that the cost and heat content of the fuel is also captured.

6.8.2 Variation on account of change in Power Purchase Costs (V_{PP})

6.8.2.1 The adjustment on account of variations in the power purchase costs from other sources will be calculated in the following manner.

$$V_{PP} = \sum_{m=1}^{k} (FC_A - FC_B) + [\sum_{m=1}^{k} \{(VC_A - VCb) \times Q_A\}]$$

Where:

V_{PP}	Adjustment on account of power purchased from other entities in Rs. Crores
M	1 to k, the Generating Stations of other entities.
FC_A	Is the actual fixed cost paid to the generators in Rs crores
FC_B	Is the base fixed costs payable to the generators in Rs crores
VC_A	is the actual variable cost per unit of delivered energy, computed based on the principles laid down in the power purchase arrangements in Rs. / kWh and inclusive of Transmission Charge
VC_B	Is the base variable cost per unit of delivered energy from each station in Rs./kWh as considered by the Hon'ble Commission for the prevailing tariff order.
Q_A	Is the Permitted level of power purchases from each source in million units.
M	Various sources of power from 1 to k

6.8.2.2 The power purchase costs are guided by the Power Purchase Agreements & tariffs as determined by CERC/JERC. Variations in the components of the power purchase costs as per the approved figures are captured in the formulation. While the Fixed Costs are independent of the quantity purchased, the variable cost change in proportion to the quantum purchase. The quantity variance occurs due to uncertainties in the load or generation capacity addition or unscheduled outages or allocation from Ministry of Power, etc.

6.8.2.3 Therefore the formula assumes recovery of the fixed cost variance and variable cost variance in proportion to the base level of Permitted Quantity.

6.8.3 Variation on account of other Uncontrollable Costs (V_Z)

6.8.3.1 The **'Z factor'** will represent any other unpredictable and unforeseen cost, not envisaged at the time of tariff fixation.

6.8.3.2 The 'Z' factor will have a normal value of 'zero'.

6.8.3.3 The various uncontrollable costs could be variation in Water charges/ Tax structure/ Electricity Duty/ Cess & Other Levies

6.8.4 Adjustment formula for Working Capital interest (I)

6.8.4.1 The adjustment on account of interest burden due to lagged adjustment of the FPPPA has to be recovered by CED. It is proposed to calculate the interest liability according to the following formula.

$$I = \frac{A \times R \times T}{100}$$

Where

I	Interest cost (carrying cost) in Rs Crores
A	The amount of FPPPA in previous quarter in Rs. Crores
R	SBAR as on 1st April of each Financial year
T	Time difference between the applicability of FPPPA for previous and relevant Control Period as measures in months; For example in case the Control period for which FPPPA is being recovered is April-June, and it is being applied in the period Oct-Dec, the value of T would be 6 months;

Control Period: **Period of implementation of FPPPA (either quarterly or monthly)**

6.9 Implementation of FPPPA Formula

6.9.1 CED does not have its own generation. The majority of the power requirement for the UT is met through its share from Central Sector Power Stations as allocated by the Central Government.

6.9.2 CED is presently seeking that the variation be made on the basis of the power purchased from the sources as may be determined by the Hon'ble commission for the FY 2012-13 under the Tariff Order which is under process.

6.9.3 The FPPPA may be recovered in the form of an incremental energy charge (Rs/kWh) in proportion to the energy consumption and might form a part of the energy bill to be served on monthly or any other periodical basis.

6.9.4 The formula should be allowed to be applied at the end of each quarter by Distribution Licensee with post-facto approval of the honourable commission. The Distribution Licensee would provide all relevant information to the Commission and in any case where the Hon'ble Commission observes any discrepancies, the same will be adjusted during the next Control Period or at end of the year as may be felt appropriate by the Hon'ble Commission. This mechanism will provide administrative and regulatory simplicity.

6.9.5 A uniform FPPPA charge would be applicable to each tariff category of consumer.

6.9.6 CED, seeks approval for the suggested Fuel & Power Purchase Price Adjustment (FPPPA) formula and implementation of the same from 1st April, 2012, with adjustments provided on quarterly basis for under/over recovery.

Chapter 7. General Conditions and Tariff Schedule

7.1 The following LT/HT Tariffs are subjected to the following conditions:

7.1.1 Classification of Premises

7.1.1.1 CED has the right to classify or reclassify the supply of energy to any premises under an appropriate category of tariff.

7.1.2 Connected Load

7.1.2.1 The connected load of the service connection shall not exceed the contracted load. Any consumer who exceeds his contract demand or connected load or increase the capacity of the step down transformer will be liable to compensation the licensee for all damages occasioned to his equipment or machinery by reason of this default.

7.1.3 Additional charges for excluding contracted load/contracted maximum demand

7.1.3.1 If in any month the consumer exceeds his contracted load/contracted demand the portion of the load/demand in excess of the contracted load/demand shall be billed as per The Electricity Supply Code Regulations, Clause 10.1.

7.1.4 Maximum Demand

7.1.4.1 The maximum demand of supply of electricity during a month shall be twice the largest number of Kilo-Volt Ampere hours (KVAH) delivered at the point of supply to the consumers during any consecutive 30 minutes in the month. However for the consumers having contracted demand above 4000 KVA the maximum demand shall be four times the largest number of Kilo-Volt Ampere hours (KVAH) delivered at the point of supply to the consumers during any consecutive 15 minutes in the month.

7.1.5 Fixed Charges

7.1.5.1 Every consumer whether consumes energy or not shall pay fixed charges specified for each category in this part to cover the cost of distribution network laid by the licensee.

7.1.6 Additional Charges for Belated Payment of Bills

7.1.6.1 The energy bills shall be paid by the consumers within the due date mentioned on the bill.

7.1.6.2 If the payment is made after the due date the consumer is liable to pay additional charges for belated payment on the bill amount at the rate of 2% per month.

7.1.6.3 If the energy bill amount is not paid within due date of the bill, the power supply is liable to disconnection.

7.1.6.4 For reconnection of power supply after disconnection, the consumer has to pay all dues and reconnection fees plus additional charges for belated payment as mentioned in para 7.1.5.2.

7.1.7 **Surcharge for Low Power Factor/Non Installation of Required rated LT Shunt Capacitors**.

7.1.7.1 Consumer using LT installation with welding transformers and induction motors of 3 HP and above and other low power factor consuming appliances shall arrange to install low tension shunt capacitors of required rating and shall maintain these capacitors in good working condition .No service connection shall be released without installation of shunt capacitor(S) of required rating.

7.1.7.2 In case the shunt capacitor(S) are found to be missing or inoperative or damaged, 15 days notice shall be issued to the consumer for rectification of the defect and setting right the same. In case the defective capacitor(S) are not replaced/rectified within 15 days of given notice, a surcharge of 20% on the bill amount shall be levied till defective capacitor(S) are replaced/rectified to the satisfaction of the licensee. If the capacitor(S) are found to be of inadequate rating then the capacitor surcharge shall be levied on prorate basis

7.1.7.3 Consumers in whose L.T connections the meter provided by the licensee have the power factor recording feature, shall install shunt capacitors of adequate rating to ensure power factor of 90% or above failing which low power factor surcharge at the rates noted below will be levied.

If for any installation, the power factor falls below 70%, the licensee may disconnect the supply after due notice of 15days, without prejudice to the

right of the licensee to levy/demand minimum charges as applicable during the period of disconnection.

If power factor falls below 90%, surcharge of 1% on the bill amount for each 1% by which monthly average power factor falls below 90% shall be levied.

7.2 Schedule for Service Connection Charges and Service Rentals

7.2.1.1 Service connection charges are provided in schedule of general and service connection charges are to be recovered from all prospective consumers and existing consumers seeking extension in load. Schedule of service connection charges as prevalent is given under

Table 73: Service Connection Charges for Domestic and NRS Supply

(a) Single phase fixed per kW charges		
(i) Up to 1kW	**Domes c**	**Rs.250**
	NRS	**Rs.250**
(ii) Above 1 kW and upto 3 kW	**Domes c**	**Rs.300**
	NRS	**Rs.500**
(iii) Above 3 kW and 5 kW	**Domes c**	**Rs.500**
	NRS	**Rs.750**
(b) Three phase fixed per kW charges		
(i) Above 5 kW	**Domes c**	**Rs.750**
	NRS	**Rs.1000**

7.3 Variable Charges

7.3.1 No variable charges are leviable up to 75 meters. Beyond 75 meters for all loads variable charges at Rs 125 per meter length of service line shall recoverable from all consumers having load above 5 kW.

7.3.2 Domestic and Non Residential consumers falling under the following categories have the option either to pay in lump sum the service connection charge as mentioned under the preceding clause or to pay monthly service rentals at 1.6 paisa per rupee of the estimated cost of the service line excluding the cost of 30.48 meters.

i. Members of Schedule Castes.
ii. The connection meant for religious and charitable institutions run by recognized/registered associations or societies registered with Register of societies.

7.4 SERVICE CONNECTION CHARGES FOR INDUSTRIAL AND BULK SUPPLY

7.4.1 For new Connections:

Table 74: Service Connection Charge for new connection

Load	Service Connection Charge
a) Upto 20kW	1000/kW
b) Above 20 kW and below 60 kW	1250/kW

7.4.2 Service connection charges under Para 7.4.1 shall be applicable for loads up to 60 KW where the length of new and augmented or both line(s) to be provided is up to 100 meters which will include 11 kV line (whether overhead or cable LT line and service cable. Where this limit exceeds 100 meters, applicant shall be required to pay actual cost of Rs. 125/- per meter of 11 kV line, LT line and service cable in excess of 100 meters as additional service connection charges (non refundable).However, no component of distribution substation transformer to be created would be charged wherever applicable.

7.4.3 Extension of Load

7.4.3.1 Where the consumer is either paying service rentals or had paid the service connection charges on kW basis for the original load.

Table 75: Service Charges for Extension of Load

Extension of Load	
a) Upto 20kW	1000/kW
b) Above 20 kW and below 60	1250/kW

7.4.3.2 However charges for service line in excess of 100 meters shall be charged at Rs 125 per meter for length of service line (new or augmented or both) feeding such consumer. Rentals on original load, if applicable, already shall continue.

7.4.3.3 Where the consumers had paid the service connection charge in full:

i. No charges for extension shall be recoverable where the cost of service/common part of service line had been paid by the applicant at the time of release of original connection provided

ii. No augmentation of service/common portion of service lines had been carried out ever since the release of connection and also the additional load can be released from the existing line without augmentation and the cost deposited by the consumer at the time of release of original connection is not less than 'per kW charges' payable on the basis of total connected load (including extension in load)

iii. For calculating per kW charges, the rate as applicable at the time of release of original connection shall apply for the existing load and prevailing rates for the extension in load. Difference, if any , between the actual cost paid and the recoverable amount 'per KW charges' shall be payable by such consumers at the time of extension in load.

iv. This shall also apply to the cases fed through independent feeder laid at the cost of the consumer.

v. The cost of line/bay (33/66/132/220kV) paid by the consumer at the time of clubbing/conversion paid by the consumer at the time of clubbing of supply to higher voltage shall be appropriated towards service connection charges at the time of subsequent release of extension in load, if applicable. However, for calculating total 'per kW charges' service connection charges already recovered in respect of clubbing cases, applicable rates to different connections as existing prior to clubbing are to be taken into account.

vi. Cases involving augmentation of service/Common portion of service line or if the augmentation had taken place subsequent to release of connection shall be default with as per provisions of sub para 7.4.1

1) While accessing the connected load for working out service connection charges, both general and industrial loads shall be taken into account.

2) The per kW, service charges for extension in load shall be as contained in Para 7.4.3.1 above and those shall be, in addition to the service rentals on the original load, if applicable thereon.

3) An increase in the connected load even without increase in the contract demand shall call for payment of service connection charges an per kW basis as applicable to the category in which total connected load after extension falls and shall be recoverable for extension part only. Consumers seeking extension in contract demand within the sanctioned connected load shall not be required to pay service connection charges on KW basis.

4) Consumers seeking contract demand higher than 60% of the connected load, shall be charged one time charge termed as 'Contract Demand Charges' as under :

Table 76: Contract Demand Charges

Contract Demand Charges		
1	For contract demand above 60% and upto 80% of connected load	Rs.200per kVA
2	For contract demand above 80% and upto 100% of connected load	Rs 300 per kVA
3	Large Supply consumers getting at 33kV and above, are exempted from the payment of one time contract demand charges.	

7.5 RECOVERY OF SERVICES CONNECTION CHARGES FOR EXTENTION OF LOAD BY CONSUMERS WHO HAD PAID THE FULL COST OF THE LINE.

7.5.1 Industrial and Bulk supply consumers availing connection for load exceeding IMW have to pay the entire cost of service line laid for them. By virtue of paying the entire cost of the line involved in releasing the connection, consumer is entitled to avail within five years extension in load upto 100% of the original line for which the line had been erected provided that line so erected is capable of taking the load i.e. original load and extended load upto 100% of original load. If, however, line already erected is unable to take 100% extension of load, extension in load shall be limited to capacity of the line. In such an event, consumer is not required to pay service connection charges for the extension in load, provided the cost of line already provided by him is more than per kW charges calculated at the applicable rate from time to time on the total load including extension in load applied by the consumer.

7.5.2 If the extension in load applied by the consumer is in excess of the capacity of line already erected or more than 100 % of the original load, consumer shall pay the service connection charges as applicable to the new applicants.

7.5.3 If during the period of 5 Years from the date of connection some load has already been released from the line, whose entire cost has been paid by the consumer, who seeks extension in load within five years upto the extent of the capacity of the line or 100% of the original load within 5 years upto the extent of the capacity of the line or 100 % of the original load, whichever is lesser, release of additional load shall be regulated as under:

7.6 Load released on voltage above 11 kV and loads 1MW and above on 11kV:

7.6.1 Extension in load to the original consumer shall be allowed (within the contract demand for which line was originally erected for him) at the cost of the department, even if augmentation/erection of new lines is required.

7.7 Load less than 1MW released on 11 kV

7.7.1 In this case care should be taken for a period of 5 years that a margin of 100 % of the load of the original consumer is available in the capacity of the line. if other consumer(s) wants connection(s) to be released by utilizing the available margin, new consumer(s) singly or jointly, as the case may be shall pay towards the cost of augmentation of line so that sufficient margin in capacity is available to cater to the additional requirement of the original consumer.

7.7.2 Provisions of the preceding paras of this regulation shall not be applicable where as a result of extension in load the supply voltage level of the consumer charges or when the consumer changes the site of the premises.

7.8 SERVICE CONNECTION CHARGES FOR AGRICULTURE POWER

7.8.1 All prospective tubewell consumers covered under general category shall pay Rs 3000 per BHP as service connection charges The above charges are recoverable where total length of service line including new 11 kV line, LT line (new/augmented) and service cable is up to 1 Km (out of which LT line/Service cable route length should not exceed 500 meters from the common pole).Where the total length of service line is more than 1 km (out of which LT line/Service cable route length should not exceed 500 meters),applicant under this category shall be required to pay cost of new 11 kV line beyond this limit at Rs 125 per meter as additional service connection charges. However, no component of distribution substation /transmission cost would be charged.

7.9 LT Surcharge

7.9.1 If any consumer having sanctioned load above 60 kW has not switch over to take supply at 11 kV after issue of notice period, shall be charged @ 20% on the energy charges plus fixed charges.

7.10 Proposed Tariff Schedule

7.10.1 Domestic Service (DS)

7.10.1.1 Applicability

This schedule is applicable to single private house or flat for light, fan, domestic pumping sets and household appliances in the following premises:

- Single private house/flat.
- Government recognized education institutions, viz schools, colleges, universities, ITI hostels, canteens, and residential quarters attached to the educational institutions.
- Government and public sports institutions/Gymnasium halls etc. banks and PCO exclusively for the use of educational institutions.
- Electricity department offices, substations, premises belonging to Electricity Department, UT Chandigarh
- Religious Institutions viz. Temples, Gurudwaras, Mosques, Churches, provided that the Sub Divisional officer concerned authenticates the genuineness of the place being exclusively used for worship by the general public.
- Housing colonies and multi storied flats/buildings as defined in Electricity Supply Code Regulations notified by the JERC.

Notes

1) Where a portion of the dwelling is used regularly for the conduct of a business, the consumption in that portion shall be separately metered and billed under the appropriate Non Domestic Tariff.

- where only 20% of the portion of the dwelling subject to a maximum of 15 square meter is used regularly for the installation of STD,PCO, Fax or Photostat machine only.

- Where 25% of the covered area subject to maximum of 50 square meter is being used by Professional/Consultant Viz. doctors, advocates and architects etc.

2) Sub metering of supply to tenants or member of the same family residing in one premise shall be permitted.

3) Hostels shall be considered as one unit and billed under domestic supply tariff without compounding.

4) Private education institutions not recognized by the Chandigarh Administration shall be billed under Non Domestic Tariff.

5) STD/PCO, shops attached to Religious Institutions will be billed under Non Domestic Tariff.

6) In case a room or a part of residential house is utilized by a teacher for imparting tuition work, self occupied handicapped persons operating from their residences, cooking classes taken by house ladies, beauty parlour run by house ladies, ladies doing tailoring work etc. shall be covered under domestic tariff.

7.10.1.2 **Character of Service:**

AC, 50 cycles, Single phase 230 volts or three phase 400 volts or 11 Kilo volts.

For loads up to 5 KW supply shall be given on single phase 230 volts and above 5 KW up to 60 KW supply shall be given on three phase 400 volts. For loads above 60 KW, supply shall be given on 11 KV and a separate transformer of adequate capacity shall be installed by the consumer at his cost as per Electricity Supply Code Regulations notified by JERC. In case of consumers where the metering is being done on low voltage side of the transformer instead of high voltage side, the consumption should be computed by adding 3% extra on account of transformation/ losses. This arrangement shall be continued for a maximum of one year within which metering shall be shifted to HT (11KV) side of the transformers.

Consumption Range	Fixed Charge (Rs/KW/month)		Energy Charge (Rs/Kwh)	
	Existing	Proposed	Existing	Proposed
0-150 kwh (unit)	NIL	15	2.10	3.50
Above 150 Kwh (unit)	NIL	15	3.80	5.00

7.10.1.3 **POWER FACTOR SURCHARGE (If the connection is released on 11 KV)**

The monthly average power factor of the plant and apparatus installed by the consumer shall not be less than 90% lagging. The monthly average power factor shall mean the ration expressed as percentage of total kWH to total kVAh supplied during the month. The ratio shall be rounded upto two figures.

In case the monthly average power factor falls below 90%, consumer shall pay on the bill amount a surcharge of 1% for each 1% by which the monthly average power factor falls below 90%

If for any installation, the average power factor is less than 70%, the supply may be disconnected after due notice of 15 days, without prejudice to the right of the licensee to levy demand/minimum charges as applicable during the period of disconnection.

7.10.1.4 POWER FACTOR INCENTIVE

The monthly average power factor of the plant and apparatus installed by the consumer should be maintained above 90% lagging. The monthly average power factor shall mean the ratio expressed as percentage of total kWh to total kVAh supplied during the month. The ratio shall be rounded up to two figures.

In case the monthly average power factor will rise above 95%, consumer shall get on the bill amount a rebate of 1% for each 1% by which the monthly average power factor rises above 95%.

7.10.1.5 LATE PAYMENT SURCHARGE:

If the payment is made after the due date the consumer is liable to pay additional charges for belated payment on the bill amount at the rate of 2% per month. Further annual surcharge at the rate of 10% shall also be charged on the unpaid dues of the Electricity Department, if the electricity connection of the consumer gets permanently disconnected on account of non-payment of dues.

7.10.2 COMMERCIAL / NON RESIDENTIAL SUPPLY (NRS)

7.10.2.1 Applicability

This schedule is applicable to all consumers, using electrical energy for light, fans appliances like pumping sets, central air conditioning plant, lift ,welding set, small lathe, electric drill, heater, battery charger, embroidery machine, printing press, ice candy, dry cleaning machines, power press, small motors in non residential premises such as business houses, cinemas, clubs, public offices, hospital, hotels/motels, departmental stores, shops, guest houses, restaurant, offices etc. NRS supply shall also be applicable to multi consumer complex including commercial complexes as defined in the Electricity Supply Code Regulations notified by the JERC.

7.10.2.2 Character of Service

AC, 50 cycles, Single phase at 230 Volts or Three Phases at 400 Volts or 11 Kilo volts.

For loads up to 5 KW supply shall be given on single phase 230 volts and above 5 KW up to 30 KW supply shall be given on three phase 400 volts. For loads above 30KW, supply shall be given on 11 KV in case of multi consumer complex including commercial complex as specified in Electricity Supply code Regulation 2010 notified by JERC and in other cases, load above 60 KW, the supply shall be given on 11 kV. In case of consumers where metering is done on low voltage side of the transformer instead of high voltage side, the consumption should be computed by adding 3% extra on account of transformation losses. This arrangement shall be continued for a maximum of one year within which metering shall be shifted to HT (11KV) side of the transformers.

Consumption Range	Fixed Charge Rs./KW/month		Energy Charge (Rs./Kwh)	
	Existing	Proposed	Existing	Proposed
0 to 20 kw	5	100	4.10	5.50
Above 20 kw	60	100	4.10	6.00

7.10.2.3 **POWER FACTOR SURCHARGE (If the connection is released on 11 KV)**

The monthly average power factor of the plant and apparatus installed by the consumer shall not be less than 90% lagging. The monthly average power factor shall mean the ration expressed as percentage of total kWH to total kVAh supplied during the month. The ratio shall be rounded upto two figures.

In case the monthly average power factor falls below 90%, consumer shall pay on the bill amount a surcharge of 1% for each 1% by which the monthly average power factor falls below 90%

If for any installation, the average power factor is less than 70%, the supply may be disconnected after due notice of 15 days, without prejudice to the right of the licensee to levy demand/minimum charges as applicable during the period of disconnection.

7.10.2.4 **POWER FACTOR INCENTIVE**

The monthly average power factor of the plant and apparatus installed by the consumer should be maintained above 90% lagging. The monthly average power factor shall mean the ratio expressed as percentage of total kWH to total kVAh supplied during the month. The ratio shall be rounded up to two figures.

In case the monthly average power factor will rise above 95%, consumer shall get on the bill amount a rebate of 1% for each 1% by which the monthly average power factor rises above 95%.

7.10.2.5 **LATE PAYMENT SURCHARGE:**

If the payment is made after the due date the consumer is liable to pay additional charges for belated payment on the bill amount at the rate of 2% per month. Further annual surcharge at the rate of 10% shall also be charged on the unpaid dues of the Electricity Department, if the electricity connection of the consumer gets permanently disconnected on account of non-payment of dues.

7.10.3 **LARGE INDUSTRIAL POWER SUPPLY (LS)**

7.10.3.1 **Applicability**

The schedule shall apply for consumers having industrial connected load above 100kW.

Their contract demand shall not be less than 60%. No consumers shall increase his connected load without prior approval of the department. The consumer availing supply at high tension shall indicate rated capacity of all the step down transformers installed in his premises and shall not increase the capacity of such step down transformers without prior approval of the department.

7.10.3.2 **Character of Service**

AC, 50 Cycles, 3 phase 11 kV supply for loads above 100 kW.

Supply can be given at 33/66/220kV depending on quatum/type of load and contract demand and availability of bus voltage and transformer winding capacity at the feeding substation wherever possible at the discretion of supplier. For arc furnace loads and other loads of equally violent fluctuating nature, voltage of supply will be 33kV and above depending upon availability of bus voltage and transformer winding capacity at the feeding substation wherever possible, at the discretion of supplier.

Note

1) The above tariff covers supply at 11 kV. Surcharge at 20% on the above tariff shall be leviable for all the existing consumers which are being given supply at 400 volts.

2) Surcharge at 17.5% on the above tariff shall be leviable for all the arc furnace consumers which are being given supply at 11 kV. This surcharge at 17.5% shall also be leviable on other industrial consumers having sanctioned load exceeding 5000 kW or sanctioned contract demand exceeding 5000 kVA and running at 11 kV.

3) In case of steel rolling mills having supply at 400 volts, an additional surcharge of 5% shall be leviable.

4) In case of HT consumers (11kV and above) where maximum demand and energy consumption is recorded on lower voltage side of consumer transformer instead of high voltage side, maximum demand and energy consumption for billing purpose should be computed by adding 3% extra on account of transformation/cables losses. However this agreement shall in no case continue for more than three months and meter shall be installed on the HT side of the transformer within the said period including such existing connection.

5) For new connections, all metering will be on HT side only.

Consumption Range	Fixed Charge Rs./KW/month		Energy Charge (Rs./Kwh)	
	Existing	Proposed	Existing	Proposed
All Units	60	150	4.10	6.50

7.10.3.3 **POWER FACTOR SURCHARGE (If the connection is released on 11 KV)**

The monthly average power factor of the plant and apparatus installed by the consumer shall not be less than 90% lagging. The monthly average power factor shall mean the ration expressed as percentage of total kWH to total kVAh supplied during the month. The ratio shall be rounded upto two figures.

In case the monthly average power factor falls below 90%, consumer shall pay on the bill amount a surcharge of 1% for each 1% by which the monthly average power factor falls below 90%

If for any installation, the average power factor is less than 70%, the supply may be disconnected after due notice of 15 days, without prejudice to the right of the licensee to levy demand/minimum charges as applicable during the period of disconnection.

7.10.3.4 **POWER FACTOR INCENTIVE**

The monthly average power factor of the plant and apparatus installed by the consumer should be maintained above 90% lagging. The monthly average power factor shall mean the ratio expressed as percentage of total kWH to total kVAh supplied during the month. The ratio shall be rounded upto two figures.

In case the monthly average power factor will rise above 95%, consumer shall get on the bill amount a rebate of 1% for each 1% by which the monthly average power factor rises above 95%.

7.10.3.5 **PLANT & APPARTUS**

The following controls shall be installed:

a) A linked switch with fuse(s) or a circuit breaker for consumer having aggregate installed transformer/apparatus capacity up to 1000 KVA if supplied at voltage of 11 KV and 2500 kVA if supplied at voltage of 33 kV.

b) A circuit breaker along with linked switch for consumer having an aggregate installed transformer apparatus capacity above 1000 kVA if supplied at 11 kV and above 2500 kVA if supplied at 33 kV.

c) In either case, suitable automatic circuit breakers shall be installed on the low tension side of each transformer or on each LT feeder emanating from the transformer.

d) Extra High Tension consumer shall install a circuit breaker on HV side of the transformer.

7.10.3.6 **POINT OF SUPPLY**

The above tariff is based on the supply being given through a single delivery and metering point and at a single voltage. Supply at other points or at other voltage shall be separately billed and metered.

7.10.3.7 **CONTRACT DEMAND**

Contract demand is the load **kW, kVA** or **HP**, as the case may be agreed to be supplied by the licenses and contracted by the consumer and specified in the agreement. If the consumer in a month exceeds the contract demand, such excess shall be charged at an additional rate of Rs 250/kVA.

7.10.3.8 **LATE PAYMENT SURCHARGE:**

If the payment is made after the due date the consumer is liable to pay additional charges for belated payment on the bill amount at the rate of 2% per month. Further annual surcharge at the rate of 10% shall also be charged on the unpaid dues of the Electricity Department, if the electricity connection of the consumer gets permanently disconnected on account of non-payment of dues.

7.10.4 MEDIUM INDUSTRIAL POWER SUPPLY (MS)

7.10.4.1 **Applicability**

This tariff schedule shall apply to all industrial power supply consumers having connected load ranging from 21 kW to 100 kW.

7.10.4.2 **Character of Service**

AC, 50 cycles ,3 phase, 400volts,or at 11 kV for load above 60 KW.

Consumption Range	Fixed Charge Rs./KW/month		Energy Charge (Rs./Kwh)	
	Existing	Proposed	Existing	Proposed
All Units	60	125	4.10	6.00

7.10.4.3 **POWER FACTOR SURCHARGE (If the connection is released on 11 KV)**

The monthly average power factor of the plant and apparatus installed by the consumer shall not be less than 90% lagging. The monthly average power factor shall mean the ration expressed as percentage of total kWh to total kVAh supplied during the month. The ratio shall be rounded up to two figures.

In case the monthly average power factor falls below 90%, consumer shall pay on the bill amount a surcharge of 1% for each 1% by which the monthly average power factor falls below 90%

If for any installation, the average power factor is less than 70%, the supply may be disconnected after due notice of 15 days, without prejudice to the right of the licensee to levy demand/minimum charges as applicable during the period of disconnection.

7.10.4.4 **POWER FACTOR INCENTIVE**

The monthly average power factor of the plant and apparatus installed by the consumer should be maintained above 90% lagging. The monthly average power factor shall mean the ratio expressed as percentage of total kWh to total kVAh supplied during the month. The ratio shall be rounded up to two figures.

In case the monthly average power factor will rise above 95%, consumer shall get on the bill amount a rebate of 1% for each 1% by which the monthly average power factor rises above 95%.

7.10.4.5 **PLANT & APPARATUS**

The following features shall be installed:

a) LT installation with welding transformers will be required to have suitable shunt capacitor(s) installed so as to ensure power factor of not less than 90%.

b) Every LT consumer, including irrigation pump set consumer, whose connected load includes induction motors of 3 HP and above and other low power factor consuming appliances shall arrange to install Low tension Shunt capacitors of appropriate capacity so as to ensure power factor of not less than 90% at his cost across the terminals of his motor(s).

7.10.4.6 POINT OF SUPPLY

The above tariff is based on the supply being given through a single delivery and metering point and at a single voltage. Supply at other points or at other voltage shall be separately billed and metered.

7.10.4.7 CONTRACT DEMAND

Any consumer who exceeds his contract demand or connected load or increase the capacity of the step down transformer(s) will be liable to compensate the department for all damages occasioned to its equipment or machinery by reason of the default. Without prejudice to this right, the department may also cause the service of the consumer to be disconnected without any notice.

7.10.4.8 LATE PAYMENT SURCHARGE:

If the payment is made after the due date the consumer is liable to pay additional charges for belated payment on the bill amount at the rate of 2% per month. Further annual surcharge at the rate of 10% shall also be charged on the unpaid dues of the Electricity Department, if the electricity connection of the consumer gets permanently disconnected on account of non-payment of dues.

7.10.5 SMALL INDUSTRIAL POWER SUPPLY (SP)

7.10.5.1 Applicability

This schedule apply to small power industries with connected load not exceeding 20 KW (26 BHP) in Urban and rural areas.

7.10.5.2 Character of Service

AC, 50 cycles, single phase 230 volts, or 3 phase, 400 volts.

Consumption Range	Fixed Charge Rs./KW/month		Energy Charge (Rs./Kwh)	
	Existing	Proposed	Existing	Proposed
All Units	5	110	4.10	6.00

7.10.5.3 POINT OF SUPPLY

The above tariff is based on the supply being given through a single delivery and metering point and at a single voltage. Supply at other points or at other voltage shall be separately billed and metered.

7.10.5.4 LATE PAYMENT SURCHARGE

If the payment is made after the due date the consumer is liable to pay additional charges for belated payment on the bill amount at the rate of 2% per month. Further annual surcharge at the rate of 10% shall also be charged on the unpaid dues of the Electricity Department, if the electricity connection of the consumer gets permanently disconnected on account of non-payment of dues.

7.10.6 AGRICULTURAL PUMPING SUPPLY (AP)

7.10.6.1 Applicability

This schedule shall apply to all consumers for use of electrical energy for irrigation pumping load up to 20 kW (26 BHP). Supply for loads above 26 BHP/20 KW shall be charged in accordance with relevant industrial tariff (Govt. Tubewells meant for water supply are covered under relevant Industrial Tariff)

7.10.6.2 Character of Service

AC, 50 Cycles, three phase, 400 volts, Single Phase at 230 volts.

Consumption Range	Fixed Charge Rs./KW/month		Energy Charge (Rs./Kwh)	
	Existing	Proposed	Existing	Proposed
All Units	NIL	15.00	2.10	5.00

Note

1) Pumping sets shall be ISI marked. The responsibility for ensuring installation of ISI marked pumping sets as well as shunt capacitors shall be that of JE concerned, who shall verify the same at the time of verification of test reports before release of connection.

2) Supply for agriculture/Irrigation pump set, at one point, may also be given to a registered co-operative society or to a group of farmers recognized by the Chandigarh Administration.

3) An agriculture consumer, if he so desires, may shift the location within his premises of his connection, with the approval of the CED, after payment of appropriate charges.

7.10.6.3 **POINT OF SUPPLY**

The above tariff is based on the supply being given through a single delivery and metering point and at a single voltage. Supply at other points or at other voltage shall be separately billed and metered.

7.10.6.4 **POWER FACTOR IMPROVEMENT**

All consumers are required to install shunt capacitors having suitable kVAR capacity. No connection shall be released without installation of shunt capacitors. In case shunt capacitors is/are found to be missing or inoperative or damaged, a 15 days notice shall be issued to the consumers for rectification of the defect and setting right the same. In case the defective capacitors is/are not replaced/rectified within 15 days of the issue of notice, the licensee will replace the capacitor at the cost of consumer and recover the cost as determined by the licensee.

7.10.6.5 **LATE PAYMENT SURCHARGE**

If the payment is made after the due date the consumer is liable to pay additional charges for belated payment on the bill amount at the rate of 2% per month. Further annual surcharge at the rate of 10% shall also be charged on the unpaid dues of the Electricity Department, if the electricity connection of the consumer gets permanently disconnected on account of non-payment of dues.

7.10.7 **Street Light Supply**

7.10.7.1 **Applicability**

This tariff schedule shall apply for use of Street Lighting system, including signaling system and road and park lighting in municipality, panchayats, institutions(at the discretion of the supplier)etc.

7.10.7.2 **Character of Service**

AC, 50 cycles, Single phase at 230 Volts or three phase at 400 Volts

Consumption Range	Fixed Charge Rs./KW/month		Energy Charge (Rs./Kwh)	
	Existing	Proposed	Existing	Proposed
All Units	60	110	4.10	6.00

Note

The fitting brackets or any special fitting for public lighting shall be in accordance with the relevant BIS specifications or its equivalent, and shall maintain required clearances as per prevailing rules and regulations. The local body/Municipal corporation will bear the full cost of arranging of power supply to public street lights including complete fitting and brackets. In case, any special fittings are to be provided, the local body shall arrange for it.

7.10.7.3 Rebate for energy saving lights

10% relief in energy charges will be given, if all energy efficient lights are used in that connection.

7.10.7.4 Rates of Line Maintenance and Lamp renewal Charges:

Category –A

Where the initial installation of complete street light fittings and lamps and their subsequent replacement is being carried out at the Department's cost, line maintenance and lamp renewal charges are as under :-

Ordinary Lamps		
Sr. No.	**Category**	**Rates**
1	Lamps up to 150 Watts	Rs. 16 per lamp/month
2	Lamps above 150 Watts	Special Quotations

Mercury Vapour Lamps		
Sr. No.	**Category**	**Rates**
1	Lamps of 80 Watts	Rs. 49 per lamp/month
2	Lamps of 125 Watts	Rs. 53 per lamp/month
3	Lamps of 250 Watts	Rs. 90 per lamp/month
4	Lamps of 400 Watts	Rs. 101 per lamp/month

Flourescent Tubes		
Sr. No.	**Category**	**Rates**
1	Single 2 ft. 20 Watts	Rs. 26 per lamp/month
2	Single 4 ft. 40 Watts	Rs. 43 per lamp/month
3	Double 2 ft. 20 Watts	Rs. 43 per lamp/month
4	Double 4 ft. 40 Watts	Rs. 68 per lamp/month

7.10.7.5 Annual Minimum Charges:

If total number of units consumed in the whole year is less than those would have been consumed if the lamps had been lit on an average of 8 hours per night over the whole year , the Department shall charge for the difference between the stipulated units and units actually consumed at tariff rates. The units consumed in a calendar year will be calculated on the basis of sanctioned load or connected load detected whichever is higher. The annual minimum charges are exclusive of line maintenance and lamp renewal charges.

7.10.7.6 LATE PAYMENT SURCHARGE

If the payment is made after the due date the consumer is liable to pay additional charges for belated payment on the bill amount at the rate of 2% per month. Further annual surcharge at the rate of 10% shall also be charged on the unpaid dues of the Electricity Department, if the electricity connection of the consumer gets permanently disconnected on account of non-payment of dues.

7.10.8 Bulk Supply

7.10.8.1 Applicability

This tariff schedule shall apply to general or mixed loads exceeding 10 kW to MES, Defense establishments, Railways, Central PWD, institutions, Hospitals, Departmental Colonies and other similar establishments where further distribution is to be done by the consumer. Above schedule shall not be applicable, if 50 % or more of the total sanctioned load is motive/ manufacturing load.

7.10.8.2 Character of Service

AC, 50 cycles, three phase, 400 volts or 11 kV or higher voltage at the option of the department. Loads exceeding 60 kW/60 kVA contract demands shall be released on HT only.

Consumption Range	Fixed Charge Rs./KW/month		Energy Charge (Rs./Kwh)	
	Existing	Proposed	Existing	Proposed
All Units	60	150	4.10	6.25

7.10.8.3 POWER FACTOR SURCHARGE (If the connection is released on 11 KV)

The monthly average power factor of the plant and apparatus installed by the consumer shall not be less than 90% lagging. The monthly average power factor shall mean the ration expressed as percentage of total kWH to total kVAh supplied during the month. The ratio shall be rounded upto two figures.

In case the monthly average power factor falls below 90%, consumer shall pay on the bill amount a surcharge of 1% for each 1% by which the monthly average power factor falls below 90%.

If for any installation, the average power factor is less than 70%, the supply may be disconnected after due notice of 15 days, without prejudice to the right of the licensee to levy demand/minimum charges as applicable during the period of disconnection.

7.10.8.4 **POWER FACTOR INCENTIVE**

The monthly average power factor of the plant and apparatus installed by the consumer should be maintained above 90% lagging. The monthly average power factor shall mean the ratio expressed as percentage of total kWH to total kVAh supplied during the month. The ratio shall be rounded upto two figures.

In case the monthly average power factor will rise above 95%, consumer shall get on the bill amount a rebate of 1% for each 1% by which the monthly average power factor rises above 95%.

7.10.8.5 **LATE PAYMENT SURCHARGE**

If the payment is made after the due date the consumer is liable to pay additional charges for belated payment on the bill amount at the rate of 2% per month. Further annual surcharge at the rate of 10% shall also be charged on the unpaid dues of the Electricity Department, if the electricity connection of the consumer gets permanently disconnected on account of non-payment of dues.

7.10.9 **Temporary Supply**

7.10.9.1 **Applicability**

Available to any person requiring power supply for a purpose temporary in nature for period of three months, which may be extended up to a maximum period of two years after an annual notice to the consumer regarding deemed extension up to two years.

7.10.9.2 **Character of Service**

AC, 50 cycles, Single phase at 230 Volts or three phase at 400 Volts.

Consumption Range	Fixed Charge Rs./KW/month		Energy Charge (Rs./Kwh)	
	Existing	Proposed	Existing	Proposed
All Units	NIL	100.00	5.10	6.50

Note

The supply connection will be released within three days after payment of charges and compliance of other requirements by the consumer for loads up to 10 kW and within 15days for load exceeding 10 kW where extension of distribution mains is not required. Where extension of distribution mains is required, the supply shall be released within 60days in case of LT consumers, 90 days for HT consumers and 180 days for EHT Consumers

7.10.9.3 **POWER FACTOR SURCHARGE (If the connection is released on 11 KV)**

The monthly average power factor of the plant and apparatus installed by the consumer shall not be less than 90% lagging. The monthly average power factor shall mean the ration expressed as percentage of total kWH to total kVAh supplied during the month. The ratio shall be rounded upto two figures.

In case the monthly average power factor falls below 90%, consumer shall pay on the bill amount a surcharge of 1% for each 1% by which the monthly average power factor falls below 90%

If for any installation, the average power factor is less than 70%, the supply may be disconnected after due notice of 15 days, without prejudice to the right of the licensee to levy demand/minimum charges as applicable during the period of disconnection.

7.10.9.4 **POWER FACTOR INCENTIVE**

The monthly average power factor of the plant and apparatus installed by the consumer should be maintained above 90% lagging. The monthly average power factor shall mean the ratio expressed as percentage of total kWh to total kVAh supplied during the month. The ratio shall be rounded up to two figures.

In case the monthly average power factor will rise above 95%, consumer shall get on the bill amount a rebate of 1% for each 1% by which the monthly average power factor rises above 95%.

7.10.9.5 **Late Payment Surcharge**

Surcharge would be levied on unpaid dues of the Electricity Department (consumption charges, fixed charges, meter and service rentals, sundry charges etc.) at the rate of 2% on the unpaid amount of the defaulting consumers, for

disconnections, temporarily or permanent or even if not disconnected in the event of the bill not having been paid in full within the period specified in the bill. Further annual surcharge at the rate of 10% shall also be charged on the unpaid dues of the Electricity Department.

7.11 Service Characters of Supply for load above 5000 kW

7.11.1 Supply to any category of consumers above 5000 kW shall be given at the voltage level of 66 kV and above only.

7.12 Schedule of General and Miscellaneous Charges

Sr. No	Description	Proposed
A	**Application processing charges**	
i	Application for Domestic supply	Rs 20/-
ii	Application for Non-Domestic	Rs 50/-
iii	Application for L.T. Industrial supply, street lighting supply.	Rs 100/-
iv	Application for H.T. Industrial supply and bulk supply	Rs 150/-
v	Application for AP supply	Rs 50/-
vi	Application for temporary metered supply	As per corresponding category of permanent supply
B	**Meter Installation Charges**	
i	(Whenever meter purchased by a consumer from the market and is installed at consumer's premises by the department)	
ii	Single Phase Meter	100/- per meter
iii	Three Phase Meter without CT	250/- per meter
iv	Three Phase Meter (with CTs & PTs)	3% of the cost of the meter/ metering equipment subject to minimum of Rs.900/-
v	11 kV Meters	
C	**Meter Inspection & Testing Charges**	
	(In case correctness/accuracy of a meter belonging to the Licensee is challenged by the consumer)	
i	Single phase	120/- per meter
ii	3-phase whole current i.e. without C.T	450/- per meter
iii	L.T. meter with CTs	1200/- per meter
iv	H.T. & E.H.F metering equipment.	2400/- per meter
	NOTE: If the challenged meter is found to be incorrect ,the credit of these charges will be given to the consumer,otherwise these will be forfeited.	
D	**Changing the Meter or its position in the same premises at the request of the consumer when no additional material is required:**	
i	Single phase	225/- per meter
ii	3-phase whole current i.e. without C.T	450/- per meter
iii	L.T. meter with CTs	900/- per meter
iv	H.T. & E.H.F metering equipment.	2400/- per meter

Sr.	Description	Proposed
E	**Re-sealing charges (irrespective of the number of seals involved against each item below and where seals found to have been broken by the consumer):**	
i	Meter cupboard	50/-
ii	Where cut-out is independently sealed	50/-
iii	Meter cover or Meter Terminal cover (Single phase)	150/-
iv	Meter cover or Meter Terminal cover (3-phase)	375/-
v	Maximum Demand Indicator or C.T.s Chamber	900/-
vi	Potential fuses	900/-
	Note :If M&T and ME seals are found to be broken/tempered cost of meter shall be recoverable and the case shall be treated as theft case	
F	**Reconnection Charges**	
a	Reconnecting/connecting the premises of any consumer who was previously disconnected on account of breach of his agreement with the department or of any other provisions of the Act as may be relevant.	
i	Single Phase	Rs 250/-
ii	Three Phase LT	Rs 500/-
iii	Three Phase HT/EHT	Rs 3000/-
iv	Bulk Supply/ Street Lighting/ Temprary Connection (less than 1 MW)	Rs 1500/-
v	Bulk Supply/ Street Lighting/ Temprary Connection (Above 1 MW)	Rs 3000/-
b	Reconnecting vacant premises on the request of the consumer in case the service line is existing	
i	Single Phase	Rs 250/-
ii	Three Phase LT	Rs 500/-
iii	Three Phase HT/EHT	Rs 3000/-
iv	Bulk Supply/ Street Lighting/ Temporary Connection (less than 1 MW)	Rs 1500/-
v	Bulk Supply/ Street Lighting/ Temporaryy Connection (Above 1 MW)	Rs 3000/-
G	**Testing Consumer's installation**	
a	For first test of new installation or of any extension to an existing installation if the installation is found to be not defective and the wiring contractor or his representative is present at the test.	
b	For first or subsequent test of a new installation or an extension to an existing installation if the installation is found to be defective or the wiring contractor or his representative fails to be present	
i	Single Phase	Rs 150/- (Payable in advance for each subsequent visit for the purpose of testing the installation.)
ii	Three Phase	Rs 200/- (Payable in advance for each subsequent visit for the purpose of testing the installation.)
iii	MS/BS loads upto 100 kW	Rs 1000/- (Payable in advance for each subsequent visit for the purpose of

Sr.	Description	Proposed
		testing the installation.)
iv	LS/BS (loads above 100 kW)	Rs 2500/- (Payable in advance for each subsequent visit for the purpose of testing the installation.)
G	**Meter Reading Cards/ Passbook (New/ Replacement)**	
i	Provision of meter reading cards including PVC jacket	Rs 5/- per card
ii	Replacement of meter card found to be missing on consumer's premises	
iii	Domestic & NRS	Rs 5/- per card
iv	SP and AP	Rs 10/- per card
v	MS	Rs 25/- per card
vi	LS	Rs 45/- per card
vii	Replacement of Passbook in case it is lost by AP Consumer	Rs 60/-
viii	Replacement of identification card missing on the premises of AP Consumer	Rs 25/-
ix	Temporary	Rs 60/- per card
H	**Meter Rentals**	
a	(In case where consumer opts that department to supply departmental meter)	
i	Single Phase meter	Rs 11/- per month
ii	Three Phase LT meter	Rs 25/- per month
iii	Three Phase LT meter with CT	
iv	150/2 Amp	Rs 57/- per month
v	100/5 to 400/5 Amp	Rs 42/- per month
vi	LT and HT Poly phase meter/metering equipment of higher rating	1.6 paisa per rupee of the cost of metering equipment.
vii	Solid state HT Metering equipment	Rs 320/- per month
I	**Replacement of broken glass**	
a	Replacement of broken glass of meter cupboard (when the cause of the breakage is considered to be an act or fault of the consumer).	Rs 60/-
b	Replacement of meter glass where the same has been tampered with or broken by the consumer	
i	Single phase meter	Rs 250/-
ii	Three phase meter	Rs 450/-
J	**Supply of duplicate copies of electricity bills**	
i	Domestic consumers	Rs 5/-
ii	Non-Domestic consumers	Rs 10/-
iii	Temporary consumers	Rs 10/-
iv	L.T. Industrial (upto 20 kW) & AP consumer	Rs 10/-
v	L.T. Industrial (above 20 kW) & Street lighting consumer	Rs 15/-
vi	H.T. Industrial & bulk supply consumer	Rs 20/-
K	**Review of electricity bills**	
a	(If the accuracy of licensee's bill is challenged by the consumer and a review of the bills is demanded)	
i	Single Phase	Rs 10/-

Sr.	Description	Proposed
ii	Three Phase	
iii	load upto 20 kW	Rs 250/-
iv	load above 20 kW upto 100 kW	Rs 450/-
v	load above 100 kW	Rs 900/-
	NOTE: If the challenged bill is found to be incorrect ,the credit of the fee will be given to the consumer,otherwise these will be forfeited.	
L	**Testing and calibration including sealing of energy meter owned /supplied by the consumer**	
i	Single Phase	Rs 60/-
ii	Polyphase whole current meter	Rs 450/-
iii	Polyphase meters with CTs	Rs 1200/-
iv	HT and EHT metering equipment	Rs 2500/-
a	Testing of consumer substation by Metering & Protection Laboratory	
i	First Visit	Rs 5000/-
ii	Second and Final Visit	Rs 1000/-
M	**Checking of the capacitors at the request of the consumer**	
a	Consumer receiving supply at	
i	230/440 V	Rs 150/- per visit
ii	Above 400 V and up to 11 KV	Rs 300/- per visit
N	**Rates for Security/ Advanced Consumption Deposit for new/extension in load only.**	
i	Security/ACD against Consumption (per KW or part thereof),	
ii	Domestic Supply	Rs.500
iii	N.R.S.	Rs.700
iv	S.P.	Rs.500
v	M.S.	Rs.750
vi	L.S.	Rs. 1000
vii	B.S.	Rs.1500
viii	P.L.	Rs.2000
ix	A.P.	Rs.200 per BHP
x	Temporary	Rs.1500
O	**Security for Meter/Metering equipment for new/ extension in load cases**	
i	LT Single Phase meters	Rs 600/-
ii	L. T. Three Phase / poly Phase Meters without CTs.	Rs 1500/-
iii	L. T. Three Phase C. T. Meters Without C.T.s	Rs 4000/-
iv	L.T./T.P.T Metering Equipments without C.Ts	Rs 15000/-
v	Solid State H.T./T.P.T Metering equipment (without C.T./P.T.Units)	Rs 10000/-
vi	L.T.-C.T.s	
	a) 50/5A	Rs 800/-
	b) Above 50/5A	Rs 400/-
vii	H.T.C.T./P.T. Unit	Rs 25000/-
P	**Charges recoverable from the consumer when the meter is found damaged / burnt owing to negligence or default on the part of consumer**	
i	Single Phase Meter	Rs 700/-
ii	Three Phase Meter	Rs 1550/-
iii	LT CT operated Solid State Meter. (Without CTs)	Rs.3000/-
iv	LT CTs	
a	a) Upto 50/5A	Rs.1,580/-
b	b) Above 50/5 A	Rs. 600/-

Sr.	Description	Proposed
c	Solid State HT TPT metering equipment (without CT/PT unit)	Rs.20,000/-
d	H.T.C.T./P.T. Unit	Rs.40,470/-
Q	**Demand Notice Extension Fee (for each period of 3 months)**	
i	DS /NRS - LT	Rs. 50/-
ii	DS /NRS – HT	Rs 2500/-
iii	A.P.	Rs. 500/-
iv	S.P.	Rs. 200/-
v	MS / LS / BS	Rs. 2500/-
	Note:- Revival fee (One time only) for cancelled application shall be twice the demand notice extension fee as prescribed above	

Chapter 8. Compliance to Directives

8.1 Annual Statement of Accounts

8.1.1 The CED being a UT and a Govt. Department, the accounts pertains to Electricity Business are prepared regularly on year to year basis and submitted to AG UT Chandigarh for audit. The audit certificate for the accounts FY 2007-08 has been received. Accounts for the financial year 2008-09 and 2009-10 had already got audited from AG UT Chandigarh and audit certificate is awaited. Accounts for the FY 2010-11 have been prepared and is being submitted for audit.

8.2 Preparation of Asset and Depreciation Registers

8.2.1 The preparation of Asset and Depreciation register is covered under APDRP Part-A project. While doing GIS mapping, these registers will be prepared. M/s NDPL and M/s SPANCO has confirmed that these registers will be prepared during the implementation of Part-A of R-APDRP. A petition for investment approval of R-APDRP project was filed before the JERC vide Petition No. 55/2011 and the same has been approved by Hon'ble JERC vide orders on dated 24.10.2011.

8.3 Management Information System (MIS)

8.3.1 M/s NDPL and M/s SPANCO has confirmed that these will be prepared during the implementation of Part-A of R-APDRP. A petition for investment approval of R-APDRP project was filed before the JERC vide Petition No. 55/2011 and the same has been approved by Hon'ble JERC vide orders on dated 24.10.2011.

8.4 Metering of consumer installations / replacement of Non-Functional or defective Meters

8.4.1 The CED has already arranged 15,000 Nos. Single phase meters and 2,500 No. Three phase meters from the PSPCL during the last one year. Also the UHBVN has recently allocated 2,500 Nos. single phase meters and allocation for another 5,000 Nos. single phase meters from PSPCL is still awaited.

8.4.2 The tender for 20,000 Nos. single phase intelligent meter and 8000 Nos. three phase intelligent meters as per CEA guidelines were called but tenders could not mature due to lack of competition.

8.4.3 However, again tender for 35000 Nos. single phase meters as per guidelines on meter in para 7.2 of the supply code has been called.

8.5 Energy Audit

8.5.1 The aspect of Energy Audit is covered under the APDRP project for which the DPR has already been sanctioned and the issue of allotment of work to M/s SPANCO is under process. A petition for investment approval of R-APDRP project was filed before the JERC vide Petition No. 55/2011 and the same has been approved by Hon'ble JERC vide orders on dated 24.10.2011.

8.6 Billing and Collection Efficiency

8.6.1 The aspect of Billing and Collection Efficiency is also covered under the R-APDRP project for which the DPR has already been sanctioned and the issue of allotment of work to M/s SPANCO is under process. A petition for investment approval of R-APDRP project was filed before the JERC vide Petition No. 55/2011 and the same has been approved by Hon'ble JERC vide orders on dated 24.10.2011.

8.7 Interest on Security Deposit

8.7.1 Since UT Chandigarh is following a Treasury system. All revenue collected is deposited in the consolidated fund of India and no separate account is being maintained where the security could be deposited and the interest is earned on the security deposit. The case has been forwarded to Finance Department, UT Chandigarh for implementing the directive issued by the Hon'ble Commission.

8.8 Power Factor improvement incentives

8.8.1 It has proposed in the ARR to give power factor incentive on the bill amount of 1% for each increase of 1% monthly average power factor rise above 95%.

8.9 Collection of arrears

8.9.1 CED has analyzed the outstanding dues, bad debts etc on the basis of amount, age, category etc. and list of those consumers with outstanding of Rs. 1.00 Lacs lying for more than six months. Action regarding recovery of such dues has been initiated and significant recovery has been made.

8.10 Demand Side Management and Energy Conservation

8.10.1 DSM can be achieved through.

a) Improving the efficiency of various end-users through better housekeeping correcting energy leakages, system conversion losses, etc;

b) Developing and promoting energy efficient technologies, and

c) Demand management through adopting soft options like higher prices during peak hours, concessional rates during off-peak hour's seasonal tariffs, interruptible tariffs, etc.

8.10.2 For implementing (a), various programs is being implemented in Part-A and Part-B of the R-APDRP project.

8.10.3 For implementing (b), though 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. etc. However, Electricity Department is also implementing the Bachat Lamp Yojna (BLY) of BEE and after taking up the matter with them, they have now sent the MOU to be signed, which is being examined.

8.10.4 For implementing (c), In-fact, Sale of Energy from Domestic consumer is 38.3%, from NRS consumers it is 26% and from public lighting/Bulk Supply/Agriculture etc. it is 14.7%. The tariff during off peak hours will not get a good response from the domestic and NRS consumers. We have 11% consumption from large supply connections and 8.5% consumption from medium supply and 1.5% from small supply connections. Off peak tariff will be implemented after implementation of R-APDRP project & installation of TOD meters

8.11 Manpower study

8.11.1 In order to provide services as per the Standard of Performance notified by JERC, CED will be requiring more manpower. Accordingly, DNIT has been submitted for approval to the competent authority for the appointment of consultant.

8.11.2 Further, the appointment of consultants for manpower study is a big tender process which involves necessary publicity of tenders, their approvals and requirements to be met for transparency and competitive bidding.

8.12 Meter rental

8.12.1 CED Chandigarh is not charging any meter rental from those consumers who opt to provide their own meter/metering equipment as per JERC supply code Regulation 2010.

Chapter 9. Annexure

Annexure 1: Fuel Surcharge Formulae in Other States

1. **Variable Cost Adjustment (VCA) Formula: Madhya Pradesh**

The amount of **variable (Fuel & other) cost adjustment** shall be computed as under

$$V = V_F + V_{PP} + V_Z$$

Where,
V = Amount of variable charge in a specified period in Rs.
V_F = Amount of differential cost on account of fuels on own generation (Rs)
V_{PP} = Amount of differential cost on account of Power purchase (Rs.)
V_Z = Amount of variable charges on account of unknown & Unpredictable factors.

The VCA rate shall be calculated as,

$$\text{VCA Recovery Rate (Paise/kWh)} = \frac{V \text{ (Rs)}}{\text{Energy Sales (kWh)}} \times 100$$

Where Energy sales consist of,

(a) Metered sale of Energy.... (ES 1)
(b).Assessment of unmetered sale …. (ES2)
(c) Deemed sale of Energy on account of excess T&D losses ... (ES 3)
Less (d) Energy sale to the Exempted categories of consumers... (ES4)

The deemed sale of energy is equal to actual T&D losses minus losses allowed by the Commission. In case the figure is negative, the same may be ignored.

The recovery formula shall be as under:

$$\text{VCA Recovery Rate} = \frac{QC\,(RC2-RC1) + QO\,(R02-R01) + (Ps/kWh)\,QPP\,(RPP2-RPP1) + V_Z}{ES1+ ES2+ES3-ES4} \times 100$$

QC = Quantity of coal consumed during the period in MT.

$$= \underline{SHRO} \times \text{Generation (in MU)} \times (1 + LO) \times 10$$

NCVO

QO = Quantity of oil consumed during the period in KL
= Generation (in MU) x specific oil consumption (ml/kWh) as approved by the Commission

[QC and QO will have to be calculated station wise & totaled]

QPP = Quantity of power purchased during the period in kWh
(Justifying the quantity purchased and mix of supply from various source other than fixed by the Commission). Quantity purchased due to reduction in self generation will not be allowed. QPP will have to be worked out for each source of supply.

SHRO = Station heat rate as approved by the Commission in kcal/kWh

NCVO = Approved calorific value of coal fired in kcal/kg

LO = Transit 8c storage losses of coal as approved by the Commission

RC1 = Average rate, of coal Ex. Power station coal yard as approved by the Commission for the period in Rs / MT

RC2* = Average rate of coal Supplied Ex. Power station coal yard as per actual for the period in Rs / MT

RO1 = Average rate of oil Ex. Power Station approved by the Commission for that period in Rs / KL

R02 = Average rate of oil actually supplied Ex. Power station during the period in Rs / KL

RPP1 = Average rate of power purchase as approved by the Commission in Rs / kWh

RPP2 = Average rate of power purchase during the period in Rs / kWh

* If the grade of coal supplied is inferior or superior to the grade considered in the last tariff order, then average rate of coal supplied (RC2) will be corresponding to the grade of coal considered by the Commission in tile last tariff order.

2. Fuel & Power Purchase adjustment Formula: Maharashtra

The formula for the calculation of the FAC component of Z-factor Charge shall be as given under:

ZFAC (Rs crore) = F + C + B,

Where
ZFAC = Z-factor Charge - component for FAC
F = Change in fuel cost of own generation and variable cost of power purchase
C = Carrying Cost for any under recovery/over recovery on account of Change in fuel cost of own generation and variable cost of power purchase
B = Adjustment factor for over-recovery / under-recovery

Explanation I – for the purpose of this Regulation, the term "F" shall be computed in accordance with the following formula:

F (Rs. Crore) = AFC (Gen) + AFC (PP),

Where:
AFC (Gen): Change in fuel cost of own generation. This change would be computed based on the norms and directives of the Commission, including heat rate, auxiliary consumption, generation and power purchase mix, etc.
AFC (PP): Change in energy charges of power procured from other sources. This change would be allowed to the extent it satisfies the criteria prescribed in these Regulations and the prevailing MYT Order, and subject to applicable norms.

Explanation II – for the purpose of this Regulation, the term "C" shall mean carrying cost on account of change in fuel cost of own generation and variable cost of power purchase.

Explanation III – for the purpose of this Regulation, the term "B" shall be computed in accordance with the following formula:

BHn (Rs. Crore) = AHn-1 + RHn

Where:
BHn =Adjustment factor for over-recovery / under-recovery in the half "n"
AHn-1 =Incremental cost in the half "n-1"

RHn =Incremental cost in half "n-1" actually recovered in ensuing half "n".

The total FAC component of Z-factor Charge recoverable, as per the formula specified above, shall be recovered from the actual sales in "Rupees per kilowatt-hour" terms.

The monthly FAC charges of a particular tariff category/sub-category/consumption slab shall not exceed 10% of the variable component of tariff of that tariff category/sub-category/consumption slab, or such other ceiling as may be stipulated by the Commission from time to time.
Provided that any excess in the FAC charge over the above ceiling shall be carried forward by the Distribution Licensee and shall be recovered over such future period as may be directed by the Commission.

Provided further that in case of unmetered consumers, ceiling of FAC charges shall be calculated by multiplying the ceiling of FAC charges of metered sub-category by the ratio of Average Billing Rate (ABR) of respective un-metered sub-category to ABR of metered sub-category within the same tariff category.

Provided further that where the actual distribution losses of the Distribution Licensee exceed the level approved by the Commission, the amount of FAC component of Z-factor Charge corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total FAC component of Z-factor Charge recoverable.

Calculation of FAC per kWh for a particular tariff category/sub-category/consumption slab shall be as per the following formula:

FAC Cat Rs/kWh = (FAC / (Metered sales + Unmetered consumption estimates + Excess distribution losses)) * k * 10

Where:
FAC Cat = FAC component for a particular tariff category/sub-category/consumption slab in Rupees per kWh terms
k = Energy Charge/ ACOS
Energy Charge = Energy Charge for a particular tariff category / sub-category/ consumption slab under consideration in 'Rupees per kWh' as approved by the Commission in Tariff Order
ACOS = Average Cost of Supply in Rupees per kWh as approved for recovery by the Commission in Tariff Order.

3. Fuel & Power Purchase Price Adjustment Formula: Gujarat

The approved formula for recovery is as follows: -

$$FPPPA = [F_{OG} + PPP_1 + PPP_2] \div [S.E]$$

Where,

$$F_{OG} = \sum_{n=1}^{k} [(H_B \times OGD_A) \times (Fuel\ C_A - Fuel\ C_B)]$$

F_{OG}	Adjustment on account of variations in delivered cost of Fuel at GSECL's Thermal Power Stations Rs. in millions
N	1 to k, the thermal power stations in GSECL.
OGD_A	The actual level of delivered energy at the bus bar (net generation) from GSECL's thermal plants in million units during the control period.
H_B	Base station heat rate in Kcal / kWh calculated on the net output using permitted auxiliary consumption
$FuelC_A$	new landed price of fuel at relevant GSECL's generating stations, expressed in Rs. / Kcal calculated after **allowing only statutory / notified increases in the price of fuel/railway freight, taxes and duties on fuel as well as fuel price increase by central/state Government PSUs.**
$FuelC_B$	base landed price of fuel at relevant GSECL's generating stations, expressed in Rs. / Kcal calculated using the base data. This parameter is constant (frozen) for the various quarters (periods) for which increases in fuel prices are being permitted.

Adjustment Formula approved by the Commission for change in variable costs of Power Purchases:

The adjustment on account of variations in the power purchase costs will be calculated separately in two parts, i.e., adjustment on account of variations in the variable cost and adjustment on account of changes in fixed costs of power purchase.

PPP_1: *Adjustment on account of variable cost of power purchase:*

$$\sum_{k}$$

$$PPP_1 = \sum_{m=1}^{k} [(VC_A - VC_B) \times Q_A]$$

Where:

PPP_1	Adjustment on account of variable cost of power purchased in Rs. Millions
M	1 to k, the sources from which power is purchased
VC_A	variable cost per unit of delivered energy, computed based on the principles laid down in the power purchase agreements in Rs. / KWh
VC_B	base variable cost per unit of delivered energy from each source in Rs. / KWh
Q_A	Actual level of power purchases from each source in million units.

When power is purchased from a source which is not considered in base year, it is to be excluded and any adjustment in cost of power purchased due to such change in source is to be considered at the time of next ARR filing when new base is derived.

Adjustment Formula approved by the Commission for change in fixed costs of Power Purchase:

PPP2: Adjustment on account of fixed cost of power purchase:

$$PPP_2 = \sum_{m=1}^{k} [(FC_A - FC_B)]$$

Where:

PPP_2	Adjustment on account of fixed cost of power purchased in Rs. Millions
m	1 to k, the sources from which power is purchased
FC_A	Is the actual fixed cost paid in Rs. millions
FC_B	Is the base fixed costs payable in Rs. millions

Saleable Energy

S.E. (in MU) = [(Total Sales in MU + Excess T & D loss in MU)]

Where,

Total Sales = Actual energy sold to metered categories in MU + Estimated energy supplied to unmetered consumers based on norms approved, in MU

Excess T & D loss in MU=

{(Net Generation in MU + Power Purchase in MU – Total sales in MU)} -

{(Net Generation in MU + Power Purchase in MU) X (%T& D loss level Approved)}

The FPPPA will be recovered in the form of an incremental energy charge (Rs/KWh) in proportion to the energy consumption.

4. Power Purchase Cost Adjustment Formula: Daman & Diu

The Electricity Department, Daman and Diu (ED-DD) depend for its power entirely on Central Power Generating Stations, viz., NTPC, NPC and NSPCL, Bhilai. ED-DD has no control over any increase in price of the power from these sources due to any increase in fuel cost etc. The Commission is of the view that any increase in power purchase cost on account of increase on fuel cost etc., has to be passed over the consumer as per approved formula.

The approved power purchase cost adjustment (PPCA) formula is given below

$$\text{PPCA (Rs./kWh)} = \frac{\text{QPP (RPP2 – RPP1)}}{\text{QPP x (1-L) – PSE}}$$

Where:
QPP = Quantum of power purchase from different sources and fed to ED-DD system (in MUs)
RPP1 = Average rate of power purchase as approved by the Commission (in Rs./KWH)
RPP2 = Average rate of power purchase during the adjustment period (in Rs./KWH)
L = T&D loss as approved by the Commission or actual whichever is lower
PSE= Power sold to exempted categories.

The approved (PPCA) formula is subject to the following conditions:
(i) The basic nature of PPCA is 'adjustment' i.e. passing on the increase or decrease, of Fuel cost.

(ii) Any cost increase by the ED- DD by way of penalty interest due to delayed payment etc., and due to operational inefficiency shall not be allowed.

(iii) PPCA charges shall be levied on all categories of consumers, except LIG (BPL) Category and agricultural consumers.

(iv) The data in support of PPCA claims shall be duly authenticated by an officer of the ED- DD authorised for the purpose.

(v) Variation of PPCA charge will be allowed only when it is five (5) paise and more per unit.

(vi) The PPCA charges shall be revised by the ED- DD Quarterly from the date of implementation of the order.

(vii) The approved formula is subject to review as the Commission may deem fit.

Annexure 2 : Category wise breakup of Employees

Category Wise Employees for FY 2011-12

Sl.No	Particulars	Provisional		
		Technical	Clerical	Total
1	Total employees as on 1st April	852	278	1130
2	No of employees retired/retiring during the year	30	14	44
3	No of employees recruited	1	1	2
4	No of employees at the end of year	**823**	**265**	**1088**

Category Wise Employees for FY 2012-13

Sr.No	Particulars	Projected		
		Technical	Clerical	Total
1	Total employees as on 1st April	823	265	1088
2	No of employees retired/retiring during the year	27	9	36
3	No of employees recruited	144	63	207
4	No of employees at the end of year	**940**	**319**	**1259**

Annexure 3: Tariff Filing Formats of CED for FY 2010-11, FY 2011-12 and FY 2012-13