

**JOINT ELECTRICITY REGULATORY COMMISSION
FOR THE STATE OF GOA AND UNION TERRITORIES**

Petition No.33/2011

TARIFF ORDER

**In the matter of Aggregate Revenue Requirement (ARR)
And Tariff Determination for the Union Territory of Daman and
Diu for the Financial Year 2011-12**

**Date of Order
3rd October, 2011**

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ARR and Tariff Order for UT of Daman & Diu for FY 2011-12

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Abbreviations

1.	A&G	Administration and General
2.	Act	Electricity Act, 2003
3.	ARR	Aggregate Revenue Requirement
4.	CAGR	Compounded Annualized Growth Rate
5.	CAPEX	Capital Expenditure
6.	CEA	Central Electricity Authority
7.	CERC	Central Electricity Regulatory Commission
8.	Ckt. Km.	Circuit Kilometer
9.	CPSU	Central Public Sector Undertaking
10.	CGS	Central Generating Station
11.	D/C	Double Circuit
12.	ED-DD	Electricity Department, Daman & Diu
13.	FC	Fixed Charges
14.	FY	Financial Year
15.	GFA	Gross Fixed Assets
16.	GGPP	Gandhar Gas Power Project
17.	HP	Horse Power
18.	HT	High Tension
19.	JERC	Joint Electricity Regulatory Commission for Goa and UTs.
20.	KAPS	Kakrapur Atomic Power Station
21.	KGPP	Kawas Gas Power Project
22.	KHSTPS	Kahalgaon Super Thermal Power Station
23.	KSTPS	Korba Super Thermal Power Station
24.	kVA	Kilo Volt Ampere
25.	kVAh	Kilo Volt Ampere Hour
26.	kWh	Kilo Watt Hour
27.	LT	Low Tension
28.	MOP	Ministry of Power
29.	Mu	Million Units
30.	MVA	Mega Volt Ampere
31.	MW	Mega Watt
32.	MYT	Multi-Year Tariff
33.	NPCIL	Nuclear Corporation of India Limited
34.	NSPCL	NTPC-SAIL Joint Power Corporation Limited
35.	NTPC	National Thermal Power Corporation
36.	O&M	Operation and Maintenance
37.	O/H	Over Head
38.	PGCIL	Power Grid Corporation of India Limited
39.	PPCA	Power Purchase Cost Adjustment
40.	R&M	Repairs and Maintenance
41.	RE	Revised Estimate
42.	REA	Regional Energy Accounting
43.	RLDC	Regional Load Despatch Centre
44.	RoE	Return on Equity
45.	SBI-PLR	State Bank of India Prime Lending Rate
46.	S/C	Single Circuit
47.	SS	Sub-station

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48.	TAPS	Tarapur Atomic Power Station
49.	TSTPS	Talcher Super Thermal Power Station
50.	U/G	Underground
51.	UI	Unscheduled Interchange
52.	VC	Variable Charges
53.	VSTPS	Vindhayachal Super Thermal Power Station
54.	WRLDC	Western Region Load Despatch Centre
55.	WRPC	Western Regional Power Committee

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Before the

Joint Electricity Regulatory Commission for the State of Goa and Union Territories Gurgaon-122 016

CORAM

Dr. V.K. Garg (Chairperson)
Shri. R.K. Sharma, FIE (Member)

Petition No- 33 / 2011

In the matter of

Aggregate Revenue Requirement (ARR) and Retail Tariff for the Union Territory of
Daman and Diu for the Financial Year 2011-12

And in the matter of

Electricity Department, Daman and Diu

Petitioner

ORDER

Date 3rd October, 2011

1. Background

1.1 CONSTITUTION OF THE COMMISSION

- 1.1.1 In exercise of the powers conferred by the Electricity Act, 2003, the Central Government constituted a Joint Electricity Regulatory Commission for all Union Territories except Delhi 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.

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The 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 Islands, Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Lakshadweep and Puducherry. The powers and the functions of the Commission are as prescribed in the Electricity Act, 2003. The head office of the Commission is presently located in the district town of Gurgaon, Haryana and falls in the National Capital Region.

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.

Union Territory of Daman & Diu, a deemed licensee under Section 14 of Electricity Act, 2003 is carrying on the business of distribution and retail supply of Electricity in Daman & Diu (Union Territory) through their Electricity Department.

- 1.1.2 Electricity Department, Daman & Diu, hereinafter, referred to as ED-DD, had filed a petition for approval of Aggregate Revenue Requirement and determination of retail tariff for the year 2011-12 on 28th March, 2011 according to the Conduct of Business Regulations of JERC.

1.2 TARIFF RELATED FUNCTIONS OF THE COMMISSION

- 1.2.1 Under Section 86 of the Act, the Commission has the following tariff related functions, namely:
- (a) determine the tariff for electricity supply, wholesale, bulk, or retail, as the case may be;
 - (b) regulate electricity purchase and procurement process of distribution licensee including the price at which the electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply .
 - (c) promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee,

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(d) To promote competition, efficiency and economy in the activities of the electricity industry to achieve the objects and purposes of this Act.

1.2.2 Under Section 61 of the Act in the determination of tariffs, the Commission is to be guided by the following:

- (i) the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;
- (ii) the generation, transmission, distribution and supply of electricity are conducted on commercial principles;
- (iii) the factors which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments;
- (iv) safeguarding of consumers' interests and at the same time, recovery of the cost of electricity in a reasonable manner;
- (v) the principles rewarding efficiency in performance;
- (vi) multi-year tariff principles;
- (vii) that the tariff progressively, reflects the cost of supply of electricity, and also, reduces and eliminates cross subsidies within the period to be specified by the appropriate Commission;
- (viii) the promotion of co-generation and generation of electricity from renewable sources of energy;
- (ix) the National Electricity Policy and Tariff Policy:

1.2.3 In accordance with the Act, the Commission will not show undue preference to any consumer of electricity in determining the tariff, but may differentiate according to the consumer's load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required (Section 62 (3) of the Act)

1.2.4 If the State Government requires the grant of any subsidy to any consumer or class of consumers in the tariff determined by the Commission, the State Government shall pay in advance the amount to compensate the person affected by the grant of subsidy in the manner the Commission may direct, as a condition for the license or any other person concerned to implement the subsidy provided for by the State Government (Section 65 of the Act).

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1.3 ADMISSION OF PETITION AND PUBLIC HEARING PROCESS:

The ED-DD has submitted the ARR and Tariff Petition for 2011-12 on 28th March 2011 wherein the Department has worked out a deficit of Rs 101.84 crore. The Commission has observed that the ARR and tariff petition filed by the petitioner was incomplete and lacking some critical and vital information required and the manner in which it is required as specified in Commission's regulations on Terms and Conditions for Determination of Tariff. However, the ARR & Tariff petition was admitted on 23rd May, 2011 vide petition No.33/2011 to avoid delay in processing the ARR, though the information submitted by the utility did not fully comply with the regulatory requirement as per JERC Terms and Conditions for Determination of Tariff Regulations, 2009. The essential information required ultimately was supplied on 17.09.2011 through affidavit dated 16.09.2011 and e- mail dated 23.09.2011.

The essential information/data as per ARR & Tariff Petition submitted by the ED-DD is taken into consideration while issuing Tariff order.

- 1.3.1 The licenses i.e ED- DD published its application for ARR and tariff revision in the abridged form and manner as specified in Regulation 29 of JERC (Conduct of Business) Regulations read with section 64(2) of the Electricity Act, 2003, in following News Papers.

Sl.No	News Paper	Language	Date of Publication
1	Savera India Times	Hindi	23 rd May 2011
2	Vartaman Pravah	Hindi	23 rd May 2011

Through the public notice, the public were invited to submit their objections and suggestions on the petition upto 06/07/2011.

The Commission received two written objections/suggestions within the due date on the petition filed by ED-DD. The Commission forwarded them to ED-DD for communicating their response to the objections raised. ED-DD submitted their response on the objections to the concerned objectors.

- 1.3.2 The Commission also published a public notice in the following leading newspapers having wide circulation in the jurisdiction of Union Territory of Daman and Diu giving due intimation to the stake holders, consumers, objectors and public at large about public hearing to be held at Daman on 19/07/2011 and Diu on 26/07/2011.

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Sl.No	Name of Newspaper	Language	Date of Publication
1.	Savera India Times	Hindi	04/07/2011
2.	Vartaman Pravah	Hindi	04/07/2011

Accordingly, the Commission held public hearings on ARR and Tariff proposals of ED-DD as per schedule given below

Date	Venue of Hearing	Time & Category
19/07/2011	Daman	10.00 AM to 1.00 PM For all the consumers – Focus on domestic/non-domestic (commercial) and LT/HT industries.
26/07/2011	Diu	11.00 AM to 2.00 PM For all the consumers – Focus on domestic/non-domestic (commercial) and LT/HT industries.

During the public hearing each objector was provided with a time slot on the day of public hearing for presenting his views on the petition of ED-Daman and Diu for FY 2011-12 before the Commission. The general public and stakeholders, other than those who had earlier sent their written objections, were also given an opportunity to express their views/objections/suggestions on the petition.

The main issues raised by the objectors in respect of the petition along with the response given by the ED-DD and the comments of the commission are briefly given in chapter 4.

1.4 HIGHLIGHTS OF THE ORDER

The Commission has examined the data furnished in the ARR and the tariff petition and subsequent submissions and has passed this order. The highlights of the order are as under:

ARR and Tariff Order for UT of Daman & Diu for FY 2011-12

Table 1.1 Highlights of the order

Sl.No.	Particulars	Projected by ED-DD for FY 2011-12	Approved by the Commission for FY 2011-12
1	Energy sales (MU)	1715	1715
2	ARR Net (Rs. crore)	661.42	569.45
3	Revenue at existing tariffs (Rs. crore)	559.58	554.61
4	Revenue Gap (Rs. crore)	101.84	14.84
5	Average cost (Rs./kWh)	3.86	3.32

2. Summary of Daman & Diu Petition for Annual Revenue Requirement (FY 2011-12)

2.1 The Electricity Department of Union Territory of Daman & Diu (ED-DD) in its petition has submitted Aggregate Revenue Requirement (ARR) for the year 2011-12 for meeting its expenses, the estimated Revenue with the existing tariffs and the revenue gap as shown in Table-1.1 above. The component-wise details of ARR, the estimated revenue and the gap for the year 2011-12 are as given in Table-2.1 below:

Table 2.1: Aggregate Revenue Requirement and Gap Projected by ED-DD for FY 2011-12

(Rs. in crore)

Sl. No.	Items of Expense	Proposed by the Licensee
1	2	3
1.	Cost of power purchase	623.24
2.	Employee cost	5.97
3.	R&M expenses	6.26
4.	Administration and General expenses	2.20
5.	Depreciation	16.34
6.	Interest charges (including interest on working capital)	8.84
7.	Return on NFA/equity	1.37
8.	Provision for bad debts	6.61
9.	Total revenue requirement	670.83
10.	Less : Non tariff income	9.41
11.	Net revenue requirement (9-10)	661.42
12.	Revenue from existing tariff	559.58
12.A.	Revenue from UI	0.00
13.	Gap (11-12)	(101.84)
14.	Gap for FY 2010-11	(12.26)
15.	Total Gap (13+14)	(114.10)
16.	Energy Sales (MU)	1541.00

Source: (Format 27 and Tables 28 and 29 of petition)

2.2 The Electricity Department of DD has requested the Commission to

“

- Admit the Aggregate Revenue Requirement of FY 11-12 and the Tariff Revision Proposal for FY 11-12 as submitted herewith.
- Approve the Aggregate Revenue Requirement of FY 11-12 as well as the Tariff Revision Proposal for FY 11-12.

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- *Make the proposed Retail Supply Tariffs applicable from April 1,2011.*
- *Condone any inadvertent omissions/ errors/ shortcomings and permit the Petitioner to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date.*
- *Submit necessary additional information required by the Commission during the processing of this petition.*
- *And pass such other and further orders as are deemed fit and proper in the facts and circumstances of the case.*

3. Power Sector in Daman & Diu - An Overview

3.1 INTRODUCTION

The ED-DD has submitted that the Department is responsible for distribution and supply of Electricity in the Union Territory of Daman & Diu. It operates in an area of 104 sq. kms. The total population of Union Territory is around 1.58 lakhs as per 2001 census spread over 2 towns i.e Daman & Diu (approx. 800KM apart) and 26 villages. ED-DD serves 60219 consumers under different categories of supply. While the HT industrial Category of consumers are 1.35 % of total number of consumers, yet this category is responsible for 85% of total energy sales.

3.2 POWER SUPPLY

Daman and Diu (UT) has submitted that ED-DD does not have its own generation. The power supply requirement of the Union Territory is met from its share in Central Generating Stations based on the allocation by Ministry of Power, Government of India and from other sources. The quantum of firm / unallocated power based on the allocation made by the (WRPC) CEA in its letter No. WRPC/CommI./Alloc/2010 dated 08/10/2010 from central generating stations for FY 2011-12 as furnished by ED-DD is given in Table-below:

Table 3.1: Allocation from Central Generating Stations

Sl. No.	Station	Capacity (MW)	Weighted average firm share	Weighted average un-allocated share	Total
1.	KSTPS	2100	-	52.77	52.77
2.	VSTPS-I	1260	5.00	9.52	14.52
3.	VSTPS-II	1000	3.00	7.68	10.68
4.	VSTPS-III	1000	5.00	7.77	12.77
5.	KGPP	656.2	2.00	28.99	30.99
6.	GGPP	657.39	2.00	29.31	31.31
7.	SIPAT	1000	4.00	7.77	11.77
8.	NSPCL	500	70.00	39.00	109.00
9.	KAPS	440	2.00	2.30	4.30
10.	TAPS 3 & 4	1080	5.00	8.40	13.40
11.	KHSTPS-II	1500	2.00	2.00	4.0
	Total		100.00	195.50	295.50

Source: (Table 6 of petition)

ED-DD has a firm allocation of 100 MW from various central generating stations (viz) NTPC, NPC and NSPCL, Bhilai. In addition to the firm share allocation, most of the

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stations have 15% unallocated power. The distribution of this unallocated power among the constituents of Western Region is decided by Ministry of Power, Government of India from time to time. The present allocation of firm/ infirm power for DD from CGS is around 295.50 MW. as per table 3.1 above.

ED – DD also stated that any short fall in the supply would be met by open market purchase through power exchange etc.

3.3 TRANSMISSION AND DISTRIBUTION NETWORK

The ED-DD owns and operates the transmission and distribution network as on 31st March, 2010 as given in Table below:

Table 3.2: Transmission and Distribution Network as on 31.3.2010

Sl. No.	Voltage	Transmission Lines (Ckt. Km)	Substations	Power transformers
			Nos.	Capacity (mVA)
	Transmission			
1	220 kV (D/C)	19.25	1	350
2	66 kV (D/C) 66kV (S/C)	52.0 28.7	7	347
	Distribution			
3	11 KV (O/H) 11kV (U/G)	347 83.6		
4	LT (OH) LT (U/G)	659.7 131.19		
	Distribution Transformers			
5	11 kV / 400V		491	110.92

3.4 TRANSMISSION AND DISTRIBUTION (T&D) LOSSES

The transmission and distribution (T&D) losses as reported by ED-DD for FY 2009-10 and for FY 2010-11 are as shown below:

Year	T&D Loss
2009-10	11.77%
2010-11	10.87%

Source: (Table 4 of petition and actual data 2010-11 supplied by affidavit dated 21.6.2011)

The technical & commercial losses are not segregated so far.

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3.5 CONSUMER PROFILE

The ED-DD is serving 60,219 consumers under different categories of supply as on 31.3.2011. The consumer categories, number of consumers and the energy sales during FY 2010-11 are as given in Table below:

Table 3.3: Consumer Profile and Energy Sales – FY 2010-11

Sl. No.	Consumer Category	No. of Consumers	Percentage	Energy Sales (MU)	Percentage
1	Domestic	44862	(74.5%)	62.2	(3.8%)
2	Kutir Jyothi	-	-	0.1	-
3	Commercial	9040	(15%)	29.3	(1.79%)
4	Agriculture	1658	(2.75%)	2.6	(0.16%)
5	LT Industry	3589	(5.96%)	151	(9.25%)
6	HT/EHT Industry	811	(1.35%)	1381.8	(84.62%)
7	Public Lighting	182	(0.3%)	4.4	(0.27%)
8	Public water works	77	(0.13%)	0.9	(0.055%)
9	Temporary supply	-	-	0.65	(0.04%)
	Total (Net)	60219		1632.95	

Source: Extracted from tables 1 and 2 of actual data for FY 2010-11 vide affidavit 21.6.2011

3.6 DEMAND AND SUPPLY POSITION

The ED-DD has a firm allocation of 100 MW and unallocated share of 195.50 MW during 2010-11. This allocation was revised downward by GOI on 6th May, 2011 leading to deficit scenario. The demand of Union Territory of Daman and Diu was estimated by ED-DD at 320 MW during 2011-12, as against its allocation of 295.50 MW from various central generating stations as given in Table 3.1 above.

3.6.1 POWER SUPPLY POSITION

The power supply from various central generating stations and other sources during FY 2009-10 and FY 2010-11 as furnished by ED-DD is given in Table below:

Table 3.4 : Power Supply from Central Generating Stations and other Sources

Sl.No.	Source / Station	FY 2009-10	FY 2010-11
	NTPC STATIONS		
1.	KSTPS	523	396
2.	VTPS-I	179	108
3.	VTPS-II	140	82
4.	VTPS-III	161	101
5.	KGPP	155	225
6.	GGPP	109	232
7.	NSPCL	327	779
8.	SIPAT	142	90
	Sub Total	1736	2013
	NTPC (Eastern Region)		

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1.	FSTPP	21	-
2.	TSTPP	15	-
3.	KHSTPP-II	16	11
	Sub Total	52	11
	NPCIL		
1.	NPC	-	-
2.	KAPS	23	14
3.	TAPS 3 & 4	68	76
	Sub Total	91	90
	Grand Total	1879	2114
1	Power Purchase for IEX	5	1
2	UI	66	17
	Sub Total	71	18
	Total Power Purchase	1950	2132
	External Losses	114	112
	Energy Available	1836	2020

Source: (Table 7 of petition and table 5 of actual data / essential information FY 2010-11 vide affidavit 21.6.2011 .

Note: There were totaling errors in the figure of power purchase as shown in the Table 7 of the Petition and Table 5 of Actual data / essential information furnished by ED-DD. Corrected totals have been shown in Table 3.4 above.

3.6.2 ENERGY BALANCE

The energy balance as filed by the ED-DD is detailed in Table below:

Table 3.5: Energy Balance

Sl. No.	Particulars	FY 2009-10	FY 2010-11
1.	Energy Sales with in State	1469	1632.95
2.	T&D losses %	11.77	10.87
	T&D losses MU	196	199.21
3.	Total energy requirement	1665	1832.16
4.	Energy availability	1951	1992.60
5.	Energy Surplus	286	160.40

Source: (Table 5 of petition and table 6 of actual data / essential information FY 2010-11 vide affidavit 21.6.2011)

4. Brief summary of objections raised, response from ED-DD and Commission's view

4.1 PUBLIC RESPONSE TO THE PETITION

On admitting the ARR and tariff petition for FY 2011-12, the Commission directed the ED-DD to make available copies of the petition to the general public, post the petition on their website and also publish the same in news papers in abridged form duly inviting comments / objections from them.

4.2 PUBLIC HEARING

4.2.1 The following Stakeholders/ objectors submitted their objection/ suggestions in writing.

- (i) Shri Lalubhai B. Patel, Member of Parliament, Lok Sabha, Daman and Diu (Union Territory).
- (ii) President, Daman Industries Association Somnath, Daman.

The details of objections raised, Department's reply on the written objections received in response to the public notice are given in annexure -4.1

Public hearings were held by the Commission at Daman on 19/07/2011 and at Diu on 26/07/2011

4.2.2 The following consumers/ representatives of the Organizations attended the Public Hearing on 19.7.2011.

- (i) Shri Ramesh Kundani, Polycab Industries, Daman
- (ii) Shri B.P Gaur, Jai Corporation Industries, Daman
- (iii) Shri Lalubhai B. Patel, Member of Parliament, Lok Sabha, Daman and Diu
- (iv) Miss Prachi Agrawal, Siyaram Polymers Industries, Daman
- (v) Shri B.M Machhi, State President, BJP, Daman and Diu
- (vi) Shri Vasu Patel, Secretary, BJP, Daman and Diu
- (vii) Shri Jignesh Jogi, President, DMC, Daman
- (viii) Shri Anjumbhai Rathod, Sandy Resort (Hotel)
- (ix) Shri K.C.Parekh, Industries, Daman
- (x) Shri Vijay Mishra, President, Daman Industries Association, Somnath, Daman

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- (xi) Shri Navin Patel
- (xii) President, Daman Hoteliers Association

The details of objections raised and response of ED-DD are given in Annexure -4.2

4.2.3 The following consumers/ representatives of the Organizations attended the Public Hearing on 26.07.2011.

- (i) Diu District Chamber of Commerce (DDCC)
- (ii) Shri Umesh Rama Bomania, R/O Vanakbora, Diu
- (iii) Shri Rohit N. Shah, R/O Diu
- (iv) Shri Javeri B. Shanbilal, R/O Diu

The details of objections raised and response of ED-DD are given in Annexure -4.3

Most of the observations/objections/suggestions are general and suggestive in nature. It is also observed that the observations/objections/suggestions are by and large repetitive in nature. The replies as given by ED-DD thereon have also been noted. Based on the observations/objections/suggestions and replies as given by ED-DD, issues have been dealt with as and where considered appropriate in the Commission's order.

5. Annual Revenue Requirement for FY 2011-12 - Commission's Analysis and Decisions

5.1 INTRODUCTION

The ARR and Tariff Petition filed by the Electricity Department-Daman & Diu (ED-DD) was incomplete as many of the formats required under JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 were not submitted. With reference to various queries from the Commission, the licensee ED-DD submitted the essential information / actual data and clarifications vide the following references:

1. ED- DD Affidavit dated 21.6.2011
2. Lr. No. ED/EE/JERC/2011-12/1074 & 1078 dated 19/07/2011
3. ED-DD Affidavit dated 16.9.2011. and e -mail dated 17.9.2011
4. ED-DD e-mail dated 19/09/2011

The essential information and revised / corrected figures submitted by the ED-DD in the above references are taken into consideration while analyzing the ARR & Tariff Petition in the order.

5.2 CONSUMER CATEGORIES

5.2.1 The ED-DD served 60,219 consumers as on 31st March 2011 in its area of operation and the consumers are broadly categorized as under:

LT

- Domestic
- Commercial
- Agriculture
- LT Industry
- Public Lighting
- Public water works
- Temporary supply

HT/EHT

A. HT – General Industries / motive power / non-industrial consumers having a contacted demand of 100 kVA and above.

B. HT – Ferro Metallurgical /Steel rerolling

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Though there are two categories under HT/EHT, the ED-DD has furnished consolidated total figure for the sales under HT/EHT initially. However, later separate data for HT(A) & HT(B) was also furnished.

5.2.2 PROJECTED CONSUMER GROWTH

The ED-DD has furnished category-wise consumers for FY 2009-10 and for FY 2010-11 (upto 30.9.2010) in the tariff petition and later the actuals for FY 2010-11 are also furnished. The consumer base from FY 2005-06 to FY 2010-11 and the projected consumer base for FY 2011-12 are shown in the table below:

Table 5.1: Category-wise consumer growth

(Nos.)

Sl. No.	Category	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12 (Projected)
	LT							
1	Domestic	39435	40502	41652	42952	43712	44862	46202
2	LIG Kutir Jyothi							
3	Commercial	8182	8297	8560	8730	8782	9040	9467
4	Agriculture	1441	1484	1536	1589	1609	1658	1829
5	Industrial (LT)	3227	3264	3390	3411	3425	3589	3538
	HT/EHT							
6	General & Ferro	708	750	770	776	783	811	904
7	Public lighting	156	159	168	176	181	182	217
8	Public water works	77	77	77	77	77	77	86
9	Temporary supply / Others	-	-	-	-	-	-	-
	Total	53226	54533	56153	57711	58569	60219	62243

Source: Table 1 of petition, extract from Tariff order for FY 2010-11 and table 1 of actual data for FY 2010-11/ essential information vide affidavit 21.6.2011.

ED-DD serves consumers at different voltages at which the consumers avail supply.

5.2.3 ENERGY SALES

The category wise sales projected by ED-DD in its petition for the approval of the ARR are examined in detail in paras 5.3 to 5.4.

5.2.4 OVERALL APPROACH TO SALES PROJECTIONS

The ED-DD has projected the category-wise energy sales for the year 2011-12 based on past trends over a period of 5 years (FY2004-05 to FY 2009-10). It has considered 4 year CAGR for projecting sales to various LT consumer categories, the

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growth rate of 9% for projecting the sales to HT/EHT consumer category and in case of stabilization or minor decline in the sales in few categories like Kutir Jyoti, agriculture, public water works, no growth has been considered while projecting sales for FY 2011-12.

5.3 PROJECTED ENERGY SALES

The ED-DD has furnished the category-wise past energy sales from FY 2005-06 to FY 2009-10, estimated sales for FY 2010-11 and the projected sales for FY 2011-12, based on the CAGR for past 5 years (FY 2004-05 to FY 2009-10) as shown in Table-5.2 below: Later ED-DD also submitted the actuals for FY 2010-11.

Table 5.2: Past trend in category-wise sales and sales projected for FY 2011-12

(MU)

Sl. No.	Category	FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10	CAGR (%) (5 years)	Adjusted CAGR (%)	FY 2010-11 (RE)	FY 2010-11	FY 2011-12
A	LT	Actual	Actual	Actual	Actual	Actual	Actual				Actual	Projected
1	Domestic	41.6	45.1	34.9	51.3	56.4	57.9	6.84	6.9	61.9	62.2	66.1
2	LIG / Kutir Jyoti	0.1	0.1	0	0.1	0.1	0.1	0.00	0	0.1	0.1	0.1
3	Commercial	23.5	23.3	20.7	25.4	26.4	27.7	3.34	3.4	28.7	29.3	29.6
4	Agriculture	2.6	3	0.2	0.3	2.5	2.5	(-0.78)	0.0	2.5	2.6	2.5
5	LT Industry	132.8	139	140.1	140.7	134.9	139.1	0.93	0.9	140.4	151.0	141.8
6	Public Lighting	3.5	4	6.9	4.3	4.3	4.4	4.68	4.0	4.6	4.4	4.8
7	Public Water Works	1.1	1.9	0.6	0.8	1.1	0.9	(-3.93)	0	0.9	0.9	0.9
8	Temp. Supply	0.3	0.4	4.3	0.4	0.6	-	18.92		0	0.65	0.0
B	HT / EHT											
9	Industry	794.4	871.3	1023.9	1053.8	1099.1	1236.5	9.25	9.0	1347.8	1381.8	1469.1
	Total Sales	999.8	1088.0	1231.6	1276.9	1325.4	1469.15	8.00		1586.8	1632.95	1714.9

Source: Tables 2 & 3 of petition and table 2 of actual data for FY 2010-11/ essential information vide affidavit 21.6.2011.

Note: The ED-DD has calculated CAGR for five years (FY2004-05 to FY 2009-10) but erroneously stated as 4 years CAGR in Table 2 of the Petition. CAGR has been corrected to two decimal places.

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5.4 ANALYSIS OF ENERGY SALES PROJECTED AND COMMISSION'S VIEW

Based on the actual sales for FY 2010-11, CAGR for 3 and 5 years from FY 2005-06 to FY 2010-11 are shown in the table below:

Table 5.3: Past trend in category-wise sales and 5 year, 3 year CAGR

Sl. No.	Energy Sales (MU)	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	5 Year CAGR (%)	3 Year CAGR (%)
A	LT	Actual	Actual	Actual	Actual	Actual	Actual		
1	Domestic	45.1	34.9	51.3	56.4	57.9	62.2	6.64	6.63
2	LIG / Kutir Jyoti	0.1	0	0.1	0.1	0.1	0.1	0.00	0.00
3	Commercial	23.3	20.7	25.4	26.4	27.7	29.3	4.69	4.88
4	Agriculture	3	0.2	0.3	2.5	2.5	2.6	-2.82	-
5	LT Industry	139	140.1	140.7	134.9	139.1	151	1.67	2.38
6	Public Lighting	4	6.9	4.3	4.3	4.4	4.4	1.92	0.77
7	Public Water Works	1.9	0.6	0.8	1.1	0.9	0.9	-13.88	4.00
9	Temp. Supply	0.4	4.3	0.4	0.6	-	0.65	10.20	17.57
B	HT / EHT								
8	Industry	871.3	1023.9	1053.8	1099.1	1236.5	1381.8	9.66	9.45
	Total Sales	1088	1231.6	1276.9	1325.4	1469.15	1632.95	8.46	8.54

Source: Table 3 of petition and table 2 of actual data for FY 2010-11 vide affidavit 21.6.2011.

The growth in category wise consumers from FY 2005-06 to FY 2010-11 is as shown in the table 5.4 below:

Table 5.4: Category wise consumers growth

Sl. No.	Category	2005-06 (Actual)	2006-07 (Actual)	2007-08 (Actual)	2008-09 (Actual)	2009-10 (Actual)	2010-11 (Actual)	2011-12 projected (Nos.)
	LT							
1.	Domestic							
2.	LIG Kutir Jyoti	39435	40502	41652	42952	43712	44862	46202
3.	Commercial	8182	8297	8560	8730	8782	9040	9467
4.	Agriculture	1441	1484	1536	1589	1609	1658	1829
5.	Industrial (LT)	3227	3264	3390	3411	3425	3589	3538
6.	Industry (HT)							
	General	708	750	770	776	783	811	904
	Ferro	-	-	-	-	-	-	-
7.	Public lighting	156	159	168	176	181	182	217
8.	Public water works	77	77	77	77	77	77	86
	Temporary supply/ Others	-	-	-	-	-	-	-
	Total	53226	54533	56153	57711	58569	60219	62243

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Reasonable projection of category wise sales based on CAGR method and prudential check and pendency of new condition has been taken into consideration to determine the energy required to be purchased and likely revenue by sale of electricity.

The growth in energy consumption / sales under each category of consumers is discussed below

1. Domestic

The ED-DD has projected energy sales of 66.1 MU for FY 2011-12 to this category at a growth of 6.9% over the estimated figure of 61.9 MU of FY 2010-11.

Actual sales of this category for FY 2010-11 are 62.2 MU. The Commission has considered it appropriate to consider the growth of 3 year CAGR. The sales as per 3 yrs CAGR, of 6.63 %, would be 66.3 MU, which is marginally higher than that projected by ED- DD.

The Commission, therefore, approves domestic sales at 66.1 MU for FY 2011-12 as projected by ED-DD.

2. LIG/Kutir Jyoti

The ED-DD has projected the energy sales at 0.1 MU for this category for FY 2011-12, considering zero growth over the earlier years. Since the consumption is assessed and is stable without any increase, the sales for this category are considered at 0.1 MU for the year 2011-12. There is a need to install energy meters on all the LIG/ Kutir Jyoti connections so as to arrive at actual energy consumption for this category.

The Commission, however, approves the energy sales of 0.1 MU for this category of LIG/ Kutir Jyoti as projected by the ED-DD.

3. Commercial

The ED-DD has projected energy sales of this category at 29.6 MU for the year 2011-12 at a growth of 3.4% over estimated figure of 28.7 MU for FY 2010-11.

The ED-DD has furnished actual consumption for FY 2010-11 at 29.3 MU. The 3 yrs CAGR, for this category is 4.88%. On the basis of 3 year CAGR and energy sales works out as 30.72 MU.

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The Commission, however, approves the energy sales of this category for the year 2011-12 at 29.6 MU as projected by ED-DD.

4. Agriculture

The ED-DD has projected the energy sales of 2.5 MU for the year 2011-12 at zero growth rate. The sales for this category has been widely varying between 0.2 MU to 3.00 MU. The sales during FY 2009-10 was 2.5 MU and during FY 2010-11 is 2.6 MU.

The 5 year CAGR (FY2005-06 to FY2010-11) is negative and 3 year CAGR is 1% for this category. This point to saturation. The Commission considers zero growth. Therefore, the energy sales of 2.5 MU is considered for FY 2011-12 i.e. at the same level as that of FY 2009-10.

The Commission, therefore, approves the energy sales of agriculture at 2.5 MU for the year 2011-12 as projected by ED-DD.

5. Industry (LT)

The ED-DD has projected energy sales for LT industry at 141.8 MU for the year 2011-12 at a growth rate of 0.9% over the estimated figure of 140.4 MU.

Actual consumption of this category for FY 2009-10 and FY 2010-11 is reported as 139 MU and 151 MU respectively. The 3 year CAGR for this category is 2.38 %. The sales as per 3 yrs CAGR would be 154.59 MU. However, considering the projection made by ED- DD as reasonable, keeping in view the prevailing field conditions, **the Commission approves the energy sales at 141.8 MU for the year 2011-12 as projected by ED – DD.**

6. Public water works

The ED-DD has projected energy sales as 0.9 MU for this category for the year 2011-12 considering zero growth. The actual sales during FY 2009-10 and FY 2010-11 are also 0.9 MU. The energy sales for this category were uniform over the last 3 years.

The Commission, therefore, approves the energy sales for public water works at 0.9 MU for the year 2011-12 as projected by ED-DD.

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7. Public Lighting

The ED-DD has projected the energy sales for this category at 4.8 MU for the year 2011-12 at a growth rate of 4.7% over the estimated figure of 4.6 MU of FY 2010-11. The actual sales of this category for FY 2010-11 are 4.4 MU. The sales at 3 year CAGR are computed as 4.43 MU and at 5 year CAGR are computed as 4.48 MU.

The energy consumption of this category over the last six years is observed to be stable except for the year 2006-07 with sudden increase in sales to 6.9 MU, which appears to be a volatile phenomenon. The sales projected by ED-DD are almost close to sales as computed based on 5 year CAGR.

The projected consumption of 4.8 MU appears to be reasonable considering the past consumption level.

The Commission, therefore, approves the sales to the category of public lighting at 4.8 MU for FY 2011-12 as projected by ED-DD.

8. High Tension (HT/EHT)

The ED DD has projected a sale of 1469.1 MU for the FY 2011-12 at a growth rate of 9.0% over the estimated sales of FY 2010-11.

Actual consumption of this category for FY 2010-11 is reported as 1381.8 MU. The 3 year CAGR is 9.45%, the energy sale for FY 2011-12 based on 3 year CAGR comes to 1512 MU over the sales of FY 2010-11. Considering the energy sales as projected by ED-DD as reasonable, the Commission accepts the projection as such for the year 2011-12.

The Commission, approves, the energy sales of 1469.1 MU for HT/EHT industry for 2011-12 as projected by ED-DD based on sales during earlier years.

9. Temporary supply

The ED-DD has not projected energy sales under temporary supply for the year FY 2011-12. The same has therefore not been considered by the Commission.

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5.5 CATEGORY-WISE ENERGY SALES

The category-wise energy sales for the year 2011-12 as discussed above and the energy sales approved by the Commission as against the sales projected by ED-DD are given in Table 5.5 below:

Table 5.5: Category-wise Energy Sales for FY 2011-12

Sl. No.	Consumer Category	Energy sales Projected by ED-DD	Energy Sales Approved by the Commission
	LT Consumers		
1.	Domestic	66.1	66.1
2.	LIG/Kutir Jyoti	0.1	0.1
3.	Commercial	29.6	29.6
4.	Agriculture	2.5	2.5
5.	LT Industry	141.8	141.8
6.	Public lighting	4.8	4.8
7.	Public water works	0.9	0.9
8.	HT/EHT Industry	1469.1	1469.1
9.	Temporary supply	-	-
	Total	1714.9	1714.9 (or say 1715 MU)

5.6 TRANSMISSION AND DISTRIBUTION (T&D) LOSSES

It is submitted by ED-DD that it has achieved significant reduction in transmission and distribution loss during recent years by implementing system improvement works under the plan schemes, which resulted in reduction of loss as under:

FY 2009-10 - 11.77% (Actual)

FY 2010-11 - 10.87% (Actual as against 11% approved)

The ED-DD has projected the losses at 10.50% for FY 2011-12

Commission's Analysis

It has been observed that the T&D losses during FY 2010-11 were reduced from 11.77% in FY 2009-10 to 10.87% with a reduction of 0.9%. Considering similar pattern of reduction in T&D loss, it would further reduce to below 10% for FY 2011-12. The Abraham Committee in its Report on RAPDRP suggested reduction of distribution losses at 2% per annum for losses between 20% to 30% and at 1% per annum, where the losses are less than 20%. Keeping this in view, **the Commission approves the T&D loss for ED-DD at 9.75% for FY 2011-12.** It should be possible to reduce the loss to 9.75% since 85% of energy sales pertains to EHT/HT Industrial consumers and moreover distribution network being spread in smaller areas.

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The ED-DD has projected external losses at 5.77%. Western region network losses are obtained for the period from 28/06/2010 to 26/06/2011 (52 weeks). The loss is in the range of 3.4% to 5.5 %, with the average loss at 4.16%. It is considered appropriate to adopt 4.16%, towards regional transmission losses (pool losses)

The regional pool loss level of 4.16% is therefore considered as against 5.85% projected by ED-DD.

5.7 ENERGY REQUIREMENT

Based on the energy sales and loss levels discussed in paras 5.5 and 5.6 above, the total energy requirement for ED-DD at its periphery as proposed by ED-DD and approved by the Commission are given in table 5.6 below:

Table 5.6: Energy Requirement for FY 2011-12

Sl. No.	Particulars	Projected by ED-DD	Approved by the Commission
1	Energy Sales	1715	1715
2	T&D Loss %	10.50%	9.75%
3	T&D loss MU	201	185.28
4	Energy Requirement at Periphery	1916	1900.28
5	Pool Loss %	5.85%	4.16%
6	Pool Losses MU	119	82.48
7	Energy to be purchased	2035	1983

(Source- Table 5 & 7 of the Petition for projection by ED-DD)

5.8 ALLOCATION OF POWER FROM CENTRAL GENERATING STATIONS AND ENERGY AVAILABLE TO ED-DD.

5.8.1 The Union Territory of Daman & Diu does not have its own generation. It depends entirely on the allocation of power from central generating stations and purchases from the market in case of shortfall.

ED-DD has been allocated power from various central generating stations of NTPC in Western and Eastern regions and Nuclear Power Corporation of India (NPCIL).

For the year 2011-12, ED-DD has considered the firm and unallocated power from central generating stations of NTPC, NPCIL as per the allocation specified in the notification No: WRPC/Comml/1/6/Alloc/2010 / dated 8th October 2010 of Western Regional Power Committee which is effective from 16/10/2010. In addition Daman and Diu has been allocated 109 MW from the 2x250 MW station of NTPC-SAIL at Bhilai.

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5.8.2 The ED-DD has adopted the following methodology to estimate the energy availability from central generating stations.

- For projecting power availability for FY 2011-12, allocation of firm and infirm power from Western region generating stations (NTPC and NPCIL) as specified in notification dated 08/10/2010 of WRPC is considered. For projecting power allocation from Eastern region NTPC generating station, allocation from KHSTPP – II has been considered.
- Average PLF of past four years has been considered for coal based NTPC plants and NPCIL plants.
- For NSPCL, an average PLF of 90% has been considered in line with the actual PLF for first seven months of the plant during FY 2010-11.
- For gas based generating stations i.e KAWAS (KGPP) and Gandhar (GGIP), average gross generation of FY 2007-08, FY 2008-09 and FY 2009-10 has been considered.
- Auxiliary consumption of 9% and 3% has been considered for coal and gas based generating stations respectively.
- Actual external transmission losses (PGCIL losses) on power purchase for FY 2009-10 was 5.85% and six months of FY 2010-11 was 5.81% of gross power purchase. ED-DD has submitted that the petitioner has little control over the PGCIL losses and hence for computing the power availability at the periphery, 5.85% external transmission losses have been applied on the gross power purchase for FY 2011-12.

Based on the above methodology / assumptions, ED-DD has estimated the energy entitled from CGS and other sources at 2035 MU ex-bus for FY 2011-12. The summary of power purchase during years 2009-10, 2010-11 and 2011-12 (projected) as furnished by ED-DD is given in Table-5.7 below:

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Table 5.7: Summary of projected power purchases

Sl.No	Source	FY 2009-10 (Actual)	FY 2010-11 (Actual)	FY 2011-12 (Projected)
	NTPC stations			
1	KSTPS	523	396	402
2	VSTPS – I	179	108	108
3	VSTPS – II	140	82	80
4	VSTPS – III	161	101	95
5	KGPP	155	225	174
6	GGPP	109	232	192
7	NSPCL	327	779	502
8	SIPAT	142	90	86
	Sub Total	1736	**2013	1639
	Eastern Region			
9	FSTPP	21	0	
10	TSTPP	15	0	
11	KHSTPP – II	16	11	11
	Sub – total	*52	11	11
	NPCIL			
12	NPC			
13	KAPPS	23	14	11
14	TAPP 3 & 4	68	76	65
	Sub – Total	91	90	76
15	Power purchase from Indian Energy Exchange	5	1	
16	UI drawal	66	17	309
	Sub Total	71	18	309
17	Gross Power Purchase	*1950	**2132	2035
18	External Losses	114	122	119
19	Power availability at the state Periphery	*1836	2010	1916

* This figure is wrongly furnished as 2115 in the rejoinder

Source: Table 7 of the petition and table 5 of actual data for FY 2010-11/ essential information vide affidavit 21.6.2011.

* Figures of 52, 1950 and 1836 wrongly furnished as 53,1951 and 1837 respectively in Table 7 of the Petition.

** Figures of 2013 and 2132 wrongly furnished as 2012 and 2115 respectively in Table 5 of Actual data / essential information.

Commission's Analysis

The share of power to ED-DD from central generating stations is obtained vide No. WRPC/comml-1/6/Alloc/2011/5699 dated June 6th 2011 and the energy available for the year 2011-12 is obtained from WRPC 135th Annual Load Generation Balance Report for 2011-12. WRPC projection of availability of power to ED-DD for FY 2011-12 has been considered.

The ED-DD submitted in their letter dated 19th July 2011 that ED-DD will be receiving additional power of 39 MW from 1st August 2011 from NTPC-Ratnagiri

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power station. It is stated that the additional energy from this source would be about 182 MU. The power would cost at Rs.3.50 per unit and additional 37 paise per unit on transmission charges. But the power from this source has not yet materialized. Hence, the Commission has considered additional energy of 71 MU from this source.

The ED-DD also submitted that the additional allocation of 39 MW available to ED-DD from NTPC-SAIL during FY 2010-11 has not been considered during FY 2011-12 as this additional power is available upto March, 2011. Hence, the Commission considered firm allocation of only 70 MW availability to ED-DD for FY 2011-12.

Thus the total power purchase quantum approved by the Commission is as furnished in Table 5.8 below:

Table 5.8: Power Purchase approved by the Commission for FY 2011-12

Sl.No	Station	Installed Capacity (MW)	Power Availability (MU)	*Weighted Average share Allocation	ED-DD Share (MU)	Projected by ED-DD (MU)	Approved by the Commission (MU)
1	KSTPS I & II	2100	14993	2.51%	376.73	402	377
2	KSTPS III	500	2315	1.26%	29.10		29
3	VSTPS I	1260	8863	1.15%	102.15	108	102
4	VSTPS II	1000	7150	1.07%	76.36	80	76
5	VSTPS III	1000	7150	1.28%	91.29	95	91
6	KGPP	656.2	3941	4.72%	186.12	174	186
7	GGPP	657.4	3940	4.76%	187.65	192	188
8	SIPAT	1000	7135	1.18%	83.97	86	84
9	KHSTPS II	1500	10648	0.13%	14.20	11	14
10	NSPCL	500		14.00%	904.00	502	666
11	NPCIL (KAPS)	440	2024	1.89%	38.16	11	38
12	NPCIL (TAPS)	1080	4931	1.24%	61.16	65	61
13	RGPP (Ratnagiri)	2220					71
14	UI					309	0
	Total				2150.89	2035	1983

*Weighted average share of peak and off peak allocation.

5.9 POWER PURCHASE COST

The Allocation of power from central generating stations, the parameters adopted by the ED-DD to arrive at the entitlement of energy from central generating stations and the estimated availability of energy for the purchase for the year 2011-12 are discussed in para 5.8.

It is stated by ED-DD that the cost of power purchase from central generating stations has been arrived as under:

- Fixed cost for FY 2011-12 has been projected considering a 10% escalation over the estimated fixed cost for various stations for FY 2010-11. The escalation has

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been considered based on the anticipated increase in the employee cost due to implementation of sixth pay commission and impact of new Tariff regulation FY 2009-14 by CERC for computation of Tariff for central generating stations.

- Variable Cost for NTPC stations has been projected based on the actual variable cost and fuel price adjustments. An escalation of 5% has been assumed for projecting the variable cost for FY 2011-12.
- For Nuclear plants KAPP & TAPP single part tariff with 5% escalation on actual per unit charge for FY 2010-11 has been considered.
- For NTPC- Sail Bhilai unit 1 & 2 fixed, variable and other charges have been projected based on actual cost for first seven months of FY 2010-11. An escalation of 5% for increase in fuel cost; fixed charges and other charges etc has been used for projecting power purchase cost.

5.9.1 Transmission and other Charges

Transmission charges payable to PGCIL are based on the total capacity allocation in the transmission network. ED – DD has a mix of firm and infirm capacity allocation from various central generating stations which is revised by MOP at regular intervals. ED-DD has estimated transmission charges for FY 2011-12 based on actual transmission charges for seven months of FY 2010-11 and prorate allocation for remaining five months.

Actual Power Purchase Cost of ED-DD during FY 2010-11 and projected cost for FY 2011-12 are furnished in Tables 5.9 and 5.10 below:

Table 5.9: Power Purchase Cost actual for FY 2010-11 as given by ED- DD
(Rs. crore)

Source	Energy (MU)	Fixed Cost	Variable Cost	FPA charges	Other Charges	Total Power Purchase Cost	Average Cost (Rs./kWh)
NTPC Stations			18.7	14.9	5.6	49.7	1.26
KSTPS	395.7	10.5	8.1	8.0	3.9	23.5	2.19
VSTPP - I	107.5	3.4	6.0	5.8	2.4	18.4	2.25
VSTPP – II	81.7	4.1	9.6	5.0	2.5	24.9	2.46
VSTPP – III	101.4	7.8	23.2	31.7	3.1	69.9	3.10
KGPP	225.3	12	24.3	30.2	3.2	75.1	3.25
GGPP	231.9	17.5	119.9	1.3	-2.3	232.5	2.99
NSPCL	778.7	113.7	6.1	1.8	1.1	16.5	1.83
SIPAT	90.2	7.5	215.9	98.7	19.5	510.52	2.54
Subtotal	2012.5	176.5					
Eastern Region							
FSTPP		0.00				(0.07)	
KHSTPP – II	10.97	1.2	1.38	0.82	0.30	3.69	3.36
Subtotal	11	1.20	1.38	0.82	0.25	3.64	3.31
N.P.C							
KAPS	14.33	0	2.66	0.05	0.00	2.70	1.88
TAPS 3 & 4	75.67	20.72	0.00	0.00	0.25	20.97	2.77
Subtotal	90.00	20.72	2.66	0.05	0.25	23.67	

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Source	Energy (MU)	Fixed Cost	Variable Cost	FPA charges	Other Charges	Total Power Purchase Cost	Average Cost (Rs./kWh)
Power purchase cost from other sources			0.05			0.05	
Power purchase from Indian E. Exchange	1.20		0.18			0.18	
UI	17.30		9.85			9.85	
Subtotal	18.50		10.03			10.08	
Gross power purchase cost	*2132.00	198.42	229.97	99.57		547.92	
Transmission charges	122.00	33.38				33.38	
Other charges		3.95				3.95	
Power Purchase available at the periphery	*2010.00					585.25	

Source: Table 7 of actual data for FY 2010-11 /Essential information vide affidavit 21.6.2011.

Note *Figures of 2132 and 2010 wrongly furnished as 2114.7 and 1992.60 respectively in Table 7 of actual data.

Table 5.10: Power Purchase cost projected by ED –DD for FY 2011-12

(Rs. crore)

Source	Units (MU)	Fixed Cost	Variable Cost	FPA charges	Other Charges	Total Power Purchase Cost	Per Unit Cost (Rs./kWh)
NTPC Stations							
KSTPS	402	11.27	33.96		3.94	49.18	1.22
VSTPS – I	108	3.61	17.11		1.00	22.10	
VSTPS – II	80	4.43	12.05		1.12	17.60	2.21
VSTPS – III	95	8.12	14.36		1.56	24.04	2.52
KGPP	174	13.04	41.49		0.72	55.25	3.18
GGPP	192	19.23	45.47		2.02	66.71	3.48
NSPCL	502	69.30	77.93		4.93	152.17	3.03
SIPAT	86	7.50	9.76		0.86	18.12	2.10
Subtotal	1640	136.51	252.12		16.55	405.17	2.47
Eastern Region							
KHSTPS – II	11	1.14	2.24		0.50	3.88	3.66
Subtotal	11	1.14	2.24		0.50	3.88	3.66
NPCIL							
KAPS	11		2.55			2.55	2.28
TAPS 3 & 4	65		18.31			18.31	2.83
Subtotal	76		20.86			20.86	2.75
Power Purchase Cost from other Sources							
Power Purchase from Indian E. exchange							
UI	309		154.53			154.53	5.00
Subtotal	309		154.53			154.53	5.00
Gross power purchase	2035		429.75			584.44	3.05
Transmission charges						38.29	
Other charges						0.52	
Total	2035	137.65	429.75		17.05	623.25	3.26

Source: table 10 of petition.

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5.9.2 Commission's Analysis

As per regulation 17(3) of JERC (Terms and Conditions for Determination of Tariff) Regulation, 2009 the cost of power purchase from central generating stations shall be worked out on the basis of tariff determination by CERC and the cost of power purchase from nuclear power generating stations of NPCIL shall be worked out on the basis of tariff notified by the department of Atomic Energy under the Atomic Energy Act 1961. Accordingly, fixed costs approved by CERC for various central generating stations have been obtained from CERC website and the share of ED-DD has been worked out based on the power allocation share as per WRPC order dated 06/06/2011.

Variable charges billed in July 2011 power purchase bills of ED-DD have been adopted.

PGCIL transmission charges are worked out on the basis of transmission charges billed by PGCIL to ED-DD for July, 2011.

ED-DD has renewable power purchase obligation of 2% on energy sales as per RPO Regulations dt 30/11/2010. The same are worked out as under

Renewable Power purchase obligation of ED-DD for FY 2011-12

Energy Sales approved for FY 2011-12 - 1715 MU

1	Non Solar	1.7% of 1715	29.16 MU
2	Solar	0.3 % of 1715	5.15 MU
	Total		34.30 MU

Considering forbearance price for non solar at RS 3.90/KWH and for solar at Rs 17.00/KWH, the renewable power purchase obligation works out as follows

(Rs. crore)

1	Non Solar	29.16 x 3.9	11.37
2	Solar	5.15 x 17	8.75
	Total		20.12

The power purchase cost for FY 2011-12 has been arrived as under:

- (i) Tariff charges as approved by CERC for FY 2011-12. The variable charges per unit have been taken from the bills of respective CGS for the month of July, 2011 which are in line with CERC approval.
- (ii) The actual amount of arrears amounting to Rs.15.64 crore. paid by ED-DD as per affidavit dated 16.09.2011 to CGS, PGCIL, NSPCL and GETCO.

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(iii) Power purchase from Dhabol- Ratnagiri has been taken as provided in the agreements i.e., Rs. 1.50/kwh for fixed charge and Rs. 2.10/kwh for energy charges.

(iv) ED-DD do not have any Non Conventional Energy Generation in its area of operation. Therefore a provision of Rs. 20.12 crore has been kept which will be utilized by ED-DD to discharge their obligations in procurement of renewable energy JERC (Procurement of Renewable energy) Regulations, 2010 during 2011-12.

The power purchase cost source-wise as approved by the Commission for FY 2011-12 is given in table 5.11 below:

Table 5.11: Power Purchase Cost for FY 2011-12 approved by the Commission

Sl. No.	Source	Installed Capacity (MW)	Annual fixed cost (Rs/Crore)	ED-DD Share %	Approved Energy Purchase (MU)	Fixed Cost (Rs/Crore)	Variable Cost (Rs/kWh)	Total variable (Rs/crore)	Total Cost (Rs/Crore)	Cost per Unit (Rs.kWh)
1	2	3	4	5	6	7	8	9	10	11
						(4*5/100)		(6*8)	(7+9)	(10/6*10)
I	NTPC Source									
1	KSTPS I & II	2100	686	2.51%	377	17.24	1.054	39.74	56.97	1.51
2	KSTPS III	500	163.3	1.26%	29	2.05	0.903	2.62	4.67	1.61
3	VSTPS I	1260	500.1	1.15%	102	5.76	1.572	16.03	21.80	2.14
4	VSTPS II	1000	502.8	1.07%	76	5.37	1.484	11.28	16.65	2.19
5	VSTPS III	1000	765.1	1.28%	91	9.77	1.484	13.50	23.27	2.56
6	KGPP	656.2	367.2	4.72%	186	17.34	1.550	28.83	46.17	2.48
7	GGPP	657.39	504	4.76%	188	24.00	1.920	36.10	60.10	3.20
8	SIPAT	1000	836.8	1.18%	84	9.85	0.878	7.38	17.22	2.05
9	KHSTPS II	1500	1167	0.13%	14	1.56	1.254	1.76	3.31	2.37
10	NSPCL – Bhilai	500	552.55	14.00%	666	77.36	1.334	88.84	166.20	2.50
II	NPCIL Source									
11	NPCIL – KAPS	440		1.89%	38	0.00	2.170	8.25	8.25	2.17
12	NPCIL – TAPS	1080		1.24%	61	0.00	2.730	16.65	16.65	2.73
III	Other Sources									
13	RGPPL (Ratnagiri)	2220	Rs. 1.50/kWh		71	10.65	2.100	14.91	25.56	3.60
14	RP Obligation								20.12	
15	PGCIL charges								53.64	
16	POSOCL charges								0.66	
	Total				1983	180.95		285.88	541.25	2.73
17	Arrears *								15.64	
	Net Total								556.89	

*Arrears – paid by ED.DD to CGS, PGCIL, NSPCL & GETCO.

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5.10 GROSS FIXED ASSETS

5.10.1 The ED-DD has projected the gross fixed assets at Rs. 296.95 crore at the end of March 2011.

The gross fixed assets from FY 2009-10 to FY 2011-12 (projection) given in the ARR are detailed in the Table 5.12.below:

Table 5.12 (a): Projected Gross Fixed Assets and additions during FY 2009-10 to FY 2011-12

(Rs. crore)

Year	Opening GFA	Additions during the year	Closing GFA
FY 2009-10 (A)	266.42	10.95	277.37
FY 2010-11 (RE)	277.37	19.59	296.95
FY 2011-12 (Pr)	296.95	57.11	354.07

(Source: Table 20 of petition)

The ED-DD has furnished the actual capitalisation during the year 2010-11 in its letter dated 15/07/2011 at Rs. 11.55 crore against Rs. 19.59 crore estimated in the RE for FY 2010-11. The opening and closing balance of the GFA after taking into consideration the actual capitalisation of Rs. 11.55 crore are as given in the table below

Table 5.12 (b): Projected Gross Fixed Assets and additions during FY 2009-10 to FY 2011-12

(Rs. crore)

Year	Opening GFA	Additions during the year	Closing GFA
FY 2009-10	266.42	10.95	277.37
FY 2010-11 (A)	277.37	11.55	288.92
FY 2011-12 (Projected)	288.92	57.11	346.03

Source: Actual as per data for FY 2010-11 submitted vide affidavit dated 21.6.2011.

The ED-DD has submitted that based on the Asset Register the Department had gross fixed assets of the value of Rs. 266.42 crore at the beginning of the year 2009-10 and the assets capitalized during the year 2009-10 are given at Rs. 10.95 crore. For the year 2010-11 ED-DD has capitalized Rs.11.55 crore. For FY 2011-12, ED-DD has proposed to capitalize Rs.57.11 crore.

5.10.2 Commission's analysis

The capital expenditure has been funded by the Government of India through budgetary support without any external borrowings. The ED-DD has not prepared any proforma accounts. The Electricity Department has not prepared and maintained

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the statements of accounts viz., Profit and Loss account, Balance Sheet etc. ED-DD was directed in the Tariff order dated 1st November, 2010 for the FY 2010-11 to

1. prepare "Accounting Statement" which includes balance sheet, profit and loss account, report of the auditors, cost records etc and
2. arrange for the preparation of assets and depreciation registers, function wise and asset classification wise.

The ED-DD, in its compliance report, has mentioned that it has invited bids for the preparation of balance sheet exercise and the work of preparation of accounts has been awarded to M/S Shyam Padia & Co.

It is evident from the above that the Department has not yet prepared the accounting statement and the Assets and Depreciation Registers.

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

"Investments made prior to and upto 31st March immediately preceding the date of the notification of these regulations or date of receipt of a petition of tariff determination whichever is earlier shall be considered on the basis of audited accounts or approvals already granted by the Commission".

The Commission reiterates the decision taken earlier in the Tariff Order dated 1st November, 2010 that in the absence of audited Asset Register the depreciation registers and the audited annual accounts the gross block assets, projected by the ED-Daman and Diu in the ARR and Tariff Petition and subsequent submissions with reference to the data gaps pointed out, cannot be considered for the purpose of arriving at the capital base and allowing depreciation and return on capital base.

The Commission directs the ED-Daman and Diu to prepare and maintain Asset Register, depreciation registers in complete shape, the annual statement of accounts for the regulated business, get them audited and submit to the Commission along with the ARR for FY 2012-13.

5.11 CAPITAL EXPENDITURE PLAN FOR FY 2011-12

- 5.11.1 The ED-Daman and Diu has projected the capital expenditure at Rs. 112.43 crore and capitalization of Rs. 57.11 crore during the year 2011-12. The scheme wise

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details given in the Table18 of ARR petition aggregates to Rs.118.43 crore against Rs.112.43 crores projected. The scheme wise details for the amount of Rs. 112.43 crore are available in page 176 of volume II of the petition. The details are as given in the table 5.13 below:

Table 5.13: Capital expenditure projected by ED-DD for FY 2011-12

Sl. No.	Name of Scheme	Proposed 2011-12 (Amount Rs. crore)
	New Schemes	
A-1	Scheme for establishment of 1x100 MVA 220/66/11 KV S/S at Ringanwada, Daman along with associated 220 KV D/C line from 220 KV Ambheti to Ringanwada S/S of PGCIL to Ringanwada in Dama	45.00
A-2	Scheme of strengthening of 66 KV Transmission line network in Daman UT and strengthening of 66/11 kV S/Ss.	9.00
A-3	Scheme for establishment of 66/11 KV 2x15 MVA S/S along with associated line at Bhimpore, Daman. Estimated Cost: 9.9864 crore.	2.99
A-4	Scheme for establishment of 66/11 KV, 2x 10 MVA S/S along with associated line at Zari, Ddaman Estimated cost : 13.6822 crore.	13.19
A-5	Augmentation of 66/11 kV existing S/S at Daman Diu.	4.50
	Continuing Schemes	
B-1	Normal Development works and release of service connections	5.50
B-2	Electrification of Tribal area and providing street lighting in village road in daman.	0.30
B-3	Providing and strengthening of power supply network and communication, MRT facilities and Special Tools and plants / workshop in Daman and Diu.	5.60
B-4	Providing underground power distribution system in Daman and Diu city / rural areas and extension of the scheme to Industrial estates.	11.50
B-5	Renovation of existing, old power distribution and providing improved metering system and providing Pre-paid metering system and indexing and digitalization in Daman and Diu	10.00
B-6	Direction and Administration	4.85
	Total	112.43

Source: Table 18 of the Petition.

5.11.2 The ED-DD has submitted that the capital expenditure of Rs. 112.43 crore proposed in FY 2011-12 by ED-DD includes Rs. 45 crore towards establishment of 1X100 MVA 220/66/11kV SS at Ringanwada, Daman along with associated 220kV DC line from 220 kV Ambheti SS of PGCIL to Ringanwada in Daman. This scheme would provide another 220kV power source to the UT of Daman and would help in improving the

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voltage regulation of the electrical system and reduce the line losses by ensuring high voltage transmission of lines. It will improve power supply and will ensure standby feeding arrangement in case of major breakdown on 220kV Magarwada circuit. Further, the scheme would enable the UT to shift its whole power load from GETCO network to PGCIL.

The proposed CAPEX also includes another scheme for strengthening of 66kV transmission line network in Daman, UT and strengthening of 66/11kV SSs at a cost of Rs. 9 crore. This would help in erection of 66kV line to interlink various 66kV SS in the UT in order to ensure stable and uninterrupted power supply to the UT even in case of major 66kV level break down. Of the above mentioned capital expenditure for FY 2010-11, part of the capital expenditure pertains to the schemes which were started in the previous years i.e FY 2008-09 and FY 2009-10.

It is further submitted by ED-DD that capitalization of new schemes has been considered at 40% of the planned capital expenditure in the same year while the balance 60% has been capitalized in the subsequent year as summarized in the table 5.14 below:

Table 5.14 (a): Projected capital expenditure and capitalization for FY 2011-12

Capital expenditure and capitalization	(Rs. crore)	
	FY 2010-11 (RE)	FY 2011-12
Capital expenditure	21.53	112.43
Asset capitalization	19.59	57.11
Capital works-in progress	20.24	75.55

Source Table 19 of the Petition.

5.11.3 Commission's Analysis

The ED-DD has projected the capital expenditure at Rs.112.43 crore and capitalisation at Rs.57.11 crore for FY 2011-12. With reference to a query, the ED-DD has furnished the actual capital expenditure at Rs.19.10 crore during the FY 2010-11 and the capitalisation at Rs.11.15 crore. The balance works in progress is given at Rs.10.98 crore vide table 14 of ED-DD's letter dated 15th July, 2011. But in tables 15 and 16 of ED-DD's letter dated 15th July 2011 the capitalisation is mentioned at Rs.11.55 crore. However, the Commission takes into consideration the actual capitalisation at Rs.11.15 crore and balance in "work in progress" at Rs.10.98 crore for FY 2010-11 as mentioned by the utility in table 14 of its letter dated 15.07.2011.

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Accordingly, the opening balance of “work in progress” for 2011-12, capital expenditure and capitalisation are arrived at taking into consideration 60% of the opening balance of CWIP and 40% of proposed capital expenditure for capitalisation as detailed in the table below:

Table 5.14 (b): Approved capital expenditure and capitalization for FY 2011-12

Capital expenditure and capitalization	(Rs. crore)	
	FY 2010-11	FY 2011-12
Opening balance of capital works in progress	-	10.98
Capital expenditure during the year	19.10	112.43
Less Capitalisation during the year	11.15	51.56
Closing balance of capital works in progress	10.98	71.85

The Commission, accordingly, takes into consideration the capital expenditure at Rs.112.43 crore and capitalization at Rs.51.56 crore for FY 2011-12.

5.12 REVENUE REQUIREMENT for FY 2011-12

The ED-DD has projected a total expenditure of Rs.661.42 crore as shown in Table-5.15 below:

Table 5.15: Expenses projected for FY 2011-12

Sl. No.	Items of Expense	(Rs. crore)
		Proposed by the Licensee
1.	Cost of power purchase	623.24
2.	Employee cost	5.97
3.	R&M expenses	6.26
4.	Administration and General expenses	2.20
5.	Depreciation	16.34
6.	Interest charges (Interest on Loan = 2.33Crore+Interest on working	8.84
7.	Return on NFA/equity	1.37
8.	Provision for bad debts	6.61
9.	Total revenue requirement	670.83
10.	Less : Non tariff income	9.41
11.	Net revenue requirement (9-10)	661.42

(Source: Format 27 of ARR)

The expenses projected by ED-DD under each head and the Commission’s analysis and decisions are discussed below:

5.13 OPERATION AND MAINTENANCE (O&M) EXPENSES

The O&M expenses comprise the Employee cost, Repairs & Maintenance (R&M) expenses and Administration and General (A&G) expenses.

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The methodology adopted by ED-DD for projecting the values of each component of O&M expenses for FY 2010-11 and FY 2011-12 is as follows:

The ED-DD furnished the actual O&M expenses from FY 2005-06 to FY 2010-11 and projection for FY 2011-12 as detailed in the Table-5.16 below:

Table 5.16: O&M expenses projected by ED/Daman and Diu

Year	O&M expenses (Rs.crore)
2005-06 (Actual)	6.43
2006-07 (Actual)	7.02
2007-08 (Actual)	6.47
2008-09 (Actual)	8.47
2009-10 (Actual)	9.35
2010-11 (Actual)	11.18
2011-12(Projection)	14.43

(Source: Table 12 of the petition and Table 9 of actual data/ Essential information vide affidavit 21.6.2011)

The above O&M expenses are discussed in the following paras.

5.13.1 Employee Cost

The ED-DD has projected the employee cost at Rs. 5.97 crore for the year 2011-12.

It is stated by the utility that employee expenses estimated comprise of all the costs related to employees like basic salary, dearness allowance, medical expenses, leave salary, travel allowances, honorarium etc. It is also stated that the petitioner does not maintain costs related to leave salary contribution, pension and terminal benefits of the employees in the employee cost. The ED-DD has submitted that a separate claim of these expenses would be made at an appropriate time when the respective cost items become payable.

Actual during FY 2009-10, FY 2010-11 and projections for FY 2011-12 as furnished are given in Table 5.17 below:

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Table 5.17: Employee cost actuals for FY 2009-10, FY 2010-11 and FY 2011-12 projection)

Sl. No.	Particulars	FY 2009-10 (Actual)	FY 2010-11		(Rs. crore)
			RE	Actuals	FY 2011-12 (Projections)
	Salaries & Allowances				
1.	Basic pay	2.61	2.66	2.30	2.93
2.	Dearness pay	0.77	0.69	0.59	0.76
3.	Dearness allowance	0.89	1.36	1.20	1.49
4.	Hose rent allowance	0.26	0.28	0.25	0.31
5.	Medical reimbursement charges	0.01	-	0.00	-
6.	Transport allowance	0.21	0.29	0.25	0.32
7.	L.T.C.	0.01	-	0.00	-
8.	Children Education allowance	0.02	0.04	0.04	0.05
9.	Family Planning allowance	0.01	0.01	0.01	0.01
10.	Bonus	0.07	0.09	0.05	0.09
11.	Total	4.86	5.42	* 4.71	**5.97

Source Table 13 of petition and Table 10 of Actual data/ *Essential information vide affidavit 21.6.2011*)

* Total wrong, it should be Rs. 4.69 Crore

** Total wrong, it should be Rs. 5.96 Crore

Commission's Analysis

The Commission has analyzed the employee cost as under. The employee cost during 2010-11 has shown a decrease over the year 2009-10. The ED-DD has not furnished reasons for such decrease. Now the ED-DD has projected Rs 5.97 core for 2011-12 with an escalation of 27% over 2010-11 actuals which is on high side. The commission considers an escalation of 10% over the previous year, which works out to be Rs 5.18 crore.

The Commission approves the employee cost at Rs 5.18 core for the year 2011-12 as against Rs 5.97 crore projected by ED-DD.

5.13.2 Repairs and Maintenance (R&M) Expenses

The R&M expenses comprise of repairs and maintenance to electrical equipments, buildings, transmission and distribution network, vehicles, furniture and fixtures, office equipment etc.

The ED-Daman and Diu has projected the R&M expenses at Rs. 6.26 crore for the year 2011-12. The actual R&M expenditure for FY 2010-11 is Rs. 6.20 crore. Now the escalation proposed is marginal.

The Commission approves the R&M expenses at Rs. 6.26 crore for FY 2011-12 as projected by the ED-DD.

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5.13.3 Administration and General (A&G) Expenses

ED-DD has projected A&G expenses at Rs 2.20crorefor FY 2011-12. The A&G expenses comprise rates and taxes, insurance, communication, legal charges, audit fees, consultancy charges, technical fees, conveyance and travel charges, fees payable to Regulatory Commission and other professional charges.

The component wise details of A&G expenses actuals for the years 2009-10 and FY 2010-11 and projection for FY 2011-12 submitted by the utility are given in the Table-5.18 below:

Table 5.18: A&G expenses projected by ED-DD for FY 2010-11

(Rs. crore)					
Sl. No.	Sub-head	FY 2009-10 (Actual)	FY 2010-11 (RE)	FY 2010-11 (Actuals)	FY 2011-12 (Projection)
1.	Rent, rates & taxes	0.00	0.00	-	-
2.	Insurance	-	-	-	-
3.	Telephone, postage & telegrams	0.05	0.06	0.04	0.07
4.	Regulatory and Consultancy fees	0.00	0.70	0.01	1.25
5.	Technical fees	-	-	-	-
6.	Other professional charges	-	-	0.23	-
7.	Conveyance & travel expenses	0.01	0.13	-	0.19
8.	Electricity & water charges	0.00	0.00	-	-
9.	Others	0.13	0.14	-	0.40
10.	Freight	-	-	-	-
11.	Consumer indexing	-	0.97	-	0.28
12.	Total	0.19	2.00	-	*2.20
13.	Add/Deduct share of others (to be specified)	-	-	-	-
14.	Total expenses	0.19	2.00	-	*2.20
15.	Less capitalized	-	-	-	-
16.	Net expenses	-	-	-	-
17.	Add prior period	-	-	-	-
18.	Total expenses charged to revenue	0.19	2.00	0.28	*2.20

(Source: Format 17 of ARR)

*Total wrong, it should be Rs. 2.19 crore

Commission's Analysis

The actual expenditure incurred during FY 2009-10 is Rs.0.19 crore and FY 2010-11 is Rs 0.28 crore. Now the ED-DD has projected Rs 2.19 crore during FY 2011-12 in which major expenditure proposed is on account of regulatory and consultancy fee of Rs.1.25 crore. On a query from the Commission ED-DD has furnished the break up for the amount of Rs. 1.23 crore against Rs. 1.25 projected under regulatory and consultancy fees, which is given below:

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Particulars	Amount (Rs. crore)
JERC Fees	0.30
Consulting fees	0.22
Energy Audit	0.10
Fees of CA	0.16
Fees of PGCIL for DPR	0.20
Fees of DPR for solar project	0.25
Total	1.23

The provisions towards energy audit, preparation of accounts etc., are in accordance with the directions issued by the Commission in the Tariff order for FY 2010-11.

As per the breakup given the total A&G expenses aggregate to Rs. 2.17 crore against Rs. 2.19 crore projected in the ARR for FY 2011-12.

The Commission, therefore, approves the A&G expenses at Rs. 2.17 crore for FY 2011-12 as against Rs. 2.19 crores as projected by ED-DD.

5.14 DEPRECIATION

The ED-DD has projected the depreciation charges at Rs. 16.34 crore for the year 2011-12 as detailed in table 5.19 below:

Table 5.19: Depreciation projected by ED-DD for FY 2011-12

Particulars	(Rs. crore)			
	FY 09-10 (Actual)	FY 10-11 (RE)	*FY 10-11 (Actual)	FY 11-12 (Projected)
Opening GFA	266.42	277.37	277.37	296.95
Additions	10.95	19.59	11.55	57.11
Closing GFA	277.37	296.95	288.92	354.07
Average GFA	271.89	287.16	283.15	325.51
Depreciation Amount	13.51	14.32	14.11	16.34
Average Depreciation Rate	4.9%	4.8%	4.9%	4.6%

Source: Table 21 of ARR.

* Table 16 of ED-DD letter dated 15.07.2011.

The ED-DD has submitted that depreciation is charged on the basis of straight line method on the gross fixed assets in use at the beginning of the year and addition of assets during the financial year. The depreciation has been computed applying the depreciation rates as specified by the CERC in the Tariff Regulations for FY 2009-14 on the gross fixed assets and 50% of the asset capitalized during the year.

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Commission's Analysis

The ED-DD has stated that the depreciation has been claimed as per the provisions of CERC Tariff regulations, 2009. The ED-DD has arrived at the gross fixed assets to end of March 2011 at Rs 296.95. The Commission has not accepted the gross fixed assets as projected by the ED-DD for the reason given in para 5.10.2 above.

The ED-DD has projected capital expenditure of Rs 112.43 crore during FY 2011-12 and proposed to capitalize Rs 57.11 crore. During FY2010-11 Rs.11.15 crore has been capitalised as against Rs 12.92 crore approved by Commission. The actual amount capitalised for FY 2010-11 is considered as opening GFA for FY 2011-12 and capitalization during the year is considered at Rs 51.56 crore as approved in para 5.11.3 and depreciation is allowed on the average of opening and closing GFA. The depreciation allowed is as per the Regulation 26 of JERC (Terms and Condition for Determination of Tariff) Regulations, 2009, which specifies that the depreciation of assets shall be calculated annually at the rates specified by CERC from time to time. The effective average rate of depreciation for distribution assets is 5.28% vide Appendix III of depreciation schedule of CERC (Terms and Condition of Tariff) Regulations, 2009. The depreciation for the year 2011-12 has been worked out at Rs 1.95 crore as detailed in Table 5.20 below:

Table 5.20: Depreciation approved by the Commission for the FY 2011-12

Particulars	Amount (Rs. crore)
Gross fixed assets as on 1-4-2011	11.15
Addition during 2011-12	51.56
Gross fixed assets to end of 2011-12	62.71
Average GFA	36.93
Rate of Depreciation	5.28%
Depreciation for 2011-12	1.95

The Commission, accordingly, approves the depreciation charges at Rs. 1.95 crore for FY for FY 2011-12 against Rs. 16.34 crores projected by ED-DD.

5.15 INTEREST AND FINANCE CHARGES

The ED-DD has projected the interest and finance charges at Rs 2.33 crore for the FY 2011-12.

The ED-DD has stated that the entire capital expenditure of ED-DD since its inception has been funded by the Government of India through budgetary support up to 2009-10 and hence no loan liabilities. Now ED-DD is migrating from a Government

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owned utility to a commercial utility under Electricity Act, 2003 and it has come under the direction of the regulatory commission. It has been assumed that the ED-DD would work as a separate commercial utility and therefore would be availing debt utilizing facility from FY 2011-12 onwards.

Assets capitalized during FY 2011-12 have been considered on normative debt equity ratio of 70:30 as per JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 Rate of interest has been considered at SBI Prime Leading Rate of 12.25% for computation of interest cost for long-term loans for FY 2011-12 as detailed in table 5.21 below:

Table 5.21: Projected Interest on Long – term loans

(Rs. crore)

Sl. No.	Interest on Long – term Loans	FY 2011-12 (Projected)
1	Opening Loan (50% of the opening GFA)	0.00
2	Addition in Loan (70% of assets capitalization)	39.98
3	Repayment of loan (10% of opening balance)	2.00
4	Closing Loan Amount	37.98
5	Average Loan	38.98
6	Interest Rate on Loan	12.25%
7	Total Interest Cost on Long term Loans	2.33

(Source: Table 22 of ARR)

Commission's Analysis

ED-DD has assumed 70% of works capitalized during 2011-12 as normative loan with assumption of repayment of 10% of normative loan during the year and calculated interest at the rate of 12.25% stated to be SBI Prime Lending Rate (PLR).

As stated by the utility the entire capital expenditure has been funded through budgetary support from Government of India.

Regulation 25 of JERC (Terms and Conditions for Determination of Tariff) Regulations 2009, lays down:

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

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agreements. The rate of interest shall however be restricted to the prevailing PLR of the State Bank of India.

The ED-DD has not borrowed any loan in the past up to 31/03/2011 and has not proposed to borrow any loan towards the capital expenditure for the year 2011-12. The interest charges projected by the utility for 2011-12 are on the basis of notional loan without external borrowings

The Commission, therefore, does not consider any interest charges.

5.16 INTEREST ON WORKING CAPITAL

The ED-DD has projected the interest on working capital at Rs. 6.51crore for the year 2011-12 as detailed in the Table-5.22 below

Table 5.22: Interest on working capital projected by ED-Daman and Diu for 2011-12
(Rs. crore)

Particulars	2011-12 (Projected)
One month's Power Purchase Cost	51.94
One month's employee costs	0.50
One month's R&M Cost	0.52
One month A&G expenses	0.18
Two months fuel cost	-
Total working capital requirement	53.14
Rate of interest	12.25%
Interest on working capital	6.51

Source: Table 23 of Petition

Commission's Analysis

The ED-DD has computed the interest on working capital based on normative basis as per the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009.

The ED-DD has considered rate of interest at 12.25% for 2011-12 the SBI short term PLR as on 1st April of the respective year. But the SBI PLR as on 1-4-2011 is 13%. Hence rate of interest at 13% is considered.

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Regulation 29 (3) of the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 specified that subject to prudence check, the working capital for integrated utility shall be the sum of one-month requirement for meeting:

- (a) Power purchase cost
- (b) Employee cost
- (c) Administration and General expenses
- (d) Repair and Maintenance expenses
- (e) Sum of two months requirement for meeting fuel cost

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Table 5.23: Interest on working capital approved for FY 2011-12

(Rs. crore)

Sl.No.	Particulars	FY 2011-12
1.	One month power purchase cost	45.10
2.	One month employee cost	0.43
3.	One month Adm & Gen. Charges	0.18
4.	One month R&M expenses	0.52
5.	Two months fuel cost -	-
6.	Total working capital	46.23
7.	Rate of interest on working capital	13%
8.	Interest on working capital	6.01

The Commission, accordingly, approves the interest on working capital at Rs. 6.01 crore for FY 2011-12 as against Rs 6.51 crore projected by ED-DD.

5.17 PROVISION FOR BAD DEBTS

The ED-DD has projected the provision for bad and doubtful debts at Rs. 6.61 crore for FY 2011-12 as detailed in the Table 5.24 below:

Table 5.24: Provision for bad and doubtful debts projected by ED-DD for FY 2011-12

(Rs. crore)

Particulars	FY 2011-12
Annual revenue requirement	661.42
Provision for bad & doubtful debts as % of receivables	1%
Provision for bad & doubtful bets	6.61

Source: Table 25 of Petition

The ED-DD has submitted that the provision for bad and doubtful debts has been considered at 1% of the revenue requirement.

Commission's Analysis

The ED-DD has furnished the arrears due from consumers at Rs. 40.28 crore at the end of Feb 2011.

Regulation 28 of JERC (Terms and condition for Determination of Tariff) Regulations, 2009 read as follows:

"The Commission may, after the generating company / licensee gets the receivables audited, allow a provision for bad debts upto 1% of receivables in the revenue requirement of the generating company / licensee".

The receivables obviously mean the debtors for electricity supplied i.e. arrears outstanding but not the receivables equivalent to the ARR. These receivables are to be duly audited for considering any provision for bad debts.

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Accordingly, 1% percent of arrears amount of Rs. 40.28 crore works out as Rs. 0.40 crore

The Commission, accordingly, approves provision for bad and doubtful debts at Rs 0.40 crore for the year 2011-12 as against Rs. 6.61 crore projected by ED-DD.

5.18 RETURN ON CAPITAL BASE / RETURN ON EQUITY

The ED-DD has projected the return on equity at Rs. 1.37 crore for the year 2011-12. The details of computation of ROE are given in the Table 5.25 below:

Table 5.25: Return on Equity projected by ED-DD for FY 2011-12

Particulars	(Rs. crore)	
	FY 2011-12	
Opening GFA (Net of consumer contribution)	-	
Addition in equity (30% of Asset capitalization)	17.13	
Closing equity amount	17.13	
Average equity	8.57	
Rate of return on equity	16%	
Return on equity	1.37	

Source: Table 24 of Petition

The ED-DD has submitted that it is entitled for Return on Equity at 16% as per the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009. The Department has considered 30% normative equity on capitalization amount during 2011-12.

Commission's Analysis

The ED-DD is an integrated utility in its present form as defined in Regulation 2 (9) of the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009. The ED-DD is not restructured and corporatised. As of now it is an integrated utility and it is entitled to return on capital base under the provisions of Schedule-VI of the repealed Electricity (Supply) Act, 1948 vide proviso under Regulation 23 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009.

The basic requirement for consideration of either return on capital base or return on equity is the audited annual accounts and registers of assets and depreciation. The ED-DD has not prepared the statement of accounts viz., profit and loss account, balance sheet etc. As admitted by the Department, the petitioner has not been maintaining adequate information. The ED-DD has, however, taken into

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consideration the addition to the assets during FY 2011-12 of Rs. 57.11 (projected) and requested the Commission to allow Rs. 1.37 crore as return on equity.

The Department has no separate audited accounts for the regulatory business. Till such time, the Department prepares annual accounts and get them duly audited, it is not feasible for the Commission to consider return on equity or return on capital base in accordance with Regulations 23 and 24 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009.

5.19 NON-TARIFF INCOME AND OTHER INCOME

The ED-DD has projected the non-tariff income at Rs. 9.41 crore for FY 2011-12.

The non-tariff income includes rent / service line rentals, recovery of penalty for theft of power / mal practices, miscellaneous charges from consumers and other income includes interest on staff loans and advances, delayed payment charges from consumers, interest on advances to suppliers / contractors and miscellaneous receipts as detailed in Table 5.26 below:

Table 5.26: Non-tariff income projected by ED-DD for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	FY 2010-11 (Actuals)	FY 2011-12
1.	Meter / service rent	0.15	0.16
2.	Late payment surcharge	8.82	9.26
3.	Theft / pilferage of energy		
4.	Wheeling charges under Open access		
5.	Interest on staff loans & Advance		
6.	Income from trading		
7.	Income from staff welfare activities		
8.	Investment and bank balances		
9.	Misc. receipts / income		
10.	Total income		
11.	Add prior period income		
12.	Total non-tariff income	8.96	9.41

Source: Format 21 of Petition.

Commission's Analysis

The Department has submitted that the actual non-tariff income for FY 2010-11 is Rs. 8.96 crore. The ED-DD has projected the non-tariff income at Rs. 9.41 crore assuming an escalation of 5% over RE for FY 2010-11.

The Commission, accordingly, approves the non-tariff income at Rs. 9.41 crore for FY 2011-12 as projected by the ED-DD

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5.23 REVENUE FROM SALE OF ENERGY WITH EXISTING TARIFF

5.23.1 The ED-DD has projected the revenue from sale of energy with existing tariff at Rs. 559.59 crore for the year 2011-12. The details are given in Table 5.27 below.

Table 5.27: Revenue from sale of power at existing tariff projected by ED-DD for FY 2011-12
(Rs. crore)

Sl. No.	Consumer categories	2011-12
1	Domestic	11.65
2	LIG / Kutir Jyoti	0.01
3	Commercial	7.12
4	Agriculture	0.04
5	LT industry	40.37
6	HT / EHT Industry	499.60
7	Public lighting	0.57
8	Public waterworks	0.23
9	Temporary supply	-
	Total revenue from consumers	559.59
10	Revenue from surplus power	-
	Total revenue	559.59

Source: Table 28 of petition.

5.23.2 The ED-DD has furnished the actual sales and revenue from sale of energy with existing tariff for FY 2010-11 as shown in the table below:

Table 5.28: Sales and revenue from sale of power as per the actual data furnished by ED-DD for FY 2010-11

Categories	Sales for FY 2010-11 (MU)	Total Revenue for FY 2010-11 (Rs. Crore)	Avg. Rate (Rs./kwh/)
Domestic	62.2	12.03	1.93
LIG/Kutir Jyoti	0.1	0.01	1.00
Commercial	29.3	8.09	2.76
Agriculture	2.6	0.35	1.35
LT Industry	151	41.15	2.72
HT/EHT Industry	1381.8	482.96	3.50
Public Lightening	4.4	0.58	1.31
Public water works	0.9	0.24	2.60
Temp. Supply	0.65	0.32	4.92
Total	1632.95	*547.42	
Revenue from surplus power	160.40	46.36	2.89
Total Revenue		*593.78	

Source: Affidavit dated 21.6.2011 and e-mail dated 19.09.2011.

*Total wrong, it should be Rs. 545.73 Crore and accordingly, Rs. 593.78 Crore should be Rs. 592.09 Crore.

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5.23.3 Revenue with existing tariff with the sales approved by the Commission is worked out to Rs.554.61 crore as given in table 5.29 below:

Table 5.29: Revenue from sale of power at existing tariff for FY 2011-12

Sl. No.	Category of consumers	No. of Consumer	Energy Sales (MU)	Contracted Max. Demand KVA	Demand Charges per KVA / KW/HP	Tariff rates (Ps/unit)	Demand Charges (Rs. In Crore)	Energy Charge Rs. in Crores	Total Revenue Rs. in Crores	Rate per Unit
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Domestic									
a)	Up to 50 units		10.60			100		1.06	1.06	
b)	51-200 units		21.20			160		3.39	3.39	
c)	201-400 units		21.80			200		4.36	4.36	
d)	Beyond 401 units		12.50			225		2.81	2.81	
e)	LIG		0.10					0.01	0.01	
	Total	46202	66.2	55845	0.00	755		11.63	11.63	1.76
2.	NRS/Commercial								0.00	
	0-100 units		13.60			205		2.79	2.79	
	Above 100 units		16.00			270		4.32	4.32	
	Total	9467	29.60	36762	0.00			7.11	7.11	2.40
3.	Public lighting	217	4.8	1653	4	120	0.05	0.58	0.63	1.30
4.	Public Water Work	86	0.9	764	60	260	0	0.23	0.23	2.60
	Total	303	6	2417				0.81	0.86	1.51
5.	Industrial (General) HT -A									
6.	(General) HT -(A)	888		420924	60		30.31			
	-slab1(0-50000 units)		42.70			295		12.60		
	-slab2(50001 to 500,000 units)		37.30			305		11.38		
	-slab3(500,001 and above)		1279			310		396.49		
	Total	888	1359	420924	60		30.31	420.46	450.77	3.32
	HT - (B) Furance	16		31000	450	0.00	16.74			
	-slab(0-300) units)		70.80			205		14.51		
	-slab2(301-500 units)		34.10			305		10.40		
	-slab3(500 units & above)		5.1			355		1.81		
	Penal Charges									
	Total B	16	110	31000	450		16.74	26.73	43.47	3.95
7.	LT	3538								
	up to 20HP		5.8	52368		250		1.5		
	above 20HP		136	122192		260	3.67	35.36		
	Total HT + LT Industrial	3538	141.80	174560			3.67	36.81	40.48	2.85
8	Agriculture Consumption	1829	2.5	5054	0	115		0.29	0.29	1.15
	Grand Total	62243	1715	726562				503.84	554.61	3.23

The revenue from energy sales for the FY 2011-12 with existing tariff works out to Rs. 554.61 crore as against Rs.559.59 crore projected by ED-DD.

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5.24 REVENUE REQUIREMENT

The summary of the revenue requirement of the ED-DD for the year 2011-12 as analyzed in the preceding paragraphs is given in the Table 5.30 below:

Table 5.30: Revenue requirement and (Gap)/Surplus for FY 2011-12

Sl. No.	Particulars	Ref. to para	FY 2011-12	
			Projected by ED-DD	Approved by the Commission
1	Power purchase cost	5.9.2	623.34	556.89
2	Employee cost	5.13.1	5.97	5.18
3	Administration and general expenses	5.13.3	2.20	2.17
4	R&M expenses	5.13.2	6.26	6.26
5	Depreciation	5.14	16.34	1.95
6	Interest & Finance charges	5.15	2.33	0
7	Interest on working capital	5.16	6.51	6.01
8	Provision for bad debts	5.17	6.61	0.40
9	Return on Equity	5.18	1.37	0
10	Total ARR (8+9)		670.83	578.86
11	Less: Non Tariff income	5.19	9.41	9.41
12	Net Revenue Requirement		661.42	569.45
13	Revenue from existing tariff	5.23	559.58	554.61
14	Gap for FY 2011-12		101.84	14.84
15	Total Sales (MU)	5.5	1715	1715
16	Average cost (Rs./KWH)		3.86	3.32

It can be seen from the above, the revenue gap for the year 2011-12 is Rs. 14.84 crore against the gap of Rs. 101.84 crore projected by the ED-DD in the ARR & Average cost of supply works out as Rs. 3.32 per kWh.

6. Power Purchase Cost Adjustment

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

$$\text{PPCA (Rs./kWh)} = \frac{\text{QPP (RPP}_2 - \text{RPP}_1)}{\text{QPP} \times (1 - \text{L}) - \text{PSE}}$$

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.

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- (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.

7. Compliance of Directives

7.1 COMPLIANCE OF DIRECTIVES ISSUED IN TARIFF ORDER FOR FY 2010-11

The Commission, in its Tariff Order dated 1st November, 2010 had issued various directives to ED-DD. The ED-DD has submitted a compliance report on the directives issued along with the current petition for approval of ARR and determination of tariff for FY 2011-12.

The Commission's comments on the status of compliance of the directives by the ED-DD are given below:

Directive 1: Annual Statement of Accounts

The Electricity Department, Daman & Diu (ED-DD) has repeatedly asserted while giving replies to the objections raised on the ARR and Tariff Petition that ED-DD is a part of the Administration of Union Territory of Daman & Diu and it is not required to maintain audited books of accounts. The electricity business has now come under Regulation under the provisions of Electricity Act, 2003. The Electricity Department of Daman & Diu has not prepared the annual accounts of the department separately though it is required to prepare the annual accounts for the regulated electricity business. The prudence of the expenses could be checked only with reference to the audited accounts in the past and realistic projections in the ARR.

The ED-DD is directed to prepare 'Accounting Statement' which includes balance sheet, profit and loss account, report of the auditors, cost records etc along with supporting statements / schedules as per standard accepted practice and have them audited as required.

Directive 2: Preparation of Asset and Depreciation Registers

The ED-DD has mentioned that they maintain the Asset Register internally and update the same during the year and submits this to the Administration of UT of Daman & Diu. The ED-DD has submitted one such statement for two years i.e 2008-09 and 2009-10 with broad classification of assets. On a perusal of this statement it is observed the assets that were completely depreciated and withdrawn after serving their useful life are not indicated. The ED-DD has clarified that in the absence of

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annual accounts being maintained in the Department, the age and other details of withdrawn / fully depreciated assets are not available.

The ED-DD is directed to arrange for the preparation of assets and depreciation registers, function wise and asset classification wise. Till such time the above registers are prepared and got audited the Commission cannot consider the gross fixed assets and accumulated depreciation over the years to arrive at the capital base and allow the return thereon as per JERC (Terms and Conditions of Determination of Tariff) Regulations, 2009.

ED-DD's response for Directives 1 and 2 above

Most of the SERCs (State Electricity Regulatory Commissions) consider previous year annual audited accounts for approval of ARR at the time of true up for approving the actual cost. Keeping the above directives and methodology practiced in other States, ED-DD had invited bids for the preparation of Balance sheet exercise for which various bids were received by the ED-DD, however, M/S Shyam Padia & Co., has been selected for the preparation of balance sheet. The acceptance letter for the aforesaid work by the M/S Shyam Padia & Co., is enclosed in Annexure-2 (Annexure 7.2 in this order).

Commission's view

Action taken by the ED-DD to get the statement of accounts prepared and also the asset and depreciation register is noted. The ED-DD shall submit the audited statement of accounts and depreciation register along with the Tariff Petition for FY 2012-13.

Directive 3: Management Information System (MIS)

The ED-DD has not maintained proper data in respect of sales, revenue and revenue expenses as also the category wise / slab wise number of consumers, connected load / demand etc. for proper analysis of the past data based on actual and estimate of proper projections for consideration in the ARR and Tariff Petition. The Department consistently submitted that the sub category wise information is not available in the existing MIS maintained by the petitioner and the same would be provided in the filing of ensuing years.

The ED-DD is directed to take steps to build credible and accurate data base and management information system to meet the requirements for filing ARR & Tariff

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Petition as per regulatory requirement and also suit the Multi Year Tariff principles which the Commission may consider at the appropriate time under Regulation 11 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009. The formats software and hardware may synchronize with the Regulatory Information and Management System (RIMS) circulated by Central Electricity Regulatory Commission (CERC).

The ED-DD should get a study conducted on computerized data base, on electronic media and shall give a proposal as to how the department proposes to achieve this.

ED-DD's response

The ED-DD has taken assistance of NIC (National Information Commission) of Daman to implement software named RACE (Revenue Administration through Computerized Energy System). The software is being tested and would be implemented soon. The software would help in maintaining the database to meet the requirements for filing ARR and Tariff petition as per regulatory requirement.

Commission's view

Action taken is noted. Present status of implementation of the software shall be reported to the Commission by March, 2012.

Directive 4: Collection and Billing Efficiency

In Format-2 wherein the details AT&C losses are given the collection efficiency is at 93.59%. This collection efficiency is out of the billing efficiency of 88%. The overall collection efficiency is only 82% when viewed at the energy available for sale.

The ED-DD is directed to initiate measures to improve the collection efficiency to hundred percent in a time bound manner. They shall submit the action plan in respect of billing / collection by 31-12-2010.

ED-DD's response

Considering the above directive, ED-DD has planned to take stringent action by disconnecting the connection of defaulters in case of non-payment of energy bills. Along with this, ED-DD has also planned to introduce "pre-paid meters" for domestic and commercial consumers to make collection of payments hassle free. As current billing is done on bi-monthly basis, ED-DD has taken necessary steps to bill the

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domestic consumers on monthly basis by installing new meters which can be read remotely and outsourced some areas for meter reading for improving collection efficiency. Further, ED-DD would like to highlight that the collection efficiency would also improve as proposed MIS software (RACE) would provide an easy gateway for payment through various options which will be available for consumers.

Commission's view

Compliance is noted.

Directive 5: Collection of Arrears

ED-DD is having substantial amount of arrears from various categories of consumers. The amount of arrears outstanding for collection as on 31/03/2010 is Rs. 36.67 crore and this is a substantial amount for a small utility.

There are 381 consumers from whom arrears are about Rs. 29.13 crore as on 31/03/2010 which includes 43 HT consumers who owe Rs. 14.75 crore towards arrears.

The ED-DD is directed to provide age wise analysis before the next ARR and initiate measures to liquidate the arrears and submit an action plan in this respect by 31st December, 2011.

ED-DD's Response

As most of the arrears are from Government agencies, ED-DD has initiated recovery through fund transfer from fund allocated to the Government body. This has been implemented and many payments have been recovered through this means. In case of other arrears ED-DD has planned to take stringent action as per the previous clause.

Commission's view

Action taken is noted. The ED-DD shall report the current status of arrears from Government Departments and others by December, 2011 and alongwith steps taken to recover the balance arrears.

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Directive 6: Pilferage of Energy

The ED-DD has furnished the T&D losses at 11.25% during 2009-10 and projected the losses at 11% for 2010-11. The Department has not segregated the losses into technical and commercial losses. It is feasible that the losses projected may include commercial losses on account of pilferage.

Pilferage of energy may be by illegal tapings from electrical lines, tampering meters etc. The Commission feels that there is need to launch an extensive drive to revoke illegal connections, if any, check meter tampering and keep constant vigil so that corrective measures could be taken to reduce the AT & C losses. Requisite action may be taken as per the provisions under sections 135 and 138 of Electricity Act, 2003.

The Commission directs that an energy audit through an accredited agency be carried out in order to find out the actual losses and remedial measures required to be taken as a result there of and submit an action plan including scope of work for energy audit shall be submitted by 31st December 2010.

ED-DD's Response

The ED-DD has issued a work order to Energy Auditors for conduction the energy audit of sub – stations. ED-DD has invited bids for the energy audit exercise and various bids were received by the ED-DD, however M/s Cospower Engineering has been selected for the energy audit.

Further, the ED-DD has taken following key measures for reduction of distribution and commercial losses:

- To minimize commercial losses through replacement of defective / dead stop/ tampered meters and intensive checking of consumers to detect pilferage.
- To penalize employees conniving with the consumers.
- To initiate intensive checking of theft prone and industrial area, as identified by the proposed Energy Accounting measures by the Energy Auditor.

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Commission's view:

Action taken is noted. All these efforts shall result in reduction of losses and segregation of technical and commercial losses. The current status of the study shall be reported by December, 2011.

Directive 7: Metering of Consumer Installations / Replacement of Non-Functional / Defective Meters

It is observed that LIG category of consumers are not metered and the consumption of the consumers with 2 lamps is charged on flat rate basis.

Under section 55 (1) of Electricity Act, 2003, no licensee shall supply electricity after expiry of two years from the appointed date except through installation of correct meter in accordance with the regulation to be made in this behalf by the Authority. Accordingly metering is required to be done in line with Central Electricity Authority (installations and operation of meters) Regulations, 2006 to all consumers.

Electricity Department is directed to provide meters to all such consumers such as LIG consumer with 2 lamps etc., which are not metered for supply of electricity at present.

The present status of metering and action plan to meter the un-metered services, replacement of defective electromagnetic meters of the high value consumers etc., shall be submitted to the Commission before 31st March, 2011.

ED-DD's response

The ED-DD has provided all the LIG consumers with meters and for non-functional / defective meters have been replaced according to the regulations.

Commission's view

The action taken is noted. The ED-DD is directed to furnish the details of number of LIG houses provided with meters, the defective and non-functional meters replaced etc., by December, 2011.

Directive 8: Augmentation of Transmission and Distribution System

ED-DD stated that a number of applications are pending from prospective industrial consumers which come under HT industrial category and the department is not able to extend supply to these consumers due to inadequacy of transmission and distribution network to serve the additional consumers.

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It is necessary for the Department to augment the transmission and distribution system to meet the demand from new consumers to improve the quality of supply to existing consumers and reduce the losses.

The ED-DD is directed to conduct a Load flow study for optimization of the system and to prepare detailed project report for augmentation of the transmission and distribution system with cost benefit analysis, phasing of expenditure etc., and submit the action plan by 31st December, 2010.

ED-DD's response

Keeping in view of the above demand and required augmentation of the Transmission and Distribution System, ED-DD has appointed M/S Techlabs (Trident Techlabs Pvt. Ltd) for preparing a report of augmentation of Transmission and Distribution System till 2017 under which, the steps are to be formulated for preparation of scheme based on the report. The initial field survey has been done and process of validation of the report is being conducted. The acceptance letter for the aforesaid work by the M/S Techlabs (Trident Techlabs Pvt. Ltd) has been enclosed as Annexure-3 (Annexure 7.3 in this order).

Commission's view

Action taken is noted. The present status of the study being conducted by M/s Techlabs and the time schedule for submission of the report shall be reported to the Commission by December, 2011. Pending augmentation of the transmission and distribution system, ED-DD shall ensure to release supply to new consumers from the existing system. The Commission feels that no consumer shall be denied supply for want transformer capacity etc., particularly small industrial consumers.

Directive 9: Contribution of Consumers for Capital Investment

It is claimed by some of the consumers that the consumers are contributing for part of capital investment for providing electricity to their installations.

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

The ED-DD is directed to furnish the details of contribution being collected from consumers. The amounts collected from the consumers towards capital investment shall be brought out in the accounts. The depreciation and Return on Equity / Capital

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Base should not be claimed on the amount contributed by the consumers towards capital investment.

ED-DD's response

There are no assets, which have been contributed by the consumers, which have been considered under the asset class of the electricity department.

Commission's view

ED-DD response is noted.

Directive 10: Power Procurement

Daman & Diu does not have its own generation. It entirely depends on the allocation of power (firm and infirm) from central generating stations. During the last two years, particularly during 2008-09 the Department had to resort to procurement of power in the market and also draw power from the Western Regional system under UI at a high cost causing undue burden on the consumers by way of surcharge to recover the additional cost for power purchase.

Since the allocation of power from central generating stations is not a firm allocation, there may be exigencies of not getting adequate power to meet the demand resulting in load shedding and procurement of power at high cost to maintain continuous supply to consumers.

It is directed that ED-DD should get into long term power procurement arrangements so that uncertainties on account of their dependence on infirm power is reduced.

ED-DD's response

Keeping in view of the above power shortage, ED-DD has signed long term PPA with the following suppliers:

1. 21 MW from Ratnagiri Gas Power Plant, Dhabol
2. M/S NTPC, Mouda
3. M/S NTPC, VSTPS- IV
4. M/S NTPC, LARA
5. M/S NTPC, Khagone
6. M/S NSPCIL

Details of the PPA would be provided to the Commission soon.

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Commission's view

ED-DD response is noted.

Directive 11: Consumers Bills

The Commission feels under the present circumstances there is need of reformatting the electricity bills served on the consumers to accommodate data and information as considered essential by the utility / Commission. A draft format be prepared and submitted to the Commission by 31st December, 2011 for approval.

ED-DD's response

Keeping in view the above directive, ED-DD has also considered the format being followed by other states during the finalization of the draft consumer bills. ED-DD has revised the HT consumer bill format and the same format has been proposed for all the consumers.

Commission's view

Action taken in regard to HT billing is noted. Similar action shall be taken for LT billing.

Directive 12: Demand Side Management and Energy Conservation

Demand side management and energy conservation are important areas, which should be in focus with ED-DD, as to reduce consumption of electricity particularly, in the context of peak load. Therefore, the Commission directs that a study be conducted by ED-DD through an accredited agency for efficient use of electricity under demand side management and energy conservation means.

An action plan on the above including scope of the study shall be submitted to the Commission by 31st December, 2010.

ED-DD's response

ED-DD is in the process of finalization of scope of work and the same shall be shared with the Commission.

Commission's view

Present status shall be reported by December, 2011.

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Directive 13: Power Factor Improvement Incentives

Presently for power factor improvement a penalty is being levied for causing poor power factor. As per Commission's Regulation on Supply Code a licensee is to incentivise these consumers who help to improve the power factor. ED-DD shall examine the issue and put up a proposal for providing incentive for those consumers who help improving power factor beyond 90% as per the Commission Regulations. The above proposal shall be submitted by 31st December, 2010.

ED-DD's response

ED-DD imposes penalty to the HT consumers who maintain poor power factor. The Commission in the Tariff order for FY 2010-11 has highlighted that under the regulations formulated for Supply Code a licensee is to incentivize the consumers who assist in improving power factor. The Commission directed ED-DD to adhere to the Supply Code as per the Regulation.

ED-DD would like to bring into the notice of the Commission that ED-DD is taking assistance from NIC (National Information Commission) of Daman to implement software named RACE (Revenue Administration through Computerized Energy System). In view of this, ED-DD has planned to introduce incentives for those consumers who will maintain power factor above 0.95 / 0.98 as well as reduction of penalty only after the implementation RACE. ED-DD would be in a position to analyse the details of power factor of all the HT consumers only after the implementation of new system. Therefore, the detailed proposal will be supplied to the Commission along with the ARR for FY 2012-13.

Commission's view

Action taken is noted, The Commission directs the ED-DD to submit the detailed proposal with the ARR & Tariff Petition for the year FY 2012-13.

8. Tariff Principles, Tariff Proposed by ED-DD and Approved by the Commission

8.1 INTRODUCTION: TARIFF PRINCIPLES

8.1.1 In determining the annual revenue requirement of ED-DD and the retail supply tariff for the year 2011-12, the Commission is guided by the provisions of the Electricity Act 2003 and the JERC (Terms and Conditions for Determination of Tariff) Regulations 2009. Section 61 of the Electricity Act lays down the broad principles, which should guide the determination of retail supply tariff. These principles are that the tariff should “progressively reflect cost of supply of electricity” and also “reduce cross subsidies” within a period to be specified by the Commission. The Act lays special emphasis on safeguarding of consumer’s interest and also requires that the costs should be recovered in a reasonable manner.

The Act mandates that the tariff determination should be guided by factors, which *“encourage competition, efficiency, economical use of resources, good performance and optimum investment”*.

In determining the tariff, the Commission is guided by the principles enshrined in Section 61 of the Electricity Act, 2003, the Tariff Policy notified by the Government of India and the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009.

1.1.2 The Tariff Policy mandates that the Multi Year Tariff (MYT) framework be adopted for determination of tariff from 1st April 2006. However the Commission is not in a position to introduce MYT regime in the Union Territory of Daman and Diu mainly because of lack of requisite data in the required form for at least three consecutive years. The present MIS and regulatory reports of ED-DD are totally inadequate for such an exercise. Under these circumstances, it would not be practicable to implement the MYT framework. The Commission will introduce MYT when the requisite data for minimum appropriate period is available.

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

- 1. The State Governments can give subsidy to the extent they consider appropriate as per the provisions of the section 65 of the Act. Direct subsidy is a better way to support the poorer categories of the consumers than the mechanism of cross-subsidizing the tariff across the board. Subsidies should be targeted effectively and in transparent manner.*
- 2. "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.*
- 3. For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the SERC would notify the roadmap, within six months with a target that latest by the end of the year 2010-11 tariffs are within $\pm 20\%$ of the average cost of supply. The road map would have intermediate milestones, based on the approach of a gradual reduction in cross subsidy.*

For example, if the average cost of service is Rs.3 per unit, at the end of year 2010-11, the tariff for the cross subsidized categories excluding those referred to in para 1 above should not be lower than Rs.2.40 per unit and that for any of the cross subsidizing categories should not go beyond Rs.3.60 per unit.

- 4. 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."*

8.1.4 The provisions of the Electricity Act, 2003, National Tariff Policy and the JERC Tariff Regulations require that there be a gradual movement towards reduction of cross subsidy. The Tariff Policy aims at bringing down cross subsidy to $\pm 20\%$ of the average cost of supply by the year 2010-11.

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Regulation 6 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 specified –

Cross subsidy:

“(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) The Commission shall determine the tariff to progressively reflect the cost of supply of electricity and also reduce cross subsidies within a reasonable period. To this purpose, in the first phase the Commission shall determine tariff so that it progressively reflects combined average unit cost of supply in accordance with National Tariff Policy. In the second phase, the Commission shall consider moving towards the category-wise cost of supply as a basis for determination of tariff.”

The above provisions of the electricity tariff policy have been followed while fixing the tariff.

8.2 TARIFF APPROVED BY THE COMMISSION

8.2.1 Net revenue requirement for the FY 2011-12 is **Rs. 569.45 crore** against the revenue of **Rs. 554.61 crore** calculated from existing tariff, thereby creating a gap of **Rs.14.84 crore**. The following are considered while arriving at category-wise tariffs approved.

- 1 The average cost of supply comes to Rs.3.32 /kwh. Keeping in view that National Tariff Policy aims at bringing down cross subsidy to $\pm 20\%$ of the average cost of supply, the average tariff of various categories have to be within Rs.2.65/kwh to Rs. 3.98/kwh, except LIG category.
- 2 The minimum rate to be charged as per para 8.1.4 of National Tariff Policy as mentioned above for category of BPL consumers has to be 50% of the average cost of supply, accordingly minimum energy charge has to be fixed at Rs.1.66 Per /kWh LIG category is having a two point connection with a connected load of

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- 2x 40 (80 watts). With the above connected load, the monthly consumption works out to about 15 kWh based on which monthly fixed amount for LIG works out to Rs. 24/ P.M.
- 3 In the scenario when the demand is far exceeding supply whether served or not, the Commission feels that the minimum charges are no longer relevant and therefore minimum charges for all the categories have been done away with.
 - 4 The Commission feels that the Ferro-metallurgical / steel melting / steel rolling / power intensive industries to remain in separate category from other general industries. Therefore the Commission does not find it as a fit case for having a common tariff between HT (A) and HT (B) categories as of present.
 - 5 The demand charges have already been reduced substantially in the last tariff order and presently also there is no reason for further reduction
 - 6 The Commission observes that due to the implementation of National Tariff Policy regarding special support through cross subsidy to BPL category, increase in the rates of BPL category (LIG) is steep. Union Territory of DD may provide subsidy if considered appropriate under the provisions of para 8.3 of National Tariff Policy.
 - 7 Commercial connections category have been renamed as Non-Domestic Category.
 - 8 As no data relating to water table has been provided, this aspect has not been taken into account while fixing the tariff for agriculture and poultry category.
 - 9 The tariff of Domestic, LIG, Non-domestic, and Agriculture categories has been revised on account of implementation of National Tariff Policy as mentioned in Para 1 above.
 - 10 The Commission feels that public lighting category should not be a cross subsidized category and therefore its tariff revised.
 - 11 To Bridge the revenue gap, marginal adjustments have been carried out in the HT- General Industrial category (A)

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- 8.2.2 The tariff rates category wise as proposed by ED-DD are given in Table 8.1 and 8.2
- 8.2.3 The approved tariff rates for supply of energy in respect of different categories of consumers are as per Table 8.3.
- 8.2.4 The terms and conditions and tariff of various categories of consumers are given as per Tariff Schedule attached.

Table 8.1: The category wise tariff existing and proposed by ED-DD

Tariff Structure Category	Existing Energy Charges (Rs./Kwh)	Proposed Energy Charges (Rs./Kwh)
LT-D/Domestic		
1 st 50 units	1.00	1.00
51 to 200 Units	1.60	1.60
201 to 400 Units	2.00	2.00
401 to 600 Units	2.25	2.40
Beyond 600 Units	2.25	2.55
LT-C/Commercial		
1 st 100 Units	2.05	2.25
Beyond 100 Units	2.70	2.90
LT-Ag/Agriculture		
Upto 10 HP per unit	0.55	0.55
Beyond 10 HP per unit	0.85	0.85
LTP Motive Power		
Upto 20 HP of Connected Load	2.50	2.75
Above 20 HP of Connected load	2.60	2.85
LT-PL/Public Lighting		
Public Lighting	1.20	1.20
HT		
HTC General		
50000 units	2.95	3.81
50000 to 5 lakh units	3.05	3.91
Beyond 5 lakh units	3.10	3.96
HTC Ferro		
First 300 units per KVA	2.05	Merged with HTC General category [tariff of HTC General category will apply]
Next 200 Units per KVA	3.05	
Above 500 units per KVA	3.55	
Temporary Supply		
Single phase supply	6.00	6.00
Three phase supply	6.00	6.00

Source: Table 31 of the petition.

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Table 8.2 : Fixed Charges & Minimum Charges, existing and proposed by ED-DD

Sl. No.	Category	Fixed charges		Minimum charges	
		Existing Rs/month or part thereof	Proposed Rs/month or part thereof	Existing Rs/month or part thereof	Proposed Rs/month or part thereof
1.	Domestic				
	First 500W or part thereof			20	20
	Every additional 500W or part thereof			15	15
	LIG(per connection)			10/connection	10/connection
2.	Commercial				
	Single phase				
	First 500W or part thereof			25	25
	For every additional 500W or part thereof			40	40
	Three phase per HP or part thereof			40	40
3.	Industrial (LT)				
(i)	Contracted load upto 20 HP				40/HP or part
(ii)	Contracted load above 20 HP up to 99 HP	Rs. 25/HP	Rs.40/HP	25/HP	40/HP or part
4.	Agriculture			8/HP	8/HP or part
5.	Public lighting	Rs.4 /Lamp	Rs.10/Lamp	4/lamp	10/lamp
6.	Temporary supply (LT)				
(a)	Single phase				
(i)	Not exceeding 3 days			25/day	25/day
(ii)	Exceeding of 3 days.			10/day	10/day
(b)	Three phase supply			35/day	35/day
7.	Industrial (HT)	Demand Charges Rs./KVA	Demand Charges Rs./KVA		
A	HT General for billing demand upto contracted demand	60	100	60	100
	For billing demand in excess of contract demand	180	300	180	300
B	HT Ferro / Steel furnace/rerolling for billing demand upto contracted demand	450	*	450	*
	For billing demand in excess of contracted demand	900	*	900	*

Source: Table 31 of the petition and Tariff Order of ED-DD for FY 2010-11.

* Merged with HTC General category [tariff of HTC General category will apply]

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The Commission approves the following tariff for the FY 2011-12 based on the approved ARR

Table 8.3 : Category wise tariff approved by the Commission for FY 2011-12

Sl. No.	Category / sub category	Energy charges (Ps / KWH)	Fixed Charges / Demand charges (Rs/HP/Month) / (Rs./kVA/Month) Or part thereof / Or part thereof
1	LT-D/Domestic		
	1 to 50 units	160	
	51 to 200 Units	225	
	201 to 400 Units	300	
	401 and above	325	
	Low Income Group (BPL)		Rs 24/connection/Month
2	LT-C/ Non Domestic		
	1 to 100 Units	225	
	101 and above Units	325	
3	LT-Ag/Agriculture		
(a)	Upto 10 HP per unit	250	
(b)	Beyond 10 HP per unit	265	
4	LT Industrial (Motive Power) Including Public Water Work		
	Upto 20 HP of Connected Load	250	
	Above 20 HP of Connected load	260	Rs 25/HP or part thereof
5	Public lighting	332	
(A)	HT		
	HT General Industrial / Motive Power 11KV or 66KV having CMD above 100KVA		
	1 to 50000 units	295	
	50001 to 500000	310	Rs. 60/KVA or part thereof
	500001 and above	315	
	Penal Charges for exceeding contracted demand	800	Rs 180/KVA or part thereof
(B)	HTC Ferro Metallurgical/ Steel Melting / Rolling /Power intensive		
	First 300 units/KVA	205	Rs 450/KVA or part thereof
	301-500 Units/ KVA	305	
	Above 500 units per KVA	355	
	Penalty charges for exceeding contract demand	800	Rs 900/KVA or part thereof

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CONCLUSION

Having considered the petition No.33/2011 of Electricity Department, Daman & Diu for approval of Annual Revenue Requirement (ARR) and determination of retail tariffs for supply of energy, the Commission approves the Annual Revenue Requirement (ARR) and the Retail Tariff Schedule for ED-DD, as given below:

- 1.0 The break-up of the Annual Revenue Requirement approved for ED-DD for the year 2011-12 is given below.

(Rs. crores)

Sl. No.	Details	Year 2011-12
1	Cost of power purchase	556.89
2	Employee cost	5.18
3	A&G expenses	2.17
4	R&M expenses	6.26
5	Depreciation	1.95
6	Interest and finance charges	0.00
7	Interest on working capital	6.01
8	Provision for bad debts	0.40
9	Return on Equity	0.00
10	Total Revenue Requirement	578.86
11	Less: Non Tariff income	9.41
12	Net revenue requirement	569.45

- a. The approved retail tariff for supply of energy and terms and conditions are given in the Tariff Schedule appended as Appendix 1 to this Order..
- b. The order shall come into force from **1st June, 2011 and** shall remain effective till 31st March, 2012.
- c. The existing Tariff (Table 8.1& 8.2), approved Tariff (Table 8.3) and other charges along with contents of para **8.2.1** above shall be published in News Papers as per Regulation 41(1) of JERC (Terms and Conditions for Determination of Tariff) Regulation 2009.

sd/-
(R K Sharma)
Member

Place: Gurgaon

Date: 3rd October, 2011

sd/-
(Dr. V K Garg)
Chairman

TARIFF SCHEDULE

General Terms and Conditions:

- 1 The tariffs are exclusive of electricity duty, taxes and other charges levied by the Government or other competent authority from time to time which are payable by the consumers in addition to the charges levied as per the tariffs.
- 2 Unless otherwise agreed to these tariffs for power supply are applicable for supply at one point only.
- 3 Supply to consumers having contracted load between 100 KVA to 1500 KVA will be at 11 KV and for more than 1500 KVA at 66 KV. The consumer who requires load more than 25000 KVA load, the supply Voltage shall be at 220 KV level.
- 4 In case, any dispute arises about the applicability of any tariff for any particular class or service or as to the interpretation of any clause of these tariffs, the decision of the Commission shall be final and binding.
- 5 The department shall not permit installation of contracted load of 3 HP and above unless they are provided with the capacitors of adequate rating to comply with power factor conditions. The consumer has to provide appropriate capacitors for these installations presently running on without capacitors.
- 6 If energy supplied for a specific purpose under a particular tariff is used for a different purpose, not contemplated in the contract for supply and / or for which higher tariff is applicable, it will be deemed as misuse and energy consumption bills already rendered for the service shall be revised by applying the appropriate higher tariffs from the date of connection unless convincing reasons are produced thereof for adopting a different period. The imposition of this higher tariff shall not relieve the consumer from any penalties as per the law.
- 7 If the consumer fails to pay the energy bill presented to him within the stipulated period, the Department shall have the right to disconnect the supply as per provision of the Supply code.

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- 8 Fixed charges and demand charges, wherever applicable, will be charged on prorata basis from the date of release of connection.
- 9 Demand charges and fixed charges, wherever applicable, will be double as and when bi-monthly billing is carried out, Similarly slabs of energy consumption will also be considered accordingly in case of bi-monthly billing.
- 10 In case of exceeding the contract demand for other than technical reasons, or adding additional load by the high-tension consumers and sanctioned load by the low-tension consumers by adding additional load, the penalty charges shall be charged in the regular bills itself.
- 11 If the entire energy consumption has been recorded in the meter, the quantum of energy bearing the same ratio of the total energy recorded in the meter as excess load or the unauthorized additional / extension of load bears to the total connected load as detected at the time of checking shall be charged at penal rate as per the provisions of Electricity Supply Code Regulations, 2010 issued by the Commission. Payment of penal charges for usage in excess of contract demand / load for any billing period does not entitle the consumer to draw in excess of contract demand / load as a matter of right.
- 12 Unless specifically stated to the contrary, the figures of energy charges related to paise per unit (kWh) charge for energy consumed during the month.
- 13 Delayed payment charges shall be applicable to all category of consumers. Delayed payment charges of 2% per month (2% of the delayed Payment charges shall be charged on all arrears of the bill). In case of permanent disconnection, delayed payment charges will be charged only upto the month of permanent disconnection.
- 14 Power Purchase Cost Adjustment (PPCA) shall be applicable to all categories of consumers except LIG category – BPL and Agriculture & Poultry and will be charged over and above the tariffs on the basis of PPCA formula specified, by the Commission.

The detailed tariff schedule is outlined below:

I. (A) DOMESTIC CATEGORY

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Applicable to private houses, hostels, hospitals run on Noncommercial lines, Charitable Educational and Religious Institutions for lights, Fans, Radios, domestic heating and other household appliances including water pumps up to 2 HP.

Energy Charges

Usage (Units/Month)	Tariff (Ps./Unit)
First 50	160
51 – 200	225
201 – 400	300
401 and above	325

(B) Power Supply to Low Income Group (Up to 2x40 W bulbs only)

Power supply to low income group connections will be charged at **Rs.24 per service connection per month**. For any unauthorized increase in the load beyond 2x40 watts, penal charges at the rate of Rs. 24 per month per point will be levied and the installation will be liable for disconnection.

II. NON-DOMESTIC CATEGORY

This includes all categories which are not covered by other tariff categories mentioned below:

Domestic Category, Power Supply to low Income Group, Industrial LT, HT/EHT Category (A&B), Agriculture and Poultry, Public Lighting.

Applicable for Shops, Offices, Restaurants, Bus Stations, Photo Studios, Laundries, Cinema Theatres, Industrial Lighting, clubs and other Commercial installations.

(i) Energy Charges

Usage (Units/Month)	Tariff (Ps./Unit)
1-100 units	225
101 units and above	325

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III. LT - INDUSTRIAL CATEGORY INCLUDING PUBLIC WATER WORKS

Applicable to all Low Tension Industrial Motive Power Connections including water works/pumps up to 99 HP.

(i) Energy Charges

Usage (Units/Month)	Tariff(Ps./Unit)
Upto 20 HP	250
For loads above 20 HP	260

(ii) Fixed Charges

Contract (HP)	Tariff (Rs./HP/month) part thereof
Up to 20 HP	Nil
For loads above 20 HP	Rs. 25 Per HP or part thereof

(iii) Power Factor Charges

Any motive power connection above 3 HP running without proper capacitors installed so as to maintain power factor 0.9 as per the Commission regulation 11/2010 shall be charged extra 2.5% of units consumed as additional power factor charges. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. In case of abnormal power factor decrease ,the department will give the consumer 15 days time to install appropriate capacitors and maintain the standard power factor. If the consumer is not able to rectify the problem within the notice time, the connection will be liable for disconnection. ED-DNH reserves the right to install a suitable capacitor at its own cost and recover the cost thereof as arrears of energy charges.

IV. HT/EHT CATEGORY

A. High Tension Consumer

Applicable to all Industrial/Motive power consumers drawing through 11 kV and 66 kV systems having contract demand of 100 kVA and above.

(i) Demand Charges

Demand (KVA)	Charges (Rs./KVA/month) part thereof
For billing demand up to contract demand	Rs. 60 per kVA of billing demand or part thereof
For billing demand in excess of contract demand	Rs. 180 per kVA of billing demand or part thereof

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(ii) Energy Charges

Usage (Units/Month)	Tariff (Ps./Unit)/per month
1 - 50,000 units	295
50001 – 500000 Units	310
500001 and above	315

(iii) Penalty Charges

Penalty charges @800Ps/unit/per month

- i. Penalty charges will be levied on those units which are drawn beyond the contract demand. These units will be worked out on pro-rata basis correlating the total consumption of the month with billing demand.
- ii. If industries are over drawing power by more than 20% of the contract demand ,then their connections will be disconnected immediately.

(iv) Power Factor Charges

If the power factor of the consumer is less than 0.90 for every 0.01 of the power factor decrease, 0.5% of the total units consumed will be charged as extra at the rate of 410 Ps./unit. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. In case of abnormal power factor decrease, the department will give the consumer 15 days time to install appropriate capacitors and maintain the standard power factor. If the consumer is not able to rectify the problem within the notice time, the connection will be liable for disconnection.

(v) Billing Demand

Billing demand will be the highest among the following:

- (a) 100 kVA
- (b) 75% of the Contract demand
- (c) Actual Demand Established

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B. HT Industrial (Ferro Metallurgical/ Steel Melting/ Steel Rerolling Power Intensive)

(i) Demand Charges

Demand (kVA)	Charges (Rs./KVA/month) part thereof
For billing demand up to contract demand	Rs. 450 per kVA of billing demand or part thereof
For billing demand in excess of contact demand	Rs. 900 per kVA of billing demand or part thereof

(ii) Energy Charges

Usage	Tariff (Ps./Unit)
First 300 units / kVA	205
Next 200 units / kVA	305
Above 500 units / kVA and above	355

(iii) Penalty Charges

Penalty charges @ 800Ps/unit/ per month

- Penalty charges will be levied on those units which are drawn beyond the contract demand. These units will be worked out on pro – rata basis correlating the total consumption of the month with billing demand.
- If Industries are drawing power by more than 20% of the contract demand ,then their connections will be disconnected immediately.

(iv) Power Factor Charges

If the power factor of the consumer is less than 0.90 for every 0.01 of the power factor decrease, 0.5% of the total units consumed will be charged as extra at the rate of 410 ps/unit. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. In case of abnormal power factor decrease the department will give the consumer 15 days time to install appropriate capacitors and maintain the standard power factor. If the consumer is not able to rectify the problem within the notice time, the connection will be liable for disconnection.

(v) Billing Demand

Billing Demand will be the highest among the following

- 100 KVA
- 75% of the Contract Demand

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(c) Actual Demand Established

V. AGRICULTURE CATEGORY

Agriculture or poultry loads up to 99 HP connected load will be considered in this category.

(i) Energy Charges

Usage	Tariff (Ps./Unit)
For connected load up to 10 HP	250
Beyond 10 HP and upto 99 HP connected load	265

VI. PUBLIC LIGHTING CATEGORY

Particulars	Rate
Energy Charges	332 ps./unit

VII. TEMPORARY SUPPLY

Tariff for Temporary Connection shall be Fixed / Demand charges (if any) plus energy charges (for relevant slab if any) under corresponding permanent supply category plus 50% of both.

For multi-activity pursuit, applicable tariff for temporary connection shall be with reference to that of non-domestic category for permanent supply.

The Temporary Tariffs are applicable for temporary period of supply up to 1 (one) month, which can be extended for another period of supply up to maximum period of 2 years.

VIII. SCHEDULE OF OTHER CHARGES

(i) Meter Rent Charges

Meter Type	Tariff
Single Phase Meter	Rs. 10 per month or part thereof
Three Phase Meter	Rs. 25 per month or part thereof
LT Meter with MD indicator	Rs. 200 per month or part thereof
Tri-vector Meter	Rs. 500 per month or part thereof

Note: The type of meters to be installed in consumer premises will be decided by the department. Generally the consumers having connected load above 50 HP will be provided with L.T.M.D. meters.

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(ii) Reconnection Charges

Connection Type	Tariff
Single Phase LT	Rs 50
Three Phase LT	Rs 100
HT Consumers.	Rs 1000

(iii) Service Connection Charges

Connection Type	Tariff
Single Phase LT	Rs 250
Three Phase LT	Rs 1000
HT(First 500 KVA)	Rs 10000
HT(Beyond 500 KVA)	Rs 1000per 100 KVA or part thereof

(iv) Extra Length Charge

Connection Type	Tariff
Single Phase	Rs 25/ meter
Three Phase	Rs 50/ meter
Extra length Chargeable will be beyond permissible 30 Meters free length from existing network for new connection for all categories except Agriculture. Free length in respect of New Agriculture consumer is 300 Meters	

(v) Cost of HT Connection

Entire Cost of setting up HT connection would be borne by the consumer and the agreement period would be two years for the category. 15% supervision charges shall be recovered by ED-DNH.

(vi) Service connection charges for- Under Ground Lines

(a) Single phase consumers

- (i) Area outside municipal limit - Full cost plus 15% supervision charges
- (ii) Area within municipal limit - Rs. 150/- plus Rs. 40/- per meter beyond 30 meters

(b) Three phase consumers:

- (i) Area outside municipal limit - Full cost plus 15% supervision charges

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- (ii) Area within municipal limit - Rs. 550/- plus Rs. 60/- per meter beyond 30 meters.
- (c) In case of all the connections (both industrial and non-industrial) U/G service cable and metering system approved by the department will have to be provided by the consumer at his own cost.

(vii) Testing Fee for various Metering Equipments

S. No	Types of Metering Equipment	Fee Per Unit (in Rs.)
1	1 – Ø Single Phase	100
2	3 – Ø Single Phase	300
3	3 – Ø Single Phase Tri-vector Meter (0.5 Class) Industrial LT Consumer	500
4	3 – Ø Three Phase Tri-vector Meter (0.5 Class) 11 KV HT Consumer	500
5	Three Phase Tri-Vector Meter (0.2 Class) 66 KV EHT Consumers	1000
6	Combined CTPT Unit for 11 Kv Consumer	500
7	66 KV CT / PT Unit	500
8	Three Phase CT Block	300
9	CT Coil	100

(viii) Fees (Non- refundable) for submission of Test Report of wiring Completion

Sl. No.	Types of Connection	Fee Per Test Report (in Rs.)
1	1 – Ø Single Phase Lighting / Domestic	10
2	3 – Ø Lighting / Domestic	25
3	1 – Ø Single Phase Lighting / Non Domestic	50
4	3 – Ø Three Phase Lighting /Non Domestic	100
5	Three Phase LT Industries	250
6	Single phase / Three phase Agriculture / Street light / Public Lighting & others.	50
7	HT Industries up to 500 KVA	1000
8	HT Industries up to 2500 KVA	5000
9	HT Industries above 2500 KVA	10000

Annexures

Written objections received in response to public notice on the ARR and the Tariff petition.

Objector 1: Shri Lalubhai B. Patel, Member of Parliament, Lok Sabha, Daman and Diu (Union Territory)

Objections

The objector requested,

- 1) Not to increase domestic consumers tariff from Rs. 2.25/- per unit to Rs. 2.55/- per unit by creating of new slab for consumption of above 600 units.
- 2) Not to increase in tariff for commercial and industrial consumers, and
- 3) Not to merge of HT ferro with HT general and not to reduce fixed charges for HT ferro consumers from Rs. 450 / kVA to Rs.100 / kVA to avoid loss of revenue to the department. He also mentioned that most of the states in India do not allow these industries to be set up, but in Daman they are being allowed under very strict conditions.

Response of ED-DD

ED-DD submitted that,

- 1) The increase in domestic consumer tariff is in line with the National Tariff Policy, where the tariff is set around $\pm 20\%$ of cost of supply. Therefore, to cater to the consumers' need and quality of supply of power, the ED-DD has proposed marginal increase in the tariff.
- 2) Increase in tariff for commercial and industrial consumers is mainly due to increase in power purchase cost and increase in cost of supply.
- 3) ED-DD cannot discriminate the consumers. All industrial consumers shall come under the same tariff slab. HT ferro, being an industrial consumer, shall come under HT general on par with any other industry in the State.

Commission's view

The objections raised on increase in tariff for domestic, commercial and LT industry consumers and merging HT consumers as one category and response of ED-DD are noted. The Commission has examined the relevant factors and taken an appropriate decision.

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Objector 2: President, Daman Industries Association, Somnath, Daman Objections

The objector submitted that so far as LT-C commercial is concerned, there is proposal to increase tariff by 20 Paise on present tariff (existing tariff being Rs. 2.05/- and Rs. 2.70/- proposed to be hiked to Rs. 2.25/- and Rs. 2.90/- respectively. Similarly, in LTP Motive Power, the increase proposed is 25 Paise (from existing Rs. 2.50/- and Rs. 2.60/- to Rs. 2.75/- and Rs. 2.85/- respectively and increase in fixed charges by Rs. 15/- per HP from existing Rs. 25/- per HP to 40/- per HP). As regards high tension supply, proposal to increase in HTC – General is 86 paise i.e from Rs. 2.95/-, Rs. 3.05/- and Rs. 3.10/- to Rs. 3.81/-, Rs. 3.91/- and Rs. 3.96/- respectively and also increase in fixed charges by Rs. 40/- per KVA i.e. from 60/- per KVA to 100/- per KVA. The objector requested not to raise the tariff as well as fixed charges and also mentioned that proposed increases are wholly arbitrary, illegal and unjustified.

Response of ED-DD

The ED-DD submitted that the major reason for proposed tariff increase for FY 2011-12 is due to the increase in power purchase cost because of the following reasons:

1. The requirement of power in the UT varies from month to month, whereas the procurement or commitment to purchase is for the entire year. This results in surplus and deficits when the demand is less or more than the scheduled energy. The ED-DD endeavors to sell surplus power in certain months to the outside state sale to avoid impact of tariff increase for the consumers of the State. Therefore, there is increase in the quantum of purchase, both because of increase in internal sales and external sales (where both of them to an extent are linked).
2. Cost of available power to meet the growing demand has increased in the region especially in HT category. In order to maintain adequate supply to various categories of consumers, it was necessary for ED-DD to procure such high cost power.

Therefore, the increase in tariff has been proposed in view of the estimated increase in costs of the ED-DD in the recent years. ED-DD wishes to gradually move towards the recommendations of the National Tariff Policy so that the tariff in the UT of Daman and Diu is in the range of 80% to 120% of the cost of supply. Further, ED-DD highlighted that the tariff applicable to the industrial consumers in the state is far below the level of 100% of the cost of supply.

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Commission's view

The power purchase cost which contributes to more than 90% and other expenses have been scrutinized by the Commission and the revenue gap has been reduced considerably and the Commission has accordingly revised the tariff to meet the gap.

Objections / suggestions raised during public hearing on 19/07/2011 at Daman

Objector 1: Shri Ramesh Kundani, Polycab Industries, Daman

Objections

- Opposed the proposed increase in tariff for industrial consumers.
- Mentioned that present tariff itself is very high and power being supplied to the consumer at present is not of good quality.
- Mentioned that power purchase cost is very high.
- Mentioned that for industrial consumers the cost would increase if the tariff is increased, this would adversely affect the industries in Daman.

Response of ED-DD

Cost of available power to meet the growing demand (especially in HT category) has increased in the region. In order to maintain adequate supply to various categories of consumers, it is necessary for ED-DD to procure such high cost power.

Objector 2: Shri B. P. Gaur, Jai Corporation Industries, Daman

Objections

- Mentioned that the present condition of industries in Daman is bad and banks have also increased the interest rates. This is causing difficulties to the industries.
- Requested the Commission that if the tariffs are to be changed it should be in the favour of industries.
- Mentioned that many people have already purchased the land and set the machinery for small scale industries and if the power tariff is increased, it will affect the growth of industries in Daman.
- Mentioned that the Commission should facilitate low cost power supply to increase the industrial growth.
- Suggested that R&M cost can be reduced to improve tariff.
- Requested to release power immediately to LT Consumers.

Response of ED-DD

According to the previous Administrative Policy, no additional power connection was allowed. Recently the policy has been amended and power connections are now

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provided to the applicants as per their requirement. The pending applications are being looked into and more connections would be allocated.

Objector 3: Shri Lalubhai Patel, Hon'ble Member of Parliament, Daman and Diu

Objections

- Requested the Commission not to increase the power tariff as it is the only benefit to the industries to flourish in Daman and if the rates are increased the industries will go to other places.
- Suggested that the price rise will not only affect the Industries & Hotels but also to the common/domestic person.
- Mentioned that in Daman the 'Bhatti' Industries are flourishing which consumes more power. Also, Daman, being the Plastic and Textile Zone, is affected due to Bhatti industries which should be closed with immediate effect.
- Requested the Commission not to privatize the Electricity Department even in present scenario when it is running in loss.

Response of ED-DD

The ED-DD submitted that, it cannot differentiate between two consumers in the same category, even if they are consuming more power. The consumer has to pay as per the existing tariff for its load and energy consumption.

Objector 4: Miss Prachi Agrawal, Siyaram Polymers Industries, Daman

Objection

- Opposed the tariff revision as tariff was increased just 6 months back.

Objector 5: Shri B. M. Machhi, State President, BJP, Daman and Diu

Objections

- Submitted that there is no problem of employment in Daman because of the Hotel industries and Industries in Daman; if the tariff rate is increased it will affect the employment in Daman and Diu.
- Requested Commission not to increase the tariff as it might provoke people.

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Objector 6: Shri Vasu Patel, Secretary, BJP, Daman and Diu

Objections

- Mentioned that the people of Daman could not attend this hearing as it is rainy season and majority of the people are engaged in the work of farming.
- Mentioned that people are opposing the increase in tariff and the people will resort to road demonstration if the rates are increased; and Bharatiya Janta Party will support such demonstration.

Objector: 7Shri Jignesh Jogi, President, DMC, Daman

Objections

- Mentioned that the main business in Daman & Diu is hotels and industries. In recent years many industries have disappeared from the state, and if power tariff is increased then the number of industries would go down further.
- Requested the Commission not to increase in tariff.

Objector 8:Shri Anjumbhai Rathod, Sandy Resort (Hotel)

Objections

- Submitted that the only benefit to industries and hotels in Daman is in the rate of electricity. Because of this the industries and hotels are alive and if the rate of electricity is increased, it will adversely affect all industries in Daman.

Response of ED-DD (for objectors 4,5,6,7 and 8)

ED-DD submitted that the tariff revision has been done on the basis of Regulations specified by the Commission on yearly basis. Accordingly, ED-DD has submitted the ARR and Tariff petition as per the Regulations.

Objector 9: Shri K. C. Parekh, Industries, Daman

Objections

- Disagreed with the T&D loss shown for the FY 2011-12; expects the losses to be around 2-3%.
- Disagreed with the O&M cost shown stating R&M cost is more than Employee cost.
- Wanted to get the copy of ARR before public hearing is conducted, rather than publishing it in the newspaper.

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Objector 10: Shri Vijay Mishra, President, Daman Industries Association, Somnath, Daman

Objections

- Stated that the Electricity Department has not followed the guidelines of JERC for preparing the ARR- the Depreciation and Profit and loss has not been followed as per the guidelines of JERC.
- Mentioned that in spite of quality being maintained, the infrastructure is not proper; also the industries in Daman give huge revenue to the Government and therefore the Government should also take proper care of the industries in Daman.

Objector 11: Shri Navin Patel

Objections

- Stated that the development of Daman and Diu is only due to the Hotels and Industries which are flourishing in Daman and if the tariff is increased it will affect the development of Daman and Diu.
- Stated that the Electricity Department is running in loss; so JERC should look into the matter and get the facts/reasons behind the same.
- Requested the Commission not to increase the power tariff.

Response of ED-DD (for objectors 9, 10 and 11)

T&D Loss

ED-DD submitted that, it is quite difficult to reduce losses by more than 0.75% p.a., due to low base loss level in UT of Daman & Diu. It requires significant effort and resources to reduce losses even by 0.75%- 0.5%, considering the law of diminishing returns. Moreover, the quantum of energy being handled by the system has increased over a period of time and this also marginally affects the T&D losses in the system. ED-DD would like to highlight that indexation of consumers, network and system studies etc., has been started for improving technical efficiency, voltage regulation and reliability of power distribution system and allied services. On the basis of these facts, the details of schemes have been sent to CERC for approval.

ED-DD has also started preparing the DPR to replace existing conductor with higher capacity conductor to reduce the overloading and to cater to the future load. ED-DD

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is also installing capacitor banks in substations to improve power factor of the system.

Depreciation

The ED-DD submitted that the depreciation rates considered in the Petition are as specified by CERC in the Tariff Regulations for FY 2009-14, which vary from 3.34% to 9.50%. Based on the CERC depreciation rates, the weighted average depreciation claimed by the ED-DD is 4.6% for the opening block of assets and the assets capitalized during the year.

O&M cost

ED-DD submitted that, employee and R&M expenses are two different components of cost. The employee cost is an important component of the O&M cost for every utility in India. All distribution utilities have large number of employees for maintenance of distribution infrastructure, billing and distribution, collection, etc. and employee cost forms significant portion of the O&M expenses.

Repair and Maintenance cost is another component in the O&M cost, which helps in reduction of transmission and distribution losses and breakdowns in the system. The details of these expenses have been provided to the Commission in the ARR and Tariff Petition.

Revenue Gap

ED-DD submitted that, their current revenue requirement is more than the revenue generated from the consumers at present tariff. Therefore, the revenue gap has been calculated as per the difference in revenue and ARR required. Accordingly, a revision in tariff has been proposed to reduce the gap.

Objector 12: Daman Hoteliers Association

Objection

- Increase in electricity tariff will be a blow to an already over burdened industry as the hospitality industry does not get any incentive like income tax or sales tax / vat tax benefits.
- To consider the hotel industry at par with agriculture and be treated accordingly as the hotel industry is like agriculture, employing huge number of employees but get little benefit.

C. Objections / suggestions raised during public hearing on 26/07/2011 at Diu

Objector 1: Diu District Chamber of Commerce (DDCC)

Objection

The objector submitted that the traders and the industries are totally dependent on neighboring state. Diu, being a small island, does not have any agriculture productivity and any interstate availability of raw materials for the industries which make the cost of products very high. The trading is also on smaller scale and the public in large is dependent on fishing and tourism business, which are also seasonal in nature. In the above circumstances, margin of survival in business is very narrow and this proposed tariff hike will erode the business of the island.

Response of ED-DD

ED-DD submitted that the tariff revision has been done on the basis of regulations specified by the Commission. Any change in tariffs is the replica of change in total annual revenue requirement for the year.

On the basis of annual revenue requirement, the average cost of supply has been projected to increase from Rs. 3.70 per unit to Rs. 3.86 per unit for FY 2010-11 and FY 2011-12, which is mainly due to increase in quantum of power purchase and cost incurred. Therefore, to replicate such change in cost revised tariff has been proposed.

Objector 2: Shri Umesh Rama Bamania, R/O Vanakbara, Diu

Objection

The objector opposed the increase in tariff as Diu is a small place and the people of Diu are mainly dependent on two important sectors viz., Tourism Industry (hotels) and Fishing (ice factory) for their livelihood. The objector suggested that, there are no industries in Diu except few ice-factories which come under SSI (Small Scale Industries), the tariff should not be increased.

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Objector 3: Shri Rohit N. Shah, R/O Diu

Objection

The objector informed that in continuation to the suggestions of Shri Umesh, the tourism industry is an important sector in Diu and the cost price of export and import of raw materials of goods will increase if the tariff is increased and therefore requested not to increase the tariff.

Response of ED-DD (for objectors 2 and 3)

ED-DD submitted that, the average cost of supply has been estimated from Rs. 3.70 per unit for FY 2010-11 to Rs. 3.86 per unit for FY 2011-12. In accordance to that, ED-DD's total ARR has been projected at Rs. 661 crore of which 95% is power purchase cost for FY 2011-12. Also average revenue realized from many of the consumers is below the average cost of supply. Therefore, to reflect the increase in power purchase cost, ED-DD has proposed marginal increase in power tariff for LT and HT consumers.

Objector 4: Shri Javeri B. Shantilal, R/O Diu

Objection

The objector submitted that ED-DD disconnects power supply to residences on account of non-payment of electricity bill and also charges surcharge / penalty amount, whereas the same is not being done for Government offices.

Response of ED-DD

ED-DD submitted that, this is not proper forum for such issue and requested the objector to take up this issue on proper forum.

In relation to the surcharge levied to the consumer, ED-DD submitted that a constant rate of 2% is applied as surcharge for late payment of electricity bill for all consumers.

Commission's view

The Commission has considered all the aspects pointed out by the objectors and responses by ED-DD and has taken an appropriate decision on the revision of tariffs.