TARIFF ORDER

Review of ARR of FY 2012-13
and
Determination of Aggregate Revenue Requirement
&
Retail Tariff for FY 2013-14,

Petition no.91/2012

For
Electricity Department, UT of Andaman & Nicobar Islands

JOINT ELECTRICITY REGULATORY COMMISSION

For the State of Goa and Union Territories

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31st March 2013

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List of Abbreviations

Abbreviation		Full Form
A&G	:	Administration & General Expenses
Act	:	The Electricity Act, 2003
ARR	:	Aggregate Revenue Requirement
CAGR	:	Compound Annualized Growth rate
Capex	:	Capital Expenditure
CEA	:	Central Electricity Authority
CERC	:	Central Electricity Regulatory Commission
COD	:	Commercial Operation Date
Commission/JERC	:	Joint Electricity Regulatory Commission for the state of Goa and Union territories
CKt. km	:	Circuit Kilometer
DISCOM/A&N	:	Electricity Department, UT of Andaman & Nicobar Islands
D/C	:	Double Circuit
DS	:	Domestic Supply
EA 2003	:	The Electricity Act, 2003
FC	:	Fixed Charges
FY	:	Financial Year
GFA	:	Gross Fixed Assets
HP	:	Horse Power
HSD	:	High Speed Diesel Engines
HT	:	High Tension
JERC	:	Joint Electricity Regulatory Commission for the state of Goa and Union territories
kVA	:	Kilo Volt Ampere
kWh	:	Kilo Watt Hour
LPS	:	Late Payment Surcharge
LT	:	Low Tension
MU	:	Million Unit
MW	:	Mega Watt
MYT	:	Multi Year Tariff
NDS	:	Non Domestic Supply
NTPC	:	National Thermal Power Corporation

Abbreviation		Full Form
O/H	:	Over head
O&M	:	Operation & Maintenance
PLF	:	Plant Load Factor
RoE	:	Return on Equity
RPO	:	Renewable Purchase Obligation
R&M	:	Repair & Maintenance
SCL	:	Sanctioned Connected Load
S/C	:	Single Circuit
SBI PLR	:	SBI Prime Lending Rate
SPCL	:	Suryachakara Power Corporation Limited
T&D	:	Transmission & Distribution
UoM	:	Unit of Measurement
VAR	:	Volt Ampere Reactive
VC	:	Variable Charges

Before the

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

Gurgaon

CORAM
Dr. V.K. Garg, Chairperson
Sh. S.K. Chaturvedi, Member

Petition No. 91/2012

In the matter of

Review of ARR of FY 2012-13 and Aggregate Revenue Requirement (ARR) & Retail Tariff for the Financial Year 2013-14, of the Electricity Department, Union Territory of Andaman & Nicobar Islands

And in the matter of

Electricity Department, Union Territory of Andaman & Nicobar Islands………..Petitioner

ORDER

Date: 31st March 2013

1. INTRODUCTION

1.1 JERC Formation

In exercise of the powers conferred by Section 83 of the Electricity Act, 2003 the Central Government constituted a two member (including Chairperson) Joint Electricity Regulatory Commission for all Union Territories except Delhi to be known as "Joint Electricity Regulatory Commission for Union Territories'' with headquarters at Delhi as notified vide notification no.

23/52/2003 – R&R dated May 2' 2005. Later on with the joining of the state of Goa, the Commission came to be known as "Joint Electricity Regulatory Commission for the State of Goa and Union Territories" as notified on May 30' 2008. The Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Andaman & Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman & Diu, Lakshadweep and Puducherry) started functioning with effect from September 2008. Office of the Commission is presently located in the district town of Gurgaon, Haryana.

1.2 Electricity Department, UT of Andaman & Nicobar Islands

The Electricity Department, UT of Andaman & Nicobar Islands herein called ED A & N, is responsible for power supply in the Union Territory.

As submitted by the petitioner,

Quote "*The Department of Electricity of Andaman & Nicobar Administration ("EDA&N") is responsible for power supply in the union territory. Power requirement of EDA&N is met by own generation station and power purchase from SPCL.*

Andaman & Nicobar Islands is cluster of islands scattered in the Bay of Bengal. These islands are truncated from rest of India by more than 1000 kms. The total area of the territory is 8249 sq. kms having population of 379944 as per 2011 Census provisional records & average growth rate is 6.68%. The tempo of economic development has tremendously accelerated along with all-round expansion in the areas/sectors viz. (i) Shipping Services, (ii) Civil Supplies, (iii) Education, (iv) Fisheries, (v) Tourism & Information Technology, (vi) Health, (vii) Industries, (viii) Rural Development, (ix) Social Welfare, (x) Transport, (xi) Increase in District Headquarters (xii) Central Government Department, (xiii) Public Undertaking & other offices, (xiv) Services & Utilities, (xv) Defense Establishment (xvi) Commercial Organisations/Business Centersetc. Thus, these islands have reached at the take-off stage of total economical transformation. All these economic and infrastructure developments requires power as a vital input & to play a key role for achieving overall transformations.

The energy requirement of EDA&N is mainly met from own generation and power purchase from M/s Surya chakra Power Corporation Limited. There is no availability of power from Central Generating Stations or from other sources/ open market/ power exchanges, etc. Own generation accounts for around 40.08% & 43.48 % of the total power requirement for FY 2010-11 & 2011-12 respectively and power purchase accounts for around 59.20% & 56.52 of the total power requirement for 2010-11 & 2011- 12 respectively and is estimated that approximately 41.59% & 58.41% of the total energy requirement for FY 2012-13 shall be met by own generation and power purchase respectively. The present scenario is likely to continue and is projected that approximately

41.59 % & 58.41 % of the total energy requirement for FY 2013-14 shall be met by own generation and power purchase respectively " **unquote**

1.3 Filing of Petition

Electricity Department, UT of Andaman & Nicobar Islands has filed its petition for determination of Aggregate Revenue Requirement (ARR) & Retail Tariff for distribution and retail sale of electricity for FY 2013-14 under section 61, 62 & 64 of the Electricity Act, 2003, ED A&N has submitted its ARR and Tariff petition for FY 2013-14 on November 29'2012.

The Electricity Department, UT of Andaman & Nicobar Islands has prayed to the Hon'ble Commission to permit the petitioner to:-

Quote

"

a) *Accept the ARR and Tariff Petition for the FY 2013-14 for ED A&N formulated in accordance with the guidelines outlined as per the regulation of JERC relating to Distribution Licensee and the principles contained in Tariff Regulations;*
b) *Approve the Recovery of the ARR of FY 2013-14;*
c) *Approve the category wise tariff including fixed/ demand charges submitted by ED A&N to meet revenue requirement for FY 2013-14;*
d) *Approve the tariff philosophy suggested by ED A&N;*
e) *Condone any inadvertent delay/ omissions/ errors/ rounding off differences/shortcomings and EDA&N may please be permitted to add/ change/ modify/ alter the petition;*
f) *Permit EDA&N to file additional data/ information as may be necessary;*
g) *Pass such further and other orders, as the Hon'ble Commission may deem fit and proper, keeping in view the facts and circumstances of the case."*

Unquote

1.4 Admission of Petition

After initial scrutiny and analysis of the petition, the Commission as per its letter dated December 03' 2012 admitted the petition for approval of Aggregate Revenue Requirement (ARR) and Tariff for FY 2013-14. The Petitioner was directed to publish the summary of the petition for proposed ARR and Tariff for FY 2013-14 in leading newspapers of the union territory and upload the petition on the website of the Petitioner. The copy of the admission order is enclosed as **Annexure 1** to this order.

Electricity Department, UT of Andaman & Nicobar Islands had published a public notice on December 11'2012 on the website of the department and on December 13' 2012 in the leading newspaper of UT of Andaman & Nicobar Islands indicating therein the proposed ARR and Tariff for the FY 2013-14 inviting suggestions/objections from the public. The copy of the newspaper clipping wherein public notice was published by the petitioner for the information to the stakeholders are enclosed as **Annexure 2** to this order.

1.5 Interaction with the petitioner

This Order has referred at numerous places to various actions taken by the "Commission". It is pertinent to mention for the sake of clarity, that the term "Commission" unless otherwise specified in most of the cases refers to the Staff of the Commission for carrying out the technical due diligence & validation of data of the petitions filed by the utilities, obtaining and analyzing information and clarifications received from the utilities and submitting relevant issues for consideration of the 'Commission'.

The Commission's Staff held discussions with the Petitioner/Petitioner's representative, obtained information/clarifications wherever required and carried out technical validation with regard to the information provided.

Commission's staff interacted regularly with the Petitioner to seek clarifications and justification on various issues essential for the analysis of the tariff petition. The Commission's staff and the Petitioner also discussed key issues related to the petition, which included Power purchase cost, estimated sales and revenue submitted to the Commission, etc.

On February 07' 2013, the representatives of the Department along with the representatives of the Commission conducted the technical validation session at the Commission's office. The Commission vide letter dated December 12'2012 sought clarifications/additional data on the issues/discrepancies highlighted during the technical validation session. This included clarification on the compliance of directives, mismatch of certain components including revenue figures, power generation, power purchase from SPCL, capitalization, monthly consumption of HSD & Lubricants depreciation claimed for FY 2012-13 and validation of fuel receipts and consumed for FY 2011-12.

The Petitioner submitted its replies, in response to the queries raised by the Commission's office, which were necessary for computation of the ARR and the resultant tariff of the Petitioner thereof through letter and through email dated January 10'2013, January 28'2013, Febraury 02'2013, February 13'2013 and March 30'2013.

Most of the queries raised by the Commission have been clarified by the Petitioner with the last email dated March 30'2013 Commission has to rely on the information made available by the petitioner through emails and letters without waiting for affidavits which comes later on because data has been revised by the petitioner in subsequent submissions.

Table 1.5.1: Formal Interactions with the Petitioner

S.No.	Date	Action by	Subject
1.	29.11.2012	ED A&N	Submission of the petition
2.	03.12.2012	Commission	Admission of the petition
3.	12.12.2012	Commission	Part Submission of first set of deficiencies in the petition
4.	04.01.2013	Commission	Reminder letter to the petitioner for sending the reply to the first set of deficiencies pointed out on 03.12.12
5.	10.01.2013	ED A&N	Submissions of the reply of the additional information against first set of deficiencies including specific fuel consumption and aux. consumption for FY 2011-12 , H1 2012-13, month wise HSD and lubricating oil consumption FY 2011-12, H1 2012-13, connected load, village electrification status, month wise electricity sales for FY 2011-12, H1 2012-13, PLF for H1 2012-13,peak load for H1 2012-13, T&D loss for FY 2011-12, Payments to IPP for 2012-13 (H1)
6.	13.02.2013	ED A&N	Publication of Public notice on ARR and Tariff Petition for FY 2013-14 for inviting suggestions/comments from stakeholders
7.	05.03.2013	Commission	Notice for Public hearing , next reminder for filling the data gaps required after Technical validation on 7th Feb 2013
8.	18.03.2013	ED A&N	Additional information submitted by the petitioner as indicated in technical validation
9.	26.03.2013	Commission	Confirmation on the Whether the petitioner has received the letter of grant/subsidy for tariff and capital expenditure
10.	26.03.2013	Commission	Reminder to Email dated 19.03.2013, 24.03.2013 asking views of the petitioner on the comments/suggestions of the stakeholders
11.	30.03.2013	ED A&N	Petitioner's reply on comments/suggestions of the stakeholders in the public hearing

1.6 Public hearing process

Commission directed the petitioner to publish the summary of the ARR and Tariff proposal in the abridged form and manner as approved in accordance with section 64 of the Electricity Act 2003 to ensure public participation.

A public notice was published by the Petitioner for inviting objections/ suggestions from its stakeholders on the tariff petition in the leading newspaper as detailed below:-

Table 1.6.1 : Details of public notice published by the Petitioner

S.No.	Date	Language	Name of Website/Newspaper
1.	11.02.2013	English	htpp://and.nic.in

S.No.	Date	Language	Name of Website/Newspaper
2.	13.02.2013	English	The Daily Telegrams

The petitioner also uploaded the petition on Electricity Department, A&N website (http:\\electricity.and.nic.in) for inviting objections and suggestions on their petition.

Interested parties / stakeholders were requested to file their objections / suggestions on the petition on or before February 28’ 2013. The copy of paper cutting of public notice is attached as **Annexure 2** to this order.

1.7 Notice for public hearing

Commission published public notices in the leading newspapers giving due intimation to stake holders, consumers, objectors and the public at large about the public hearing to be conducted by the Commission as per the mentioned schedule below:

Pending the decision on the Petition number 89/2012 filed by M/s Suryachakra Power Corporation Ltd. (SPCL) running an Independent Power Plant of 20 MW in South Andaman (which may have an impact on the ARR of ED A&N) and also pending receipt of additional data/ removal of defects by the petitioner, the Commission’s office had published the ‘notice for public hearing’ as indicated above which was conducted on March 18’2013 at Port Blair.

Table 1.7.1 : Schedule of Public hearing at Port Blair

S.No.	Date	Venue of Hearing	Time & Category of Consumers	Subject
1.	March 18’ 2013 Monday	Marine Community Hall of DSS, Mohanpura Port Blair	**From 10:00 AM onwards** For all categories of consumers	**ARR & Tariff for FY 2013-14:** (Petition no. 91/2012)
2.			**From 11:30 AM onwards** For all categories of consumers	1. Petition no. 93/2013 – 5 MW Solar Terms and Conditions of the PPA 2. Petition no. 94/2013 – 2 MW Bio Mass Project for approval of Power Purchase Agreement @ Rs.9.81/Kwh in the 1st year and escalated@3% / annum for 10 Years. 3. Petition no. 89/2012 Capital Cost and Tariff for Independent Power Plant of Suryachakra Green Fuels.

S.No.	Date	Venue of Hearing	Time & Category of Consumers	Subject
				Uniform consumer categorization, voltage wise contract load/demand and Terms & Conditions of LT and HT supply, Road map for cross-subsidy. Effectiveness of the functioning of CGRF.

Table 1.7.2 : Details of public notice published by Commission

S.No.	Date	Language	Name of Newspaper
1.	06.03.2013	Hindi	Rajasthan Patrika (Kolkatta)
2.	06.03.2013	Tamil	Dina Thanthi (Chennai)
3.	06.03.2013	Bangla	Bartman (Kolkata)
4.	06.03.2013	English	Echo of India (Port Blair)
5.	10.03.2013	Hindi	Dweep Samachar
6.	10.03.2013	English	Daily Telegram – Andaman
7.	10.03.2013	English	Andaman Express (Port Blair)

Table 1.7.3 : Details of Repeat public notice published by Commission

S.No.	Date	Language	Name of Newspaper
1.	16.03.2013	English	Echo of India
2.	16.03.2013	Hindi	Rajasthan Patrika
3.	16.03.2013	Tamil	Dina Thanthi
4.	16.03.2013	Bangla	Bartaman
5.	16.03.2013	English	Andaman Express

The copies of public notice published by the Commission for intimation of public hearing are attached as **Annexure 3** to this order.

Commission received two written and two oral objections/ suggestions on the petition during the public hearing. The Commission handed over the set of these to the Petitioner for communicating their reply to the objections raised by the objector.

During the public hearing, each objector was provided an opportunity to present his/ her views on the petition filed by the Petitioner. All those present in the hearing, irrespective of whether they had given a written objection or not, were given an opportunity to express their views. Stakeholders who raised their concerns on the spot were replied to, by the officers of the utility orally on the spot. The list of all objectors or those who gave suggestions or comments is attached at **Annexure 4** to this order.

The list includes the objectors:

1. Those who gave their written objections & expressed desire to present orally also during the public hearing

2. Stakeholders who did not give their written objection or prior intimation, but participated in the hearing on the spot

All these objections/suggestions were responded to by the Licensee during the hearing. Later Licensee submitted their written reply for all written objections/suggestions of the stakeholders.

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

2. BRIEF SUMMARY OF ARR & TARIFF PETITION FOR FY 2013-14

2.1 Introduction

In exercise of powers conferred on Joint Electricity Regulatory Commission for the Goa and Union Territories under Section 61 read with Section 181 of the Electricity Act, 2003 (36 of 2003) and all other powers enabling it in this behalf, the Joint State Electricity Regulatory Commission for the State of Goa and Union Territories notified the (Terms and Conditions for Determination of Tariff) Regulations, 2009. These regulations came into force from the date of their publication in the official Gazette i.e. February 9' 2010. These Regulations are applicable to the State of Goa and the Union Territories of Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman and Diu, Lakshadweep and Puducherry.

As discussed in para no. 1.3 and 1.4 of Chapter no. 1, Electricity Department, UT of Andaman & Nicobar Islands filed its petition for determination of Aggregate Revenue Requirement and Tariff for FY 2013-14 to the Commission on November 29' 2012 under 61, 62 & 64 of the Electricity Act 2003 and relevant provisions mentioned in JERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2009. In accordance with the directions given by the Commission, the ED-A&N had also submitted its Revised estimates of FY 2012-13 along with audited accounts of FY 2010-11 on November 29' 2012.

After initial scrutiny & analysis of the information submitted with ARR and Tariff Petition filed by ED-A&N; the petition was admitted subject to removal of infirmities to the extent possible. The Commission has taken the aforesaid petition on record as 'petition no. 91/2012' on December 03'2012.

2.2 About Electricity Department of Andaman & Nicobar

The Department of Electricity of Andaman & Nicobar Administration (ED A&N) is responsible for power supply in the union territory. Power requirement of ED A&N is met by own generation station and power purchase from SPCL. The total area of the territory is 8249 sq. kms having population of 379944 as per 2011 Census provisional records & average growth rate is 6.68%. These islands have reached at the takeoff stage of total economic transformation. All these economic and infrastructure developments requires power as a vital input & to play a key role for achieving overall transformation. Out of 824,900 hectares of geographical area, 795,000 hectares is reported for land use of which 90.9% is forest area (including 59.15% of area is covered under protected forest) and 1.51% Cultivable Waste Land.

Due to the geographical & topographical peculiarities of these islands including separation by sea over great distances, there is no single power grid for the entire electrified island and instead a power house at each location caters independently to the power requirements of area/islands. There are 43 diesel power houses at different locations in these islands having DG sets Capacity ranging from 6[1] KW to 5000 KW (including 20 MW from IPP operated by M/s SPCL) and one hydro power station having 5.25 MW Capacity at Kalpong North Andaman. The aggregate installed capacity is 83.71 MW as on 31.03.2012 and firm capacity of 71.27 MW.

The petitioner's performance in FY 2011-12,

Quote

"In 2011-12, the total of 250.35 MUs were generated and out of 250.35 MUs, 198.62 MUs were sold to the consumers of ED A&N with the achieved T&D loss level of 18.03%. The revenue realized by the UT was Rs. 81.26 Crores from the consumer base of 1,10,002 with an average realization rate of Rs. 4.09 per kWh and per capita consumption of 492 kWh. The distribution network has 1012 Kms. of HT Lines & 3077Kms. of LT Lines for providing power to 1,10,002 consumers. The T&D loss level estimated by ED-A&N for FY 2011-12 is 18.03%" ***Unquote***

2.3 Petition Summary for Aggregate Revenue Requirement for FY 2013-14, Review of ARR for FY 2012-13

The petition covers the revised estimates of FY 2012-13 and the basis, assumptions and projections of individual elements constituting the determination of ARR and proposal for retail tariff for FY 2013-14. Commission had issued the first Tariff Order for Electricity Department of UT of Andaman & Nicobar Islands (ED-A&N) on June 04' 2012 for FY 2012-13. The Commission in its first Tariff Order dated June 04'2012 had approved the ARR for FY 2012-13 based on the actual cost of FY 2010-11 and estimated expenses of FY 2011-12, as submitted by the petitioner. Further, Commission had approved revision in retail tariff to meet the revenue deficit for FY 2012-13.

The Petitioner has submitted the ARR & tariff petition for FY 2013-14 based on the actual performance during FY 2010-11, FY 2011-12 and FY 2012-13 (half yearly actuals-H1) as bases with supporting rationales. Based on the estimates and projections for FY 2013-14, the aggregate revenue requirement for ED A&N for FY 2013-14 has been proposed at Rs. 417.55 Crores after considering the submissions of the petitioner as mentioned in the table below. The brief summary of petitioner's proposal as submitted in the petition for FY 2013-14 is presented below:

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[1] As can be observed from the submissions of the petitioner, 12 kW is the smallest capacity of DG set installed at Andaman & Nicobar Islands and not 6 kW.

Table 2.3.1 : Brief Summary of ARR for FY 2013-14, Review of FY 2012-13 submitted by the petitioner (Rs. in Crores)

Sr. No.	Particulars	(FY 2012-13) Estimates submitted in FY 13-14 petition	(FY 2013-14) Petitioner Submission
1	2	3	4
1	Cost of fuel	100.93	114.60
2	Cost of power purchase	166.27	187.89
3	Employee costs	49.30	53.62
4	R&M expenses	34.23	37.37
5	Administration and general expenses	2.40	2.61
6	Depreciation	4.98	5.50
7	Interest and finance charges	56.26	6.73[2]
8	Interest on working capital	5.39	6.08
9	Return on Equity/NFA	2.39	3.29[3]
10	Provision for Bad Debt	-	-
11	Advance Against Depreciation	-	-
12	**Total Revenue Requirement**	**422.15**	**417.55**
13	Less: Non-Tariff Income	2.00	2.10
14	**Net Revenue Requirement (12-13)**	**420.15**	**415.46**
15	Revenue from Retail Sales at Existing Tariff	100.03	108.64
16	**Net Gap (14-15)**	**320.13**	**306.82**
17	Gap for the previous year	0	0
18	**Total gap (16+17)**	**320.13**	**306.82**
19	Additional revenue from proposed tariff for FY 2013-14	0	-
20	**Revenue Gap/ (Surplus), if any, after proposed tariffs (18-19)**	320.13	306.82
21	Budgetary Support from Government	320.13	306.82
22	**Net Final Revenue Gap/ (Surplus) (20-21)**	0	0
23	**Energy sales (MU)**	**210.09**	**222.23**

[2] The petitioner has submitted Rs. 12.94 Crores in the table 4.23 of the petition against the 'Interest Charges (including interest on working capital)' and has also calculated Rs. 71.49 Crores as interest charges for FY 2013-14 in the table 4.19 of the petition. Further the petitioner showed Rs. 72.47 Crores as 'Interest Charges' in format no. 9 for FY 2013-14 and Rs. 12.81 Crores against the 'Interest Charges (including interest on working capital)' in format no. 27. In view of the variations in the submissions of the petitioner, Commission has accordingly considered the Rs. 12.81 Crores as the Interest Charges including Interest on working capital as Rs. 6.08 Crores as submitted in table 4.20 of the petition and format no. 19 of the petition.

[3] The petitioner has submitted Rs. 3.29 Crores as a return on capital base as Rs. 3.29 Crores in table 4.18 of the petition, return on equity as Rs. 4.91 Crores in table 4.22 of the petition. The petitioner in the table 4.23 of the petition showed Rs. 0.63 Crores against 'Return on NFA/Equity' in ARR for FY 2013-14 and subsequently in format no. 27 showed Rs. 3.29 Crores against 'Return on NFA/Equity' in ARR for FY 2013-14. As prayed by the petitioner in the petition, Commission condones the error of typographical nature and has considered Rs. 3.29 Crores as Return on NFA for which the petitioner is also eligible as per the relevant rules.

Sr. No.	Particulars	(FY 2012-13) Estimates submitted in FY 13-14 petition	(FY 2013-14) Petitioner Submission
1	2	3	4
24	**Cost of Supply (12/23)*10[4] (Rs./KWh)**	**20.00****	**18.70[5]**

***** This figure is worked out based on the submissions of the petitioner; Rs. 16.76/kWh was approved by the Commission in TO for FY 2012-13***

2.4 Summary of the Tariff Proposal for FY 2013-14

The resultant gap works out to Rs. 306.82 Crores. The petitioner has not proposed any tariff increase for FY 2013-14 in view of huge burden on the consumers.

It is further submitted by the petitioner that

Quote

"majority of generation is diesel based, making per unit cost of generation very high compared to other utilities in the country. Recovery of such high cost of generation through tariff increase is not practicable as this would make power unaffordable to the general consumers. ED A&N being a Government Department funded by budgetary support from Central Government it proposes to absorb the increase in cost of supply and keep the tariff unchanged for the FY 2013-14.

Further ED A&N is exploring options of alternative and cheaper sources of power so as to reduce the cost of supply. Since power generated by Central Generating Stations (CGSs) is not available to ED A&N, it has to depend totally on local power generation. Till such time cost of generation of power is brought at levels comparable to other utilities in the country, recovery of the same through tariff is not feasible.

It is prayed to the Hon'ble Commission that considering the above submissions the proposal of ED A&N for keeping the tariff unchanged for the FY 2013-14 may kindly be approved."

unquote

[4] Used for conversion purposes (Crores to Million)

[5] The petitioner showed Rs. 18.59 Crores based on the ARR worked out in Table 4.23, which after considering the typographical error in the return on capital base and advertent error in interest charges worked out Rs. 18.70 Crores.

Table 2.4.1 : Brief Summary of Tariff Proposal for FY 2013-14 submitted by the petitioner

S. No.	Category	Minimum Charges per connected load or part thereof per month (Rs./kVA or HP per month)	Rate (Rs./unit)
1	Domestic		
	Upto 100 units	Rs.30.00 per kVA	2.00
	101 units -200 units		3.70
	201 units & above		5.10
2	Commercial (General Purpose)		
	upto 200 units	Rs.50.00 per kVA	5.40
	201 units to 500 units		6.50
	501 units & above		7.25
3	Industry		
	Upto 500 units	a. Rs.50.00 per H.P. b. Rs.200.00 per month for Rice, Flour Millers of Rural areas who are having 15 HP capacity	4.45
	501 units & above		5.00
4	Bulk	Rs.50.00 per kVA	9.20
5	Public Lighting	Rs.60.00 per kVA	4.50
6	Irrigation Pumps & Agriculture	Rs.15.00 per kVA	1.25

2.5 Prayer to the Hon'ble Commission

The petitioner respectfully prays that Hon'ble Commission may:

Quote

"

a) *Accept the ARR and Tariff Petition for the FY 2013-14 for ED A&N formulated in accordance with the guidelines outlined as per the regulation of JERC relating to Distribution Licensee and the principles contained in Tariff Regulations;*
b) *Approve the Recovery of the ARR of FY 2013-14;*
c) *Approve the category wise tariff including fixed/ demand charges submitted by ED A&N to meet revenue requirement for FY 2013-14;*
d) *Approve the tariff philosophy suggested by ED A&N;*
e) *Condone any inadvertent delay/ omissions/ errors/ rounding off differences/shortcomings and EDA&N may please be permitted to add/ change/ modify/ alter the petition;*
f) *Permit EDA&N to file additional data/ information as may be necessary;*
g) *Pass such further and other orders, as the Hon'ble Commission may deem fit and proper, keeping in view the facts and circumstances of the case."*

Unquote

3. APPROACH OF THE ORDER FOR DETERMINATION OF ARR & TARIFF FOR FY 2013-14

3.1 Introduction

As discussed in earlier chapter of this order, Electricity Department of UT of Andaman & Nicobar Islands had filed its petition for determination of Aggregate Revenue Requirement and Tariff for FY 2013-14 to the Commission on November 29' 2012 in accordance with section 61, 62 & 64 of the Electricity Act, 2003 and relevant provisions mentioned in JERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2009.

3.2 Approach for Review for FY 2012-13

The Commission has considered the submission of the petitioner dated February 18' 2012 (received on February 23' 2012, attaching Min. of Home Affairs letter dated Aug 05,1959 highlighting the strategic importance of the territory, wherein it is absolutely essential that the basic utility services such as transport, electricity etc. are provided in these areas notwithstanding the fact that the services may not be economically viable. The facts are illustrated as per office memo of Ministry of Home Affairs, Govt. of India dated August 05th, 1959 addressed to the Planning Commission, New Delhi. The copy of the same is made available by the petitioner with its additional submission dated February 18'2012. The copy is attached as **Annexure 5** to this Order.

Based on the data submitted the Commission has also reviewed ARR for FY 2012-13 on Suo Moto (based on the half yearly actuals), which was determined earlier by the Commission in its ARR order dated June 04'2012. The Review of ARR for FY 2012-13 is to be carried out as per the provisions of regulation 8 of JERC Tariff Regulations, 2009, which is as under:

Quote

"The Commission shall undertake a review along with the next Tariff Order of the expenses and revenues approved by the Commission in the Tariff Order. While doing so, the Commission shall consider variations between approvals and revised estimates/pre-actuals of sale of electricity, income and expenditure for the relevant year and permit necessary adjustments/ changes in case such variations are for adequate and justifiable reasons. Such an exercise shall be called 'Review''.

After audited accounts of a year are made available, the Commission shall undertake similar exercise as above with reference to the final actual figures as per the audited accounts. This exercise with reference to audited accounts shall be called 'Truing Up'.

The Truing Up for any year will ordinarily not be considered after more than one year of 'Review'.

The revenue gap of the ensuing year shall be adjusted as a result of review and truing up exercises.

While approving such expenses/revenues to be adjusted in the future years as arising out of the Review and / or Truing up exercises, the Commission may allow the carrying costs as determined by the Commission of such expenses/revenues. Carrying costs shall be limited to the interest rate approved for working capital borrowings.

For any revision in approvals, the licensee would be required to satisfy the Commission that the revision is necessary due to conditions beyond its control.

In case additional supply is required to be made to any particular category, the licensee may, any time during the year make an application to the Commission for its approval. The application will demonstrate the need for such change of consumer mix and additional supply of power and also indicate the manner in which the licensee proposes to meet the cost for such change of consumer mix and additional supply of power.
The Commission may consider granting approval to such proposals provided the cost of additional supply is ordinarily met by the beneficiary category"
Unquote

In view of the above, the Commission has reviewed the variations between approvals and actuals of sale of electricity, income and expenditure for FY 2012-13; and also the revised estimates based on half yearly actuals, estimated the energy sale, income and expenditure for FY 2013-14 as submitted by the petitioner and permitted necessary adjustments in cases where variations are for reasonable and justifiable reasons.

The detailed analysis & treatment of each component based on the revised estimates is provided in **Chapter 5 (Review of ARR for FY 2012-13)** of this Order.

3.3 Approach for Determination of ARR & Retail Tariff for FY 2013-14

In this regard various provisions of the JERC's Tariff Regulations 2009 pertaining to business of the integrated utility are relevant and Commission is guided by the principles contained in Section 61 of the Act among other things to examine the Sales forecast, Power purchase quantum, Self-generation and other income & expenditure.

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

a) The principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;

b) The generation, transmission, distribution and supply of electricity are conducted on commercial principles;

c) The factors which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments;

d) Safeguarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner;

e) The principles rewarding efficiency in performance;

f) Multi-year tariff principles;

g) That the tariff progressively reflects the cost of supply of electricity and also, reduces and eliminates cross-subsidies within the period to be specified by the Appropriate Commission;

h) The promotion of co-generation and generation of electricity from renewable sources of energy;

i) The National Electricity Policy and tariff policy;

j) In addition to above the Commission is bound by the Renewable Energy purchase obligations, as specified in JERC (Procurement of Renewable Energy) Regulations, 2010.

k) Relevant directions given by the Hon'ble APTEL in the judgment in O.P. no. 1 of 2011.

The Commission also had considered the memo of Ministry of Home Affairs, Govt. of India dated August 05'1959 addressed to the Planning Commission, while disposing the ARR and Tariff Petition (65/2012) for FY 2012-13.which enumerates the strategic importance of the territory, and it is absolutely essential that the basic utility services such as transport, electricity etc. are provided in these areas. The copy is attached as **Annexure 5** to this Order. The facts of aforesaid memo have also been considered while disposing the ARR and Tariff Petition (91/2012) for FY 2013-14 submitted by the petitioner.

The Commission has considered the actual audited figures of income & expenditure submitted by the Petitioner for FY 2010-11, actuals for FY 2011-12, and half yearly actuals of FY 2012-13 to form the basis for projection of income and expenditure for FY 2013-14. Further, the Commission has relied on the actual data of FY 2011-12 and FY 2012-13 (half year) provided by the petitioner during technical validation session on February 07'2013 and in subsequent submissions & clarifications thereafter. The detailed analysis & treatment of each component is provided in **Chapter 6 (Aggregate Revenue Requirement for FY 2013-14)** of this Order.

4. SUMMARY OF OBJECTIONS RAISED, PETITIONER's RESPONSE AND COMMISSION'S VIEWS

4.1 Public response to the Petition

On admitting the ARR & Tariff Petition for the FY 2013-14, the Commission directed the Petitioner to make copies of the petition available to the general Public, post the petition on the Website & also publish the same in newspapers in abridged form in the given format duly inviting Comments/Objections from public as per provision of the JERC (Conduct of Business) Regulations 2009.

4.2 Public Hearing

A public hearing was held at Port Blair as per the below mentioned schedule:

Table 4.2.1 : Schedule of Public hearing at Port Blair

S.No.	Date	Venue of Hearing	Time & Category of Consumers	Subject
1.	March 18' 2013 Monday	Marine Community Hall of DSS, Mohanpura Port Blair	**From 10:00 AM onwards** For all categories of consumers	**ARR & Tariff for FY 2013-14:** (Petition no. 91/2012)
2.			**From 11:30 AM onwards** For all categories of consumers	1. Petition no. 93/2013 – 5 MW Solar Terms and Conditions of the PPA 2. Petition no. 94/2013 – 2 MW Bio Mass Project for approval of Power Purchase Agreement @ Rs.9.81/Kwh in the 1st year and escalated@3% / annum for 10 Years. 3. Petition no. 89/2012 Capital Cost and Tariff for Independent Power Plant of Suryachakra Green Fuels. Uniform consumer categorization, voltage wise contract load/demand and Terms & Conditions of LT and HT supply, Road map for cross-subsidy. Effectiveness of the functioning of CGRF.

During the public hearing, those who submitted the objections/suggestions/ comments in writing on the spot (no objection was received before the public hearing), also presented their

Objections/Suggestions/ comments in person before the Commission. Other participants from general public, who had not submitted written objections, were also given an equal opportunity to offer their views/suggestions in respect to the ARR & tariff proposal for FY 2013-14 of the ED A&N.

Each stakeholder was provided an opportunity to present his views on the petition filed by the Petitioner. All those present in the hearing, irrespective of whether they had given a written objection or not, were given equal opportunity to express their views. The list of all objectors is attached at **Annexure 4** to this order.

The list includes the objectors or who gave suggestions or comments

1. Those who gave their written objections & expressed desire to present orally also during the public hearing;
2. Stakeholders who did not give their written objection or prior intimation, but participated in the hearing on the spot;
3. Stakeholders who did not give their written objection or prior intimation, but participated in the hearing on the spot and also gave written submissions.

4.3 Objections/Suggestions of stakeholders and response of Electricity Department, UT of Andaman & Nicobar Islands there to and Commission's views on petition no. 91/2012, previous year review

PART 1: General Issues and Comments

4.3.1 Alternative Source of Power

Stakeholders Objections/Comments:

The main issue raised by the SK Mazumdar of Govt. Employees Federation as stakeholder in brief are as under:

The stakeholder suggested that the distribution licensee should explore alternative sources of power and should not maintain their dependency on diesel, which is a scarce and costlier source. The stakeholder suggested for exploring the sources of energy including gas, wind and wave etc.

Petitioner's submission:

The petitioner informed that they are exploring all sources of alternative power.

Commission's views:

Commission appreciates the suggestions of stakeholders and in the light of the 'report on initiatives taken by the department on exploring sources of alternative power' submitted by the petitioner as part of the petition no. 91/2012; Commission noticed that the Petitioner has taken some initiatives in this regard but the firm execution is required so as to speed up the process of their construction and achievement of commercial operation date as per the given timelines. It is inevitable for this distribution licensee to explore alternative sources of Power, and also consumer's contribution in this regard is required in terms of installation of roof top solar, solar water heater wind and /or hybrid equipments to reduce their load on the existing diesel generation based power stations of the utility. The petitioner is further directed to submit a progress report on quarterly basis on all such initiatives taken in this regard.

4.3.2 Power Purchase and Power Generation

Stakeholders Objections/Comments:

The main issues raised by the SK Mazumdar of Govt. Employees Federation as stakeholder, Mr. A R Marudhavaanan, President-Humane Touch and M/s SPCL in brief are as under. Further the comments made by M/s SPCL on the ARR and Tariff Petition of A&N Islands were taken note of; However Commission has not been considered the below mentioned submission as a view/comment of M/s SPCL with regard to their petition no. 89/2012, because that petition is being dealt with separately by the Commission.

i. The stakeholders suggested that the distribution licensee should improve the efficiency of generating plants and the developmental works should also be undertaken. Further the stakeholders submitted that the projects signed with any developer for procuring electricity and other works, should through be a transparent process.

ii. The stakeholders further submitted that the projects should be awarded after considering all aspects of cost overrun.

iii. The stakeholders suggested the department to ensure the technical aspects of the 5 MW solar PV projects; so as to safeguard the interests of the consumers in Andaman & Nicobar Islands. Further it is apprehended by the stakeholder that the solar project may not work in rainy season or other non-sunny days .

iv. The stakeholder highlighted that there are a few discrepancies in the information submitted to the Commission for approval of ARR for FY 2013-14. The discrepancies are listed below:

Quote"

a. *The total revenue from sale of power is Rs. 108.84 Crores but the requirement is Rs. 413.05 Crores. There is a total deficit of Rs. 304.41 Crores. The deficit is much more to the Govt. of India. It is highlighted by the stakeholder that the electricity department is trying to misrepresent.*

b. *The HSD & Lube consumption details submitted at Annexure-V, summary of power purchase cost including own generation for FY 2011-12, FY 2012-13 and FY 2013-14 are wrongly calculated. As the data on cost of fuel for these years were calculated based on the station heat rate of 2010 kcal/kWH for HSD (i.e. 4.2 unit/liter) & 1.1 gm/kWh for lube oil which is the heat rate of s SPCL for HSD calculation and the same heat rate has been taken by the Electricity Department for all other power stations of the island istead of actual heat rate achieved/fuel consumed by the respective power stations. As per the calculations showed by the stakeholders, SPCL submitted that A&N administration has saved Rs. 210 Crores from April 2003 to November 2012 on fuel cost only. If the difference in cost of generation of administration is being taken into consideration, the administration would have saved more than Rs. 600 Crores in the last 10 years. It is further submitted through an example of heat rate taken by the department for Chhattam and Phoenix Bay for FY 2013-14, the department has projected approximately Rs. 40-50 Crores less than the actual cost.*

c. *The department has no standard norm followed for auxiliary consumption as some of the power stations are having auxiliary consumption of more than 4.5%.*

d. *The department has also wrongly calculated the fuel consumption, auxiliary fuel consumption in respect of diesel generating stations, separately for each station for FY 2011-12.*" **Unquote**

Petitioner's submission:

i. The petitioner submitted that the transparent bidding process has been adopted as prescribed in the guidelines for procurement of power.

ii. The petitioner further submitted that the department is making all efforts to safeguard the interest of consumers of Andaman & Nicobar Islands.

Commission's views:

i. Commission's observations from the latest submissions of the petitioner dated March 18'2013 regarding total installed capacity and derated capacity of power houses operational for FY 2011-12 is mentioned below:

Table 4.3.2.1 : Details of contribution of DG sets owned by department and IPP for FY 2011-12

S.No.	Particulars	Installed Capacity(in MW)	Derated Capacity (in MW)	%age in total derated capacity	Actual Generation (in MUs)	%age in total generation
1.	IPP-SPCL	20	20	25%	140.95	56%
2.	DG sets owned by the department	55.96	49.25	69%	98.07	39%
3.	Hydro Power Plant	5.25	5.25	6%	11.33	5%
	Total	**81.21**	**74.50**	**100%**	**250.35**	**100%**

As seen from the above, the Diesel Generator Sets set up by IPP-SPCL capacity of 20 MW out of a total derated capacity of 74.50 MW, generates 140.95 million units, whereas remaining 49.25 MW of DG sets set up by Electricity Department, A&N contribute only 98.07 million units. Thus, it is noted that the 25% out of the total derated capacity of generation are contributing more than 56% in the total generation in A&N Islands, whereas the remaining 69% of the installed capacity of capacity of DG sets (derated capacity) owned by the department are contributing only 39% of the total generation. The above observation speaks of the heat rate and efficiency of the power houses maintained by the petitioner; the generation efficiency and the Plant load factor of each DG set seem to be very low. The Petitioner needs to look into this aspect carefully to reduce high generation cost of its owned DG Sets.

It is in the light of this, the Commission had also desired information in the following directive gave by the Commission in the tariff order for FY 2012-13 dated June 04'2012

Quote

"*There are 135 no. of diesel generating sets excluding 4 DG sets of M/s SPCL located in 29 islands of Andaman & Nicobar catering to their electricity needs; the capacity of diesel generating sets of ED A&N varies from 12 KW to 2500 KW. The diesel is generally received in bulk in big tankers, thereafter it is transported to various islands in drums. Obviously, there are losses in transportation, storage and handling of which no assessment is available. It is understood that presently there is no system through which actual fuel consumption per generating station can be ascertained for generation of one unit of energy. In fact, there should also be proper accounting of generating unit wise fuel receipts & issues. The ED A&N is directed to evolve a system of accounting of fuel received at port, dispatched island wise, actual quantity received on the islands and actual quantity consumed island wise for generating electricity; so that actual fuel consumption per unit generation along with the* *variation could be worked out. Accordingly the petitioner is directed to furnish such details along with the next filing. "* **unquote**

From the data of generation, derated capacity, consumption of HSD & Lubricating oil for FY 2011-12, FY 2012-13 (H1) furnished by the petitioner (as part of additional information), itcould be observed that some of the own DG sets may be in the Standby mode of operation and some may be inefficient. Now, the Commission feels that such DG sets are to be identified. It is however to be noted that the Petitioner had submitted the incomplete information required as part of ARR and Tariff petition for FY 2012-13. As such the fuel consumption and heat rate in the previous tariff order was provisionally considered subject to true-up based on the actual data to be submitted by the petitioner. It is further be noted that the incomplete data was accepted in the petition for FY 2012-13 being the first petition of the ED-A&N, data snags in respect of heat rate , PLF etc. will be covered under respective True up of the respective petitions.

ii. Following submission of Petition 91/2012, the Petitioner has informed the Commission about the hiring of the DG Sets of 10 MW and 5 MW for which prior approval of the Commission under section 86(1) or Section 62 of EA 2003, was not taken, which may or may not turn out to be falling in merit order procurement of Power in respect of Power Purchase Cost. This will distort the assessment of quantities of Power Purchase under Self Generation or Purchase from IPP or generated through hired sets. It is hereby concluded that the petitioner should follow consistency in the submissions made to the Commission.

iii. As regard to the comment made by the stakeholder during public hearing, it is informed that the impact of actual cost of Solar Power Purchase from the Plant being set up by NTPC as a Commercial project on the land provided by the Administration of A&N will be examined at the time of True Up of petition no. 91/2012. However for the purpose of considering a financial provision[6] in the ARR for FY 2013-14, a generic Tariff of Rs 7.87/ Kwh as per CERC Tariff order no 243/SM/2012 dated October 25'2012 has been made, with Accelerated Depreciation considered to be availed by the Project Developer. The actual impact of provision of Land or any other issue will be examined at the time of True up of Petition no. 91/2012. The Petitioner has not made any provision in this regard in its ARR Petition for FY 2013-14.

For 100 KWp (2x50 KWp) solar projects installed on the Andaman & Nicobar Islands, the petitioner is directed to revive the operations of the said plants and may go in for Annual Maintenance Contract of these small solar power plants each of 50 KWp with the

[6] The petitioner has not considered the solar power in the total power purchase cost of FY 2013-14. However the petitioner has made a separate petition (93/2012) to the Commission for approval of the PPA to be signed with NTPC for procurement of Power from solar power plant for which the power is envisaged to be available from April 2013.

organization responsible for carrying out the maintenance activity of proposed 5 MW solar power plant; so that the AMC contractor shall not be hesitant to come from mainland for such a small contract and as such the consumers of A&N shall be able to get un-interrupted green power and the burden of the Administration of A&N due to high cost of diesel power is reduced. Besides, it also helps A&N to meet RPOs.

Additionally, four to six engineers/technicians of ED A&N who shall be actually deployed for the job of maintenance of solar power plants; should be initially trained at new site of 5 MW Solar Power Plant for upkeep and maintenance of 2 x 50 kWp plants, so as to equip the O&M personnel of department with the available technologies .The spares for such Plants may also be kept in stock for maintenance purpose. This may reduce the frequent dependency on the mainland for the purpose of maintenance.

iv. Inconsistencies has been observed in the submitted information in the petition in the absence of actual data in respect of PLF, heat rate, consumption of HSD, lubricating oil of the DG Sets owned by the ED- A&N. Further with reference to page xxxiv (a) & (b), the petitioner has used the Station heat rate and lubricating oil consumption norm of the IPP to project the consumption of HSD and lubricating oil for FY 2012-13 and FY 2013-14 for its own DG sets, Commission desired the information with regard to actual consumption of HSD, Lubricating oil, actual generation, auxiliary consumption, calorific value of fuel and its density to determine the actual heat rate for FY 2011-12, FY 2012-13(H1) and as such the additional information as submitted by the petitioner is accordingly considered for estimating the cost of power purchase and fuel & lubricants. As can be observed from the actual data, the PLFs, worked out station heat rate of the DG sets owned by the ED-A&N compare poorly with DG sets of IPP.

4.3.3 Quality and Reliability of Supply

Stakeholders Objections/Comments:

The main issue raised by the President-Humane Touch in brief is as under:

The stakeholder suggested that due to mismanagement and inefficiency of the department, the power supply is very erratic. In a small area, the distribution loss is more than 18%. Further , it was highlighted that there is frequent tripping of power in Bambooflat feeder, whenever it starts raining or due to slight blowing of winds. As in the areas so informed, which covers more than eight villages, no isolators/breakers have been installed, which pushes the total area into darkness in case of tripping even for line repairing faults. The student community suffers most in examination days in the month of February and July.

Petitioner's submission:

i. The petitioner submitted that the Electricity department has been making all efforts to provide quality and reliable power to the consumers of A&N Island. However, issue raised shall be looked into and appropriate steps shall be taken to resolve the same at earliest. The existing 33 KV feeder feeding the area mentioned by the stakeholder is proposed to be divided into three feeders within a year with suitable breakers & isolators, which will stabilize the power supply in the area. It is further submitted by the petitioner that appropriate steps shall be taken to ensure uninterrupted power supply during examination period as directed by the Commission in public hearing.

ii. The petitioner further submitted that the area of supply of the Electricity Department is spread across various Islands, and infrastructure and manpower is required to be maintained at every Island even for small number of consumers, as Islands are far away from each other and communication as well as travel between the Islands is very difficult. This has contributed to the high manpower cost. However, Electricity Department shall take steps to improve the standard of performance.

Commission's views:

i. Commission noted the concerns of various stakeholders in this regard, and hereby directs the petitioner to ensure uninterrupted power supply in general and during examination period of the students in particular and see that their career is not jeopardized due to Electricity failures. This aspect is being repeatedly emphasized by the Commission with the Petitioner since admission of the first petition. Commission also directed the Petitioner to go in for Energy Audit and to make a road map for reduction of T&D losses (which at present are around 18.03%), separating pilferage and distribution.

ii. Commission observed that there is a huge bill on Manpower and felt that manpower per consumer is very high. Also the high number of manpower is not commensurate with the quality of service as brought out by the stakeholders during the hearing.

PART 2: Tariff related

4.3.4 General Comments

Stakeholders Objections/Comments:

The main points raised by the Shri S M Mazumdar of Government Employees Federation (as stakeholder) and Shri A R Marudhavaanan in brief are as under:

i. The objectors pleaded for no increase in tariff either due to increase in Power purchase cost for purchase of power from the IPP, which might be due to fixing a revised project cost or increase in the diesel cost. The power tariff should be subsidized by the Administration as in the case of all other goods in these islands.

Petitioner's submission:

i. The Petitioner submitted that the Electricity Department, A&N has not proposed any increase in tariff for FY 2013-14. It is also highlighted that the electricity is already highly subsidized by Andaman & Nicobar Administration.

ii. It is further submitted that there is an under-recovery of average cost of supply of Rs. 18.59/kWh at current revenue realization rate of Rs. 4.09/unit. Considering the huge gap, the petitioner has requested the Commission to approve the tariff at current level.

Commission's views:

Commission noted the concerns of the stakeholders and submissions of the petitioner. It is a noted fact that the gap between the present tariff and cost of supply is huge; it could not be entirely met through the tariff hike alone. As such the periodic tariff hikes would not be of much help keeping in view the wide gap. At the same time considering the last tariff hike happened in 2008, and tariff hike prayed by the petitioner in the ARR & Tariff Petition for FY 2012-13; the tariff hike was inevitable during FY 2012-13, considering the requirement of funds at least to maintain reliable distribution network to provide a seamless supply of electricity and to keep the islands electrified. Historically, also there has been substantial gap between the actual cost of supply and revenue realized. This gap so far has been borne by the administration of A&N. Therefore keeping this fact in view the assessed gap of FY 2012-13 and FY 2013-14 will be borne by the Administration of A&N through the Non-Plan funding in Annual Plan by the Govt. of India to the Electricity Department of the Andaman & Nicobar Islands.

5. REVIEW OF ARR FOR FY 2012-13

5.1 Background

The Commission had approved the Aggregate Revenue Requirement for FY 2012-13 vide its ARR and tariff order dated June 04'2012 as per the provisions of the JERC tariff regulations 2009. The petitioner had submitted the revised estimates of sale of electricity, income and expenditure of FY 2012-13 for the review of ARR of FY 2012-13 which included the actuals of first half of FY 2012-13 and estimates of the balance year as per the Regulation 8 of JERC Tariff Regulations 2009, in ARR and tariff petition for FY 2013-14 on 29th November' 2012.

The Commission had considered the following for ARR of FY 2012-13 as per the JERC Tariff Regulations, prior to the submission of Petition for Performance Review:

i. Audited[7]Accounts for FY 2010-11;

ii. Actual Performance in FY 2011-12;

iii. Revised estimates of FY 2012-13 based on the data of first half of the year and projections for second half of the year.

Commission for this Review of FY 2012-13 has considered the following:

a. Actual Performance in FY 2011-12 and audited accounts of FY 2010-11;

b. Actual Power Purchase Quantum and Cost for FY 2012-13 from April 2012 to September 2012;

c. Details of sales & Revenue, Consumers and Connected Load for FY 2012-13 from April 2012 to September 2012.

d. Revised estimates of FY 2012-13 of O&M expenses, Capital Expenditure based on 6 month actuals of FY 2012-13;

e. Non-Tariff Income

f. Depreciation, Interest and Finance Charges, Interest on Working Capital, Interest on Security Deposit, and Return on Net Fixed Assets has been computed as per the JERC tariff regulations 2009.

[7]Audited Accounts of FY 2010-11 provided by the Petitioner.

5.2 Review of ARR for FY 2012-13

The review of aggregate revenue requirement requires assessment of quantum of energy sales, energy loss as well as various cost elements like power purchase cost, O&M expenses, interest cost and depreciation etc. This has been done based on actual data for 6 months for power purchase cost, and sales, and revised estimates of FY 2012-13 based on six months actuals for O&M expenses, interest and depreciation submitted by the petitioner. As regards to various components of ARR, the Commission's analysis thereon and decision in respect of items given below is discussed in the following paras:

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

x.Other expenses.

xi.Non-Tariff Income

5.3 Consumers, Connected load and Energy Sales

Petitioner's Submission

<u>Energy Sales</u>

The petitioner has stated that

Quote

"*The consumer base of EDA&N consists of Domestic, Commercial and Industry, consumers. Sales mix is primarily dominated by Domestic consumers, followed by Commercial consumers. The total consumption for Domestic consumers is approximate 47 percent and Commercial consumers contribute to around 27.17 percent of total sales. Thus, the sales forecast would completely depend on the sales expected in the Domestic & Commercial Category.*

The sales forecast is based on the trends observed in the sales pattern of various categories over the past years, new developments on account of Government Policies, Socio economic changes, industrial growth, etc. that would affect consumption across various categories of consumers. The CAGR (%) for period of five years (FY 2011-12 over FY 2007-08) for different categories has been adopted for estimating the energy sales for the FY 2012-13. Energy sales towards temporary connections has been added to commercial category as it observed that temporary connection are predominantly availed for commercial purposes. Consumption in temporary connection category in 2011-12 was 0.93 MUs. The same has been assumed for the year FY 2012-13 as CAGR for the category reflected abnormal growth trend. In addition to this, the growth trend in number of consumers and connected load have been taken as guiding factors in arriving at the requirement of demand and energy."

Unquote

The petitioner has considered the past trend for projecting the Energy Sales (MUs) and No. of Consumers, as mentioned in the following table:

Table 5.3.1 : Details of Energy Sales during Past years and estimations for FY 2012-13 (Sales in Million Units)

S. No.	Category	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13
		Actuals	**Actuals**	**Actuals**	**Actuals**	**Actuals**	**Revised Estimates**
1	Domestic	72.16	75.49	83.96	90.20	93.98	99.08
2	Commercial	39.15	42.61	49.12	52.17	54.02	57.56
3	Industry	8.03	7.67	8.72	8.64	10.89	11.57
4	Bulk	22.44	25.40	25.99	26.02	29.57	31.25
5	Public Lighting	7.35	8.62	8.36	9.15	9.26	9.69
6	Irrigation Pumps & Agriculture	0.72	0.69	0.74	0.83	0.90	0.94
	Total	149.85	160.48	176.89	187.01	198.62	**210.09**

Source : Table 4.1 of the Petition submitted by ED A&N

The petitioner has considered the average growth rate (%) for projecting the Energy Sales (MUs) for FY 2012-13 as mentioned in the following table:

Table 5.3.2 : Growth rate considered for FY 2012-13 (in %age)

S. No.	Category	Assumed Growth rate for FY 2012-13
1	Domestic	5.42%
2	Commercial	6.65%
3	Industry	6.28%
4	Bulk	5.67%
5	Public Lighting	4.72%
6	Irrigation Pumps & Agriculture	4.60%
	Total	**5.77%**

Source : Table 4.1 of the Petition submitted by ED A&N

As part of submission of additional data, the petitioner has furnished the month wise category wise actual energy sales for FY 2011-12 and FY 2012-13 (upto September).

Number of Consumers

The petitioner has stated that

Quote

"The forecast of number of consumers is based on the trends observed in the connections pattern of various categories over the past years, new developments on account of Government Policies, Socio economic changes, industrial growth, etc. that would affect consumption across various categories of consumers. The CAGR (%) for period of five years (FY 2011-12 over FY 2007-08) for different categories has been adopted for estimating the number of consumers for the FY 2012-13.

However, normalization has been undertaken for certain categories where an abnormal rise or reduction has been observed Temporary Connections has been added to commercial category as it observed that temporary connection are predominantly availed for commercial purposes."

UnQuote

Table 5.3.3 : Details of Number of Consumers during Past years (in Numbers)

S. No.	Category	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13
		Actuals	Actuals	Actuals	Actuals	Actuals	Petitioner's estimates for review
1	Domestic	65282	67990	76479	81741	91843	98333
2	Commercial	14677	15160	15626	16131	16767	17220
3	Industry	450	451	461	457	493	502
4	Bulk	40	46	44	48	55	59
5	Public Lighting	346	375	434	505	552	606
6	Irrigation Pumps & Agriculture	161	211	177	186	292	256
	Total	80956	84233	93221	99068	110002	116976

Source : Table 4.2 of the Petition submitted by ED A&N

Commission's analysis

As per the sub-regulation (2) (ii) of regulation 13 of JERC tariff regulations 2009,

Quote

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

Unquote

Commission estimated the second half of the current financial year based on the actual figures of for the first half of FY 2011-12 and FY 2012-13, which results in overall escalation of 1.99% which is reflective of and a measurable change expected to occur in the energy sales.

The approved Sales, Connected load and number of consumers for the FY 2012-13 have been shown in the table below:

Table 5.3.4 : Category wise Sales approved by the Commission for FY 2012-13 (in million units)

S. No.	Category	FY 2011-12	FY 2012-13			
		Actuals	Revised Estimates	Petitioner's submission[8] for H1	Commission's estimates for H2	Commission's estimates for the year
1	Domestic	93.98	99.08	49.00	50.25	99.25
2	Commercial	54.02	57.56	29.79	30.33	60.12
3	Industry	10.89	11.57	5.15	7.05	12.20
4	Bulk	29.57	31.25	14.40	14.32	28.72
5	Public Lighting	9.26	9.69	0.32	0.32	0.64
6	Irrigation Pumps & Agriculture	0.90	0.94	0.17	0.18	0.35
	Total	198.62	**210.09**	**98.83**	**102.45**	**201.28**

Table 5.3.5 : Category wise number of consumers approved by the Commission for FY 2012-13 (in numbers)

S. No.	Category	FY 2011-12	FY 2012-13		
		Actuals	Petitioner's estimates for review	Petitioner's submission[9] for H1	Approved
1	Domestic	91843	98333	92503	92503
2	Commercial	16767	17220	17107	17107
3	Industry	493	502	559	559
4	Bulk	55	59	57	57
5	Public Lighting	552	606	585	585
6	Irrigation Pumps & Agriculture	292	256	213	213
	Total	**110002**	**116976**	**111024**	**111024**

Table 5.3.6 : Category wise connected load approved by the Commission for FY 2012-13 (in KW)

S. No.	Category	FY 2011-12	FY 2012-13
		Actuals	Approved
1	Domestic	87679	89475
2	Commercial	46661	48711
3	Industry	10357	11083
4	Bulk	8601	8701
5	Public Lighting	2457	2483
6	Irrigation Pumps & Agriculture	641	644
	Total (in kW)	156396	161097
	Total (in MW)	**156**	**161**

8 Commission has considered the latest submission of the petitioner for actual energy sales, connected load and number of consumers vide their submission dated March 18'2013

9 Commission has considered the latest submission of the petitioner for actual energy sales, connected load and number of consumers vide their submission dated March 18'2013

5.4 Transmission & Distribution Loss

Petitioner's Submission

The petitioner has submitted that

Quote

"The significant reduction has been achieved in distribution losses during recent years. The petitioner further submits that the system improvement works executed every year under the plan schemes which have also contributed to the reduction of distribution losses. However, it may also be noted that reduction of distribution losses may not be possible beyond a certain level due to topographical conditions and technical limitation. The distribution losses in the ED A&N distribution network have been in the range of approximately 19% to 20% in the past. For the purpose of ARR of FY 2013-14, the losses have been retained at 18.03% for the FY 2012-13."

Unquote

Commission's Analysis

The Commission in its ARR and Tariff Order for FY 2012-13 had approved the targeted T&D loss level of 19.16%. The petitioner did not furnish the actual T&D loss for first half of FY 2012-13. However based on the actual figures of Sales and energy availability of FY 2011-12, the Commission has estimated from the available data the actual loss level for FY 2011-12 at 18.03%.

As per the regulation 15 of JERC Tariff regulations, 2009

"*15. AT& C Losses*

1. *The licensee shall give information of total AT&C losses in Previous Year and Current Year and the basis on which such losses have been worked out.*

2. *The licensee shall also propose a loss reduction programme for the Ensuing Year as well as for the next three years giving details of the measures proposed to be taken for achieving the same.*

3. *Based on the information furnished and field studies carried out and the loss reduction program proposed by the licensee, the Commission shall fix separate targets for reduction of Transmission and Distribution losses and for commercial efficiency for the period specified by the Commission:*

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

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

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

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

It is noted by the Commission that the petitioner has not provided the energy audit report nor any basis for reduction of T&D loss level from 19.77% in FY 2010-11 to 18.03% in FY 2011-12 (established from Petition 91/2012) as well as maintaining the same loss level in FY 2012-13 except that the petitioner has submitted that *'it may be noted that system improvement works executed every year under the plan schemes which have also contributed to the reduction of distribution losses'*.

The sharing of gain on account of over-achievement/under-achievement of target specified by the Commission will be dealt in the true-up of FY 2012-13 on the basis of final figures of available power, energy sales for FY 2012-13 as per the audited accounts.

Accordingly, for the purpose of this order the Commission, while taking into account the coastal environment and topography of these islands, **considers the T&D loss level of 18.03% as reasonable and approves the same for the purpose of Review of ARR of FY 2012-13.**

5.5 Energy Balance

Petitioner's Submission

The petitioner submits the energy requirement for sale within the islands is 256.31 Million Units for FY 2012-13, after considering the T&D losses of 18.03%.

As submitted by the petitioner,

Quote

"*The energy requirement of EDA&N is mainly met from own generation and power purchase from M/s SuryaChakra Corporation Limited. There is no availability of power from Central Generating Stations or from other sources/ open market/ power exchanges, etc. Own generation accounts for around 40.08% & 43.48% of the total power requirement for FY 2010-11 & 2011-12 respectively and power purchase accounts for around 59.20% &56.52 of the total power requirement for 2010-*

11 & 2011- 12 respectively and is estimated that approximately 41.59% & 58.41% of the total energy requirement for FY 2012-13 shall be met by own generation and power purchase respectively. The present scenario is likely to continue and is projected that approximately 41.59 % & 58.41 % of the total energy requirement for FY 2013-14 shall be met by own generation and power purchase respectively. "**Unquote**

Commission's Analysis

Based on the approved energy sales of 209.29 million units and T&D losses of 19.16% for FY 2012-13 in its tariff order dated June 04'2012, and the energy requirement for sale within the islands was approved for 258.89 million units for FY 2012-13.

Based on the actual performance of DG sets of IPP during first half of FY 2012-13 and the submissions made by the petitioner to increase the energy availability from their own DG sets during that period, Commission has taken a pragmatic view and considered the enhanced generation during second half of FY 2012-13 from the own DG sets of department, so that the consumers shall not suffer due to the shortage of power particularly in South Andaman.

The detailed analysis of Power Purchase from M/s SPCL and own generation has been discussed in para 5.6. As stated by the petitioner, the energy requirement is mainly met from own generation and power purchase from M/s SPCL and it can also be observed that the energy requirement of 29 islands vary during the year and is mainly met from the generating sets installed at that islands.

Commission's observations from the latest submissions of the petitioner dated March 18'2013 regarding total installed capacity and derated capacity of power houses operational for FY 2011-12 is mentioned below:

Table 5.5.1 : Details of contribution of DG sets owned by department and IPP for FY 2011-12

S.No.	Particulars	Installed Capacity(in MW)	Derated Capacity (in MW)	%age in total derated capacity	Actual Generation (in MUs)	%age in total generation
1.	IPP-SPCL	20	20	25%	140.95	56%
2.	DG sets owned by the department	55.96	49.25	69%	98.07	39%
3.	Hydro Power Plant	5.25	5.25	6%	11.33	5%
	Total	**81.21**	**74.50**	**100%**	**250.35**	**100%**

As can be seen from the above, the Diesel Generator Sets set up by IPP-SPCL of derated capacity of 20 MW out of a total derated capacity of 74.50 MW, generates 140.95 million units, whereas remaining 49.25 MW of DG sets set up by Electricity Department, A&N contribute only 98.07 million units. Thus, it is noted that the 25% out of the total derated capacity of generation are contributing more than 56% in the total generation in A&N Islands, whereas the remaining 69% of the installed derated capacity of DG sets owned by the department are contributing only 39% of the total generation. The above observation speaks of the heat rate and efficiency of the power houses maintained by the petitioner; the generation efficiency and the Plant load factor of each DG set seem to be very low. The Petitioner needs to look into this aspect carefully to reduce high generation cost of its own DG Sets.

It is in the light of this, the Commission had also desired information in the following directive gave by the Commission in the tariff order for FY 2012-13 dated June 04’2012

Quote

“*There are 135 no. of diesel generating sets excluding 4 DG sets of M/s SPCL located in 29 islands of Andaman & Nicobar catering to their electricity needs; the capacity of diesel generating sets of ED A&N varies from 12 KW to 2500 KW. The diesel is generally received in bulk in big tankers, thereafter it is transported to various islands in drums. Obviously, there are losses in transportation, storage and handling of which no assessment is available. It is understood that presently there is no system through which actual fuel consumption per generating station can be ascertained for generation of one unit of energy. In fact, there should also be proper accounting of generating unit wise fuel receipts & issues. The ED A&N is directed to evolve a system of accounting of fuel received at port, dispatched island wise, actual quantity received on the islands and actual quantity consumed island wise for generating electricity; so that actual fuel consumption per unit generation along with the variation could be worked out. Accordingly the petitioner is directed to furnish such details along with the next filing.* “ **unquote**

From the data of generation, derated capacity, consumption of HSD & Lubricating oil for FY 2011-12, FY 2012-13 (H1) furnished by the petitioner (as part of additional information). It could be observed that some of the own DG sets may be in the Standby mode of operation and some may be inefficient. Now the Commission feels that such DG sets are to be identified. It is however to be noted that the Petitioner had submitted the incomplete information required as part of ARR and Tariff petition for FY 2012-13. As such the fuel consumption and heat rate in the previous tariff order was provisionally considered subject to true-up based on the actual data to be submitted by the petitioner. It is further to be noted that the incomplete data was accepted in the petition for FY 2012-13 being the first petition of the ED-A&N, the data snags in respect of heat rate , PLF etc. will be covered under respective True up of the respective petitions.

The table below captures the figures as submitted by the petitioner and that approved for review of ARR of FY 2012-13.

Table 5.5.2 : Energy Balance

Sr. No.	Particulars	2012-13			
		Petitioner Submission	**Approved in T.O. dated 04.06.2012**	**Petitioner's estimates for review**	**Approved for Review**
1	2	3	4	5	6
A)	**ENERGY REQUIREMENT** (in MUs)				
1	Energy sales within the State/UT (in MUs)	216.02	209.29	210.09	201.28[10]
2	Energy sales to Agriculture consumers (included in total sales) (in MUs)	-	-	-	-
3	**Total sales within the State/UT**	**216.02**	**209.29**	**210.09**	**201.28**
4	**Transmission & Distribution losses**				
i)	%	19.16%	19.16%	18.03%	18.03%
ii)	MU	51.20	49.60	46.22	44.28
5	**Energy required for Sale to Retail Consumers**	**267.22**	**258.89**	**256.30**	**245.56**
6	**Total Energy Requirement for State/UT (5)**	**267.22**	**258.89**	**256.30**	**245.56**
B)	**ENERGY AVAILABILITY / PURCHASED**				
1	**Net Generation after auxillary consumption (in MUs)**	**267.21**	**258.67**	**256.30**	**245.56**
A	IPP	152.14	148.09	149.71	111.95[11]
B	Own Generation	115.07	110.58	94.45	121.39[12]
C	Hydel	-	-	12.14[13]	12.22
D	Solar Power Plant	-	-	-	-
5	**Energy (Surplus)/Gap**	**0.01**	**0.23**	**0.00**	**0.00**

Source: Table 4.3 of the Petition submitted by ED A&N

[10] Commission has considered the latest submission of the petitioner for actual energy sales, connected load and number of consumers vide their submission dated March 18'2013.

[11] The variation in the energy availability from the DG sets of M/s SPCL is due to actual performance during first half of FY 2012-13 at PLF of 58% on account of failure of one DG set of 5 MW. Commission has considered the operation of remaining three units and has considered the PLF of 74% (calculated in ratio of the total installed capacity) during second half of the FY 2012-13.

[12] In order to maintain the power supply in the affected areas of South Andaman, the power houses owned by the Department located at South Andaman are considered to be operational to take up the charge of providing un-interrupted power supply resulting in an increase in the generation from own DG sets and increase in the consumption of HSD and lubricating oil.

[13] The petitioner has considered the estimated generation of 12.33 MUs. Commission has therefore considered the energy availability after deducting the auxiliary consumption from the estimated generation from hydro power plants.

5.6 Power Purchase Quantum and Cost

Petitioner's Submission

Source of Power

The petitioner submits that ED A&N has 43 own generating stations and meets around 50% its total energy requirement from own generation. Balance requirement of power is met from purchase from SPCL. The electricity department has 42 Power houses at different locations in 29 electrified islands having 135 no. of installed Diesel Generating sets with capacity ranging from 12 KW to 2500 KW and one Hydro Power Station having 5.25 MW capacity at Kalpong at North Andaman. The aggregate installed capacity is 81.21 MW as on 31.03.2011 (including IPP of 20 MW) and firm capacity of 49.21 MW. The details of power generating stations are given below submitted as part of additional submission dated March 18'2013:

Table 5.6.1 : Details of power generating stations for FY 2011-12

S. No.	Source	Location	Installed Capacity (in MW)			Make	Derated Capacity (in MW)
			DG Size (KW)	No.s	MW		
Power Purchase from SPCL							
1	IPP - SPCL	South Andaman	5000	4	20	Mak-Catterpillar	20
Own Generation							
2	Chatham	South Andaman	2500	5	12.5	Bergen	10
3	Phoneix Bay	South Andaman	1000	2	2	Cummins	6.6
			1200	5	6	Cummins	
4	Raj Niwas	South Andaman	256	2	0.512	Cummins	0.512
5	Secretariat	South Andaman	256	1	0.256	Cummins	0.200
6	Neil Island	Neil Island	128	3	0.384	Greaves	0.500
			100	2	0.2	Cummins	
			50	1	0.05	Cummins	
7	Havelock	Havelock	256	5	1.28	Greaves	1.330
			50	1	0.05	Greaves	
8	RutLand	Rutland	12	1	0.012	Cummins	0.012
9	Baratang	Middle Andaman	256	1	0.256	Cummins	0.512
			256	1	0.256	Cummins	
10	Rangat Bay	Middle Andaman	800	4	3.2	Cummins	10.036
			1000	5	5	Cummins	
			248	7	1.736	Kirloskar	
			100	1	0.1	Cummins	
11	Long Island	Middle Andaman	128	4	0.512	Greaves	0.551
			65	2	0.13	Greaves	
			50	5	0.25	Ruston	

S. No.	Source	Location	Installed Capacity (in MW)			Make	Derated Capacity (in MW)
			DG Size (KW)	No.s	MW		
12	Strait Island	Strait Island	15	1	0.015	Cummins	0.015
13	Hanspuri	North Andaman	12	1	0.012	Cummins	0.027
			15	1	0.015	Cummins	
14	Jagannath Dera	North Andaman	24	1	0.024	Cummins	0.4275
			18.75	1	0.01875	Cummins	
15	Paschim Sagar	North Andaman	65	2	0.13	Cummins	0.18
			50	1	0.05	Cummins	
16	Smith Island	North Andaman	21	1	0.021	Ruston	0.045
			12	2	0.024	Ruston	
17	Sita Nagar	North Andaman	256	3	0.768	Cummins	1.800
			800	2	1.6	Cummins	
18	KHEP**	North Andaman	1750	3	5.25		5.25
19	Hutbay	Little Andaman	250	1	0.25	Cummins	5.756
			800	3	2.4	Cummins	
			1000	4	4	Cummins	
20	Dugong Creek	Little Andaman	16	2	0.032	Cummins	0.044
			15	1	0.015	Greaves	
21	NPH Car Nicobar	Car Nicobar	256	7	1.792	Geaves Cotton	5.255
			128	1	0.128	Cummins	
			1000	4	4	Cummins	
22	Kamorta	Nancowry	256	4	1.024	Cummins	1.024
23	Pillpillow	Nancowry	24	1	0.024	Kirloskar	0.032
			32	1	0.032	Kirloskar	
24	Kakana	Nancowry	24	1	0.024	Kirloskar	0.056
			32	1	0.032	Kirloskar	
25	Champion	Nancowry	65	3	0.195	Greaves	0.295
			50	2	0.1	Ruston	
26	Katchal	Katchal	250	3	0.75	Cummins	0.924
			50	3	0.15	Kirloskar	
			12	2	0.024	Cummins	
27	Teressa	Teressa	50	4	0.2	Kirloskar	0.662
			256	2	0.512	Cummins	
			32	1	0.032	Cummins	
			12	1	0.012	Kirloskar	
28	Chowra	Chowra	50	2	0.1	Kirloskar	0.164
			32	2	0.064	Kirloskar	
29	Campbell Bay	Great Nicobar	800	3	2.4	Cummins	2.295
			256	1	0.256	Cummins	

S. No.	Source	Location	Installed Capacity (in MW)			Make	Derated Capacity (in MW)
			DG Size (KW)	No.s	MW		
			50	1	0.05	Ruston	
	Total		**22547.75**	**142**	**81.21**	**0.00**	**74.50**
	Own Generation		**17547.75**	**138**	**61.21**		**54.50**

Assumptions for Power Generation/Projections of Power Purchase

The merit order dispatch principles are typically adopted when determining the power purchases from various generating stations. However, in the present petition, the petitioner has submitted that there is only one source for purchase of power and 100% of it's generation is available to EDA&N. Accordingly, EDA&N has considered utilization /purchase of the entire power available from all the possible sources during FY 2012-13 to meet the demand to the extent possible.

Power Purchase cost is a function of the energy requirement and price of available power from the different sources for meeting the energy requirement. The energy requirement of EDA&N for FY 2012-13 is proposed to be met from own generation & power purchase from SPCL. EDA&N has projected the quantum of power generation from own generating stations based on the units generated for the FY 2010-11 & 2011-12. The details of the computation of power generation and purchases are provided in Format-4 of the formats submitted along with the petition.

Table 5.6.2 : Summary of Power Purchase expenses of ED-A&N for FY 2012-13

Source	Purchase (MUs)	Pooled Losses	Energy recd. By Licensee (MUs)	FC (Rs. Crores)	VC (Rs. Crores)	Others (Rs. Crores)	Total (Rs. Crores)	Avg. Cost (Rs./Unit)
SPCL	149.71	0	149.71	-	-	-	166.27	11.10

Estimation of Power Purchase and Cost

The generation forecast is based on the plant availability and energy demand for the period. Accordingly, generation for FY 2012-13 is estimated.

Table 5.6.3 : Estimated Power Generation for FY 2012-13 (in million units) by petitioner

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13
Units Generated	88.34	79.28	94.28	99.24	109.41	110.26
Auxiliary consumption	3.04	3.43	3.57	4.14	4.05	3.67
Sent out	85.3	75.84	90.72	95.09	105.36	106.59

Cost of Fuel & Lubricants

The petitioner has submitted that out of total generation of 105.36 MUs in FY 2011-12, 98.07 MUs were generated from Diesel power houses and only 11.33 MUs were generated from Hydro Power Station. Hence cost of fuel (HSD and lubricants) is a major component of the cost of generation. Details of cost of fuel are provided below:

Table 5.6.4 : Estimated Cost of Fuel for FY 2012-13 by petitioner (in Rs. Crores)

Type of Fuel	FY 2011-12	FY 2012-13
HSD	89.96	98.65
Lubricants	2.05	2.29
Total	**92.02**	**100.93**

Commission's Analysis

As brought in the section on energy balance, the quantum of power purchase and from own generation, approved by the Commission in its Tariff order dated June 04'2012 was 148.09 million units and 110.58 million units at an approved power purchase cost of Rs. 159.20 Crores and cost of fuel of Rs. 95.03 Crores respectively.

The Commission as part of prudence check verified the station wise power purchase bills submitted by the petitioner for FY 2012-13 for first six months of power procured from DG sets set up by M/s SPCL. Commission has considered the actual HSD and lubricating oil consumption of FY 2011-12 and FY 2012-13 (H1), actual generation, auxiliary consumption, density of fuel, calorific value of fuel, which is used for estimating the heat rate and consumption of lubricating oil per liter.

Commission has also verified the quantum of diesel issued by the Department to IPP and own generation and has considered the rates of HSD and Lubricating oil as submitted by the petitioner for FY 2011-12. The position of receipts and issue of fuel is mentioned in the table below:

Table 5.6.5 : Position of receipts and issue of fuel during FY 2011-12

S. No.	Particulars	UoM	Total
1	Qty. of fuel receipt	kL	62506.4
2	Qty. of fuel issued to IPP	kL	34228
3	Cost of fuel issued to IPP	Rs.	1282867920
4	Cost of fuel (Rs./kL)-IPP	Rs./kL	*37480*
5	Qty. of fuel issued to own plants	kL	28278.4
6	Cost of fuel issued to own plants	Rs.	1061720832
7	Cost of fuel (Rs./kL)-Own	Rs./kL	*37545*

Accordingly, the analysis of the quantity of fuel issued and quantity of fuel consumed by IPP and own generation plants is shown below

Table 5.6.6 : Position of receipts and issued of fuel during FY 2011-12

Particulars	UoM	IPP (consumption as per bills)	IPP (actuals)	Own generation
Qty. of fuel issued	kL	34228	34228	28278.4
Qty. of fuel consumed	kL	33534	33588	28383.64
Difference	kL	694	640	-105.24
Efficiency of usage of fuel	%age	97.97%	98.13%	100.37%
Fuel (not used for consumption)	**%age**	**-2.0%**	**-1.9%**	**0.4%**

As can be observed, the table shows that the almost 2% of fuel issued to IPP (in accordance with the specified heat rate of 2010 k.Cal/kWh in the Power purchase agreement) is not used for generating units and the fuel consumed by the own generating stations is more than the quantity of fuel issued, it shows that the availability of fuel at the power house located at various islands is more than the required amount. In the light of this diversity in the data for power generation and consumption of fuel & lubricants, Commission directed the petitioner to evolve an accounting system to account every liter of fuel issued and consumed for generating electricity in an efficient manner. The above table also shows that the consumption of fuel by IPP is more than the fuel as estimated in accordance with the heat rate of 2010 k.Cal/kWh. Considering the heat rate of IPP which worked out to 2013 k.cal/kWh based on the quantity of fuel consumed as per the actuals submitted by the petitioner. Similarly consumption of lubricating oil per liter worked out as 1.28 gm/unit considering the actual consumption of lubricating oil for FY 2011-12.

The summary of power generated and delivered by M/s SPCL for first six months of FY 2012-13 as verified from the bills is mentioned below:

Table 5.6.7 : Summary of invoices of IPP (verified for FY 2012-13 (H1))

S. No.	Particulars	April	May	June	July	August	September
	Readings (in no. of days)	**30**	**31**	**30**	**31**	**31**	**30**
1	At Generation Point	9678400	9554700	8288400	6562500	8071400	9075400
2	At Delivery Point	9355600	9233400	8010160	6291120	7780440	8788120
3	Auxillary Consumption	322800	321300	278240	271380	290960	287280
4	Auxillary Consumption (%)	3.34	3.36	3.36	4.14	3.60	3.17
	PLF & Availability						
1	Installed Capacity (kWH/month)	14400000	14880000	14400000	14880000	14880000	14400000
2	Operating PLF for month	67.21%	64.21%	57.56%	44.10%	54.24%	63.02%
3	Average Capacity (in MW)	14.69	14.51	13.20	9.82	12.44	14.61
4	% age availability	73.45%	72.55%	66.00%	49.10%	62.20%	73.05%

Table 5.6.8 : Summary of calculation of HSD consumption by IPP for FY 2012-13 (H1)

S. No.	Particulars	April	May	June	July	August	September
1	Billing Units (KWh)	9678400	9554700	8288400	6562500	8071400	9075400
2	Total K. Cal @2010 K.Cal/KWh	19453584000	19204947000	16659684000	13190625000	16223514000	18241554000
3	Wt. Avg. Calorific Value (kCal/kg)	10263.18	10265.25	10264.28	10264.18	10267.36	10267.66
4	HSD Consumption (in Kgs) (2/3)	1895473	1870870	1623074	1285112	1580106	1776603
5	Density of HSD (ambient) (Kg/m^3)	0.8221256	0.8189644	0.8246988	0.8244259	0.825516	0.8240427
6	HSD Consumption (in Litres) (4/5)	2305576.3	2284433.7	1968080.7	1558796.7	1914082.5	2155959.7
7	Wt. Avg. Cost of HSD/KL (Rs.)	38345.17	38345.17	38345.17	38345.17	38352.13	40801.57
8	Cost of HSD consumed(in Rs.)	88407717	87596999	75466390	59772326	73409139	87966540.4

Table 5.6.9 : Summary of calculation of lub. oil consumption by IPP for FY 2012-13 (H1)

S.No.	Lube Oil Payment Calculation	April	May	June	July	August	September
1	Billing Units (KWh)	9678400	9554700	8288400	6562500	8071400	9075400
2	Total Consumption in Kgs @1.1 gm/kwh	10646.24	10510.17	9117.24	7218.75	8878.54	9982.94
3	Density of Lube Oil (Kg/m^3)	0.8894231	0.8894231	0.8894231	0.8894231	0.8894231	0.8894231
4	Lube Oil Consumption (in Litres)	11969.83	11816.84	10250.73	8116.22	9982.36	11224.06
5	Cost of Lube Oil/Litre (Rs.)	169.49	172.49	179.51	181.01	181.11	181.52
6	Cost of Lube Oil consumed (in Rs.)	2028765.9	2038286.6	1840109.3	1469116.3	1807904.9	2037391.73

The summary of verified quantum of power purchase units and cost for first six months of FY 2012-13 from IPP and own generation is presented below.

Table 5.6.10 : Summary of power purchase units and cost for first six months of FY 2012-13 (H1)

S. No.	Source	Actual Generation (in MUs) - H1	Availability/ PLF (in %)	Auxillary Consumption (in units)	Net Energy available/sent out (MU)
Power Purchase from SPCL					
1	IPP – SPCL	51.23	58.32%	1771960	49.46
Own Generation					
2	Chatham	22.02	50.13%	790270	21.23
3	Phoneix Bay	11.50	39.67%	291520	11.21
4	Raj Niwas	0.04	1.95%	0	0.04
5	Secretariat	0.00	0.41%	0	0.00
6	Neil Island	0.50	22.59%	8515	0.49
7	Havelock	2.09	35.75%	4087	2.08
8	RutLand	0.01	10.46%	155	0.01
9	Baratang	0.12	5.37%	770	0.12
10	Rangat Bay	9.67	21.94%	480858	9.19
11	Long Island	0.21	8.63%	11800	0.20
12	Strait Island	0.03	39.90%	25	0.03
13	Hanspuri	0.01	9.44%	1120	0.01
14	Jagannath Dera	0.02	1.20%	1832	0.02
15	Paschim Sagar	0.00	0.00%	0	0.00
16	Smith Island	0.02	11.84%	923	0.02
17	Sita Nagar	1.30	16.44%	12718	1.29
18	KHEP**	5.31	23.02%	47316	5.26
19	Hutbay	4.65	18.76%	207556	4.45
20	Dugong Creek	0.01	7.55%	263	0.01
21	NPH Car Nicobar	4.31	18.67%	218760	4.09
22	Kamorta	1.18	26.32%	4427	1.18
23	Pillpillow	0.00	0.00%	0	0.00
24	Kakana	0.00	0.00%	0	0.00
25	Champion	0.14	10.60%	2860	0.13
26	Katchal	0.58	14.34%	12052	0.57
27	Teressa	0.38	13.01%	5940	0.37
28	Chowra	0.11	15.77%	4270	0.11
29	Campbell Bay	1.48	14.64%	39130	1.44
	Total	**116.93**	**0.36**	**3919127.00**	**113.01**
	Own Generation	**65.69**	**0.27**	**2147167.00**	**63.55**

** Hydro Power Plant at kalpong, North Andaman

Table 5.6.11 : Summary of fuel cost and power purchase cost of FY 2012-13 (H1)

S. No.	Source	Heat Rate (2012-13)-H1	HSD Consumption (in liters)	Consumption of lubricating oil (in gm./ unit)	Lube Oil Consumption (in liters)	HSD Cost (Rs. Crores	Lube Oil Cost (Rs. Crores)	Total Amount (Rs. Crores)
Power Purchase from SPCL								
1	IPP – SPCL	2010	12186930	1.10	63360	47.26	1.12	56.05
Own Generation								
2	Chatham	2417	6297289	1.73	42840.00	24.41	0.76	25.17
3	Phoneix Bay	2369	3223588	0.82	10560.00	12.49	0.19	12.68
4	Raj Niwas	3995	20690	2.86	141.00	0.08	0.00	0.08
5	Secretariat	3917	1687	0.00	0.00	0.01	0.00	0.01
6	Neil Island	3529	207170	2.86	1595.00	0.80	0.03	0.83
7	Havelock	2677	661292	0.62	1466.00	2.56	0.03	2.59
8	RutLand	3274	2135	5.00	31.00	0.01	0.00	0.01
9	Baratang	2596	37075	1.02	138.00	0.14	0.00	0.15
10	Rangat Bay	2456	2811190	1.00	10857.00	10.89	0.19	11.09
11	Long Island	3031	74865	3.78	888.00	0.29	0.02	0.31
12	Strait Island	2172	6756	2.95	87.10	0.03	0.00	0.03
13	Hanspuri	2696	3571	2.38	30.00	0.01	0.00	0.01
14	Jagannath Dera	3968	10597	2.72	68.94	0.04	0.00	0.04
15	Paschim Sagar	0	0		0.00	0.00	0.00	0.00
16	Smith Island	2821	7809	2.55	67.00	0.03	0.00	0.03
17	Sita Nagar	2685	412790	0.93	1361.00	1.60	0.02	1.62
18	KHEP**	3	1315	0.01	26.00	0.01	0.00	0.01
19	Hutbay	2338	1287495	0.72	3773.00	4.99	0.07	5.06
20	Dugong Creek	4220	7282	7.50	123.00	0.03	0.00	0.03
21	NPH Car Nicobar	2366	1206760	0.79	3845.00	4.68	0.07	4.75
22	Kamorta	2558	358360	1.05	1402.00	1.39	0.02	1.41
23	Pillpillow		0		0.00	0.00	0.00	0.00
24	Kakana		0		0.00	0.00	0.00	0.00
25	Champion	3329	54090	2.67	412.00	0.21	0.01	0.22
26	Katchal	2591	178345	2.66	1742.00	0.69	0.03	0.72
27	Teressa	2635	117959	1.34	572.00	0.46	0.01	0.47
28	Chowra	3044	40915	2.16	276.00	0.16	0.00	0.16
29	Campbell Bay	2545	444230	1.26	2090.00	1.72	0.04	1.76
	Total	**2162.75**	**29662184.65**	**1.13**	**147751.08**	**114.99**	**2.62**	**125.27**

S. No.	Source	Heat Rate (2012-13)-H1	HSD Consumption (in liters)	Consumption of lubricating oil (in gm./ unit)	Lube Oil Consumption (in liters)	HSD Cost (Rs. Crores	Lube Oil Cost (Rs. Crores)	Total Amount (Rs. Crores)
	Own Generation	2283.38	17475255.00	1.16	84391.04	67.73	1.50	69.22

Quantum and Cost of Power Generation and Purchase of Power

Diesel Generating Station – IPP- M/s SPCL

While estimating the energy availability and cost second half for FY 2012-13, prudence check has been carried out on the basis of six invoices issued by M/s SPCL (from April to September 2012) to ED A&N in order to verify HSD consumption and payment made thereof by the Electricity Department, The abstract of IPP invoices for FY 2012-13 including unit generation, auxiliary consumption HSD and Lubricating oil consumption are mentioned in the tables above. The following has been considered for estimating the energy availability and cost for second half of FY 2012-13 from M/s SPCL:

- Actual gross generation from Diesel generating unit of M/s SPCL verified from the power purchase bills submitted by the petitioner for full year of FY 2011-12 and for FY 2012-13 (H1) has been considered in order to estimate the energy availability for second half of FY 2012-13. The average growth rate of 8.13% from FY 2011-12 over FY 2010-11 has been considered for arriving at the units generated for FY 2012-13.

- Auxillary Consumption of 3.46% as verified from the power purchase bills submitted by the petitioner for first half of FY 2012-13 has been considered for second half of FY 2012-13.

- HSD and Lubricating oil consumption has been calculated considering the following as per the power purchase bills of FY 2012-13 (H1):

    - For consumption & cost of HSD

        - Gross heat rate of 2010 Kcal/Kwh;

        - Average Calorific value and Density of HSD of FY 2012-13 (H1);

        - Actual Cost of HSD as on September 2012.

    - For consumption & cost of Lubricating Oil

        - Normative usage has been considered (1.1 gm per unit);

        - Average Density of Lub. Oil of FY 2012-13 (H1);

  - Actual Cost of Lub. Oil as on September 2012.

- Actual fixed cost as per the power purchase bills of FY 2012-13 (H1) has been considered for projecting the cost of FY 12-13 (H2).
- Rebate has not been considered as calculated for previous year for maintaining the high PLF, considering that the same may not be applicable for second half of FY 2012-13.

Table 5.6.12 : Details of HSD and Lub. Oil for FY 2012-13 (H1)

S. No.	Particulars	Average of FY 2012-13 (H1)
1	Wt. Avg. Calorific Value of 1 Kg. HSD (K.Cal./KWh)	10265
2	Density of HSD (ambient) (Kg/m^3)	0.8233
3	Density of Lub. Oil (Kg/m^3)	0.889
4	Cost of HSD (Rs. per Kilo litre) for September 2012	40801.57
5	Cost of Lub. Oil (Rs. per litre) for September 2012	181.52

Department's Own Generation

Commission has considered the auxillary consumption, minimum heat rate (out of estimated heat rate of FY 2011-12 and FY 2012-13), average calorific value of fuel, density of fuel & lubricating oil of first half of FY 2012-13 (H1), cost of HSD & lubricating oil in the month of September 2012 and consumption of lubricating oil per liter, derated capacity of first half of FY 2012-13 (H1) for estimating the energy availability and cost for second half of FY 2012-13 (H2). Commission has considered the growth in the plant load factor to cater to the demand estimated for second half of FY 2012-13.

Accordingly, the Commission approves the following power purchase/generation from below mentioned stations based on the merit order dispatch principles for remaining six months of FY 2012-13:

Table 5.6.13 : Summary of power purchase units (estimated) for second six months of FY 2012-13 (H2)

S. No.	Source	Generation at its full load (in KWh)-H2	Availability/ PLF (in %)-H2	Estimated Generation (in MUs) - H2	Auxillary Consumption (%)	Auxillary Consumption (in units)-H2	Net Energy available/sent out (MU)-H2
Power Purchase from SPCL							
1	IPP - SPCL	87360000	74.10%	64.73	3.46	2.24	62.49
Own Generation							
2	Chatham	43680000	50.13%	21.90	3.59	0.79	21.11
3	Phoneix Bay	28828800	53.34%	15.38	2.54	0.39	14.99
4	Raj Niwas	2236416	2.04%	0.05	0.00	0.00	0.05

S. No.	Source	Generation at its full load (in KWh)-H2	Availability/ PLF (in %)-H2	Estimated Generation (in MUs) - H2	Auxillary Consumption (%)	Auxillary Consumption (in units)-H2	Net Energy available/sent out (MU)-H2
5	Secretariat	873600	0.44%	0.00	0.00	0.00	0.00
6	Neil Island	2184000	23.72%	0.52	1.72	0.01	0.51
7	Havelock	5809440	37.53%	2.18	0.20	0.00	2.18
8	RutLand	52416	10.98%	0.01	2.81	0.00	0.01
9	Baratang	2236416	5.64%	0.13	0.64	0.00	0.13
10	Rangat Bay	43837248	23.04%	10.10	4.97	0.50	9.60
11	Long Island	2406768	9.06%	0.22	5.65	0.01	0.21
12	Strait Island	65520	41.90%	0.03	0.10	0.00	0.03
13	Hanspuri	117936	9.91%	0.01	10.00	0.00	0.01
14	Jagannath Dera	1867320	1.26%	0.02	8.12	0.00	0.02
15	Paschim Sagar	786240	0.00%	0.00	0.00	0.00	0.00
16	Smith Island	196560	12.43%	0.02	3.95	0.00	0.02
17	Sita Nagar	7862400	17.26%	1.36	0.98	0.01	1.34
18	KHEP**	22932000	27.79%	7.03	0.89	0.06	6.96
19	Hutbay	24679200	19.70%	4.86	4.46	0.22	4.64
20	Dugong Creek	192192	7.92%	0.02	1.80	0.00	0.01
21	NPH Car Nicobar	22953840	19.61%	4.50	5.08	0.23	4.27
22	Kamorta	4472832	27.64%	1.24	0.37	0.00	1.23
23	Pillpillow	139776	0.00%	0.00	0.00	0.00	0.00
24	Kakana	244608	0.00%	0.00	0.00	0.00	0.00
25	Champion	1288560	11.13%	0.14	2.08	0.00	0.14
26	Katchal	4036032	15.05%	0.61	2.07	0.01	0.59
27	Teressa	2891616	13.66%	0.40	1.57	0.01	0.39
28	Chowra	716352	16.56%	0.12	3.76	0.00	0.11
29	Campbell Bay	10024560	15.37%	1.54	2.65	0.04	1.50
	Total	**324972648**	**37.57%**	**137.10**	**3.35**	**4.54**	**132.56**
	Own Generation	**237612648**	**28.87%**	**72.36**	**3.27**	**2.30**	**70.06**

Table 5.6.14 : Summary of power purchase and fuel cost for second six months of FY 2012-13 (H2)

S. No.	Source	Estimated Generation (in MUs)	Heat Rate	HSD Consumption (in liters)	Specific consumption (in gm./ unit)	Lube Oil Consumption (in liters)	HSD Cost (Rs. Crores)	Lube Oil Cost (Rs. Crores	Total Amount (Rs. Crores)
Power Purchase from SPCL									
1	IPP - SPCL	64.73	2010	15395725	1.10	80060.18	62.82	1.45	72.13
Own Generation									
2	Chatham	21.90	2417	6262878	1.73	42605.90	25.55	0.77	26.33
3	Phoneix Bay	15.38	2364	4300974	0.82	14123.34	17.55	0.26	17.81
4	Raj Niwas	0.05	3951	21370	2.86	147.24	0.09	0.00	0.09

S. No.	Source	Estimated Generation (in MUs)	Heat Rate	HSD Consumption (in liters)	Specific consumption (in gm./ unit)	Lube Oil Consumption (in liters)	HSD Cost (Rs. Crores)	Lube Oil Cost (Rs. Crores	Total Amount (Rs. Crores)
5	Secretariat	0.00	3494	1572	0.00	0.00	0.01	0.00	0.01
6	Neil Island	0.52	3439	210862	2.86	1665.60	0.86	0.03	0.89
7	Havelock	2.18	2676	690359	0.62	1530.89	2.82	0.03	2.84
8	RutLand	0.01	2368	1613	5.00	32.37	0.01	0.00	0.01
9	Baratang	0.13	2596	38716	1.02	144.11	0.16	0.00	0.16
10	Rangat Bay	10.10	2396	2863411	1.00	11337.56	11.68	0.21	11.89
11	Long Island	0.22	2964	76450	3.78	927.30	0.31	0.02	0.33
12	Strait Island	0.03	2172	7055	2.95	90.96	0.03	0.00	0.03
13	Hanspuri	0.01	2696	3729	2.38	31.33	0.02	0.00	0.02
14	Jagannath Dera	0.02	3968	11066	2.72	71.99	0.05	0.00	0.05
15	Paschim Sagar	0.00		0		0.00	0.00	0.00	0.00
16	Smith Island	0.02	2821	8155	2.55	69.97	0.03	0.00	0.03
17	Sita Nagar	1.36	2685	431061	0.93	1421.24	1.76	0.03	1.78
18	KHEP**	7.03	2	1741	0.00	34.42	0.01	0.00	0.01
19	Hutbay	4.86	2338	1344482	0.72	3940.00	5.49	0.07	5.56
20	Dugong Creek	0.02	3995	7199	7.50	128.44	0.03	0.00	0.03
21	NPH Car Nicobar	4.50	2360	1257057	0.79	4015.19	5.13	0.07	5.20
22	Kamorta	1.24	2545	372314	1.05	1464.06	1.52	0.03	1.55
23	Pillpillow	0.00		0		0.00	0.00	0.00	0.00
24	Kakana	0.00		0		0.00	0.00	0.00	0.00
25	Champion	0.14	3221	54656	2.67	430.24	0.22	0.01	0.23
26	Katchal	0.61	2587	185973	2.66	1819.10	0.76	0.03	0.79
27	Teressa	0.40	2635	123180	1.34	597.32	0.50	0.01	0.51
28	Chowra	0.12	3042	42706	2.16	288.22	0.17	0.01	0.18
29	Campbell Bay	1.54	2517	458910	1.26	2182.51	1.87	0.04	1.91
	Total	**137.10**	**2109**	**34173213.5**	**1.1**	**169159.5**	**139.4**	**3.07**	**150.36**
	Own Generation	**72.36**	**2195**	**18777488.1**	**1.1**	**89099.3**	**76.6**	**1.62**	**78.23**

Renewable Purchase Obligations

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

"

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

"

The petitioner has to purchase 3% of total consumption of all the consumers in its area as power purchase from renewable sources for FY 2012-13 including 0.40% for Solar and 2.60% for Non-Solar.

Commission had assumed in Tariff order dated June 04'2012 that the utility shall meet its overall RPO target of 3% of total consumption of all the consumers in its area during the year through the units generated by hydro-electric power plant of capacity 5.25 MW. As part of the additional submission, the petitioner has now provided the operation & maintenance expenses incurred on the operations of KHEP. Further , the petitioner has also submitted the HSD consumption and lubricating oil consumption during FY 2011-12 and FY 2012-13 (H1) for generating energy from hydro-electric plant. Commission has therefore considered the same in the analysis and considered the cost of fuel & lubricants attributed to the hydro-electric power plant on account of DG sets installed to provide the power for running the hydro station.

Summary of total approved Power Purchase Cost for Review of ARR of FY 2012-13

While estimating the total power purchase cost, station wise energy availability and power purchase cost & fuel cost as discussed in earlier paras has been considered. **Commission considers the total Power purchase cost of Rs. 128.18 Crores and the fuel cost of own generating stations of Rs. 147.46 Crores for procuring 111.95 million units of energy and generating 138.06 million units of electricity (net availability of 133.61 million units) as reasonable and approves the same for Review of ARR for FY 2012-13.** The summary of total power purchase quantum and cost including own generation is mentioned below:

Table 5.6.15 : Revised Estimates Power Purchase Cost including Fuel cost of own generation for FY 2012-13

S. No.	Source	Total Generation	Net Energy available/ Purchased	HSD Cost (Rs. Crores)	Lube Oil Cost (Rs. Crores)	Total	Rs./KWh
		(in MUs)	(in MUs)			(Rs. Crores)	
Power Purchase from SPCL							
1	IPP - SPCL	115.96	111.95	110.08	2.58	128.18	11.45[14]
Own Generation							
2	Chatham	43.92	42.34	49.96	1.53	51.49	11.73[15]
3	Phoneix Bay	26.88	26.20	30.04	0.44	30.49	11.34
4	Raj Niwas	0.09	0.09	0.17	0.01	0.17	19.28
5	Secretariat	0.01	0.01	0.01	0.00	0.01	17.40
6	Neil Island	1.01	1.00	1.66	0.06	1.72	16.97
7	Havelock	4.27	4.26	5.38	0.05	5.43	12.73
8	RutLand	0.01	0.01	0.01	0.00	0.02	14.19
9	Baratang	0.25	0.25	0.30	0.01	0.31	12.43
10	Rangat Bay	19.77	18.79	22.58	0.40	22.98	11.62
11	Long Island	0.43	0.40	0.60	0.03	0.63	14.87
12	Strait Island	0.05	0.05	0.05	0.00	0.06	10.82

[14] Cost of power purchase /unit

[15] Cost of fuel purchased/unit of generation

S. No.	Source	Total Generation (in MUs)	Net Energy available/ Purchased (in MUs)	HSD Cost (Rs. Crores)	Lube Oil Cost (Rs. Crores)	Total (Rs. Crores)	Rs./KWh
13	Hanspuri	0.02	0.02	0.03	0.00	0.03	13.18
14	Jagannath Dera	0.05	0.04	0.09	0.00	0.09	19.24
15	Paschim Sagar	0.00	0.00	0.00	0.00	0.00	-
16	Smith Island	0.05	0.05	0.06	0.00	0.07	13.80
17	Sita Nagar	2.66	2.63	3.36	0.05	3.41	12.83
18	KHEP**	12.33	12.22	0.01	0.00	0.01	0.01
19	Hutbay	9.52	9.09	10.48	0.14	10.61	11.15
20	Dugong Creek	0.03	0.03	0.06	0.00	0.06	20.84
21	NPH Car Nicobar	8.81	8.36	9.81	0.14	9.95	11.29
22	Kamorta	2.42	2.41	2.91	0.05	2.96	12.23
23	Pillpillow	0.00	0.00	0.00	0.00	0.00	-
24	Kakana	0.00	0.00	0.00	0.00	0.00	-
25	Champion	0.28	0.27	0.43	0.02	0.45	15.95
26	Katchal	1.19	1.16	1.45	0.06	1.51	12.73
27	Teressa	0.77	0.76	0.96	0.02	0.98	12.68
28	Chowra	0.23	0.22	0.33	0.01	0.34	14.77
29	Campbell Bay	3.02	2.94	3.59	0.08	3.67	12.17
	Total	**254.02**	**245.56**	**254.42**	**5.69**	**275.64**	**10.85**
	Own Generation	**138.06**	**133.61**	**144.34**	**3.12**	**147.46**	**10.68**

** Hydro Power Plant

It is seen that in the case of A&N, the generation is mostly diesel based, making per unit cost of generation very high compared to other utilities. **If the units generated by hydro-electric plant are excluded from the total generation, the average fuel cost of DG sets of own generation works out at Rs. 11.73 per unit for FY 2012-13.** In view of the higher cost of diesel generation, the approved tariff is not covering the full cost of supply. Historically, there has been substantial gap between the actual cost of supply and revenue realized. This gap so far has been borne by the administration of A&N.

Keeping the above fact in view, the Commission is of the view that any variation is power purchase cost (including variation in cost of their own generation) should, for the time being, be borne by the utility.

5.7 Operation and Maintenance Expenses

Petitioner's Submission

The petitioner has submitted that the Operation and Maintenance expenses comprise of the following heads:

- **Employees Expenses** which includes the salaries, dearness allowances, dearness pay, other allowances and retirement benefits paid to the staff;
- **Repair and Maintenance (R&M) Expenses**, which include all expenditure incurred on the maintenance and upkeep of transmission and distribution assets; and
- **Administrative and General Expenses**, which include all expenditure incurred in operating a business such as telephone charges, regulatory and consultancy fees such as energy auditing and chartered accountant fees, conveyance and travel expenses, water charges etc.

The petitioner has submitted the operation and maintenance cost of previous years for consideration by the Hon'ble Commission as mentioned below:

Table 5.7.1 : O&M expenses of previous years

Year	O&M Expenses (Rs. Crores)
2005-06	53.60
2006-07	57.10
2007-08	60.70
2008-09	63.90
2009-10	68.70
2010-11	71.60
2011-12	78.26
2012-13 (RE)	85.93

Source: Table 4.12 of the Petition submitted by ED A&N

5.7.1 Employee Expenses

Petitioner's submission

The petitioner has submitted that the expense head of employee cost consists of salary and allowance, bonus, Leave Travel Concession (LTC) & Honorarium etc. and has estimated the employee cost for FY 2012-13 taking into consideration increase in the basic salary and related other remunerations at the rate of 8.76% i.e (WPI from 2010-11 to 2011-12) over cost for the year 2011-12. The petitioner therefore requested the Commission to approve the employee expenses of Rs. 49.30 Crores for FY 2012-13.

Commission's Analysis

As per the regulation 27 of JERC tariff regulations 2009

Quote

"27. Operation and Maintenance Expenses

1) *'Operation & Maintenance expenses' or 'O&M expenses' shall mean repair and maintenance (R&M) expenses, employee expenses and administrative & general (A&G) expenses including insurance.*

   While determining the O&M expenses for generation functions within the State, the Commission shall be guided, as far as feasible, by the principles and methodologies of CERC on the manner, as amended from time to time.

2) *While determining the O&M expenses for transmission functions within the State, the Commission shall be guided, as far as feasible by the principles and methodologies specified by CERC on the matter, as amended from time to time:*

   Provided further that the Commission may, if it considers it just, practical and proper considering the size of the total transmission system of, and the quantum of electricity handled by, an integrated utility, treat its transmission system as an integral part of its distribution system itself.

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

   - *O&M expenses as approved by the Commission for the first time for a year shall be considered as base O&M expenses for determination of O&M expenses for subsequent years;*
   - *Base O&M expenses as above shall be adjusted according to variation in the rate of WPI per annum to determine the O&M expenses for subsequent year, where WPI is the Wholesale Price Index on April 1 of the relevant year;*
   - *In case of unbundling of the Electricity Department and formation of separate distribution companies, the Commission will make suitable assessment of base O&M expenses of individual distribution companies separately and allow O&M expenses for subsequent years for individual companies on the basis of such estimation and above principle.*

4) *O&M expenses of assets taken on lease/hire-purchase and those created out of the consumers' contribution shall be considered in case the generating company or the*

licensee has the responsibility for its operation and maintenance and bear O&M expenses.

5) *O&M expenses for gross fixed assets added during the year shall be considered from the date of commissioning on pro-rata basis.*

6) *O&M expenses for integrated utility shall be determined by the Commission on the norms and principles indicated above. "*

Unquote

Commission observes the employee expenses approved for FY 2012-13 are Rs. 49.30 Crores after considering the capitalization of 36.04 Crores as was submitted by the petitioner. The actual employee cost for FY 2011-12 is Rs. 78.46 Crores and after deducting the capitalization of Rs. 34 Crores, it works out to Rs. 44.46 Crores for FY 2011-12. Commission has analyzed the past trends and the employees expenses approved in the tariff order dated June 04'2012 for FY 2012-13 and is of the view that the actual data of FY 2011-12 shows true depiction of expenses incurred by the utility. Commission has therefore considered the actuals of FY 2011-12 as a revised base for calculating the employee cost for FY 2012-13. The escalation factor used by the Commission is 8.94%[16] per annum. The WPI index upto August 2012 has been used (as available on the website of Economic Advisor, Ministry of Commerce and Industry) for estimation of the increase in the average of WPI index from FY 2010-11 to FY 2011-12. Thus, the employee expenses approved for FY 2011-12 have been escalated by the WPI factor of 8.94[17]% to determine the employee expenses for FY 2012-13. Commission has considered the capitalization in the employee cost at Rs. 36.04 Crores as submitted by the petitioner for review of FY 2012-13 and has deducted the same from estimated employee expenses of Rs. 85.47 Crores for FY 2012-13.

Commission considers the employee cost of Rs. 49.43 Crores as reasonable and approves the same for Review of ARR for FY 2012-13.

5.7.2 Administration and General Expenses

Petitioner's submission

The petitioner has submitted that the A&G expenses comprise of the following broad sub-heads of expenditure, viz.

- Domestic Travelling Expenses,

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

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

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

The A&G expenses of ED A&N for FY 2011-12 are Rs. 2.20 Crores. A&G expenses for the FY 2012-13 is estimated at Rs. 2.40 Crores which are escalated by 8.76% i.e (WPI from 2010-11 to 2011-12) over cost for the year 2011-12. The petitioner therefore has requested the Commission to approve the A&G expenses of Rs. 2.40 Crores for FY 2012-13. The escalation is to absorb the normal inflationary increases in the costs. The Administration & General expense of previous years is presented below:

Table 5.7.2.1 : A&G expenses of previous years

Year	A&G Expenses (Rs. Crores)
2004-05	1.40
2005-06	1.51
2006-07	1.60
2007-08	1.69
2008-09	1.71
2009-10	1.88
2010-11	2.02
2011-12	2.20

Source: Table 4.13 of the Petition submitted by ED A&N

Commission's Analysis

The Commission is of the view that the actual data of FY 2011-12 is a true depiction of expenses incurred by the utility. The Commission has therefore considered the actuals of FY 2011-12 as a revised base for calculating the A&G expenses for FY 2012-13 in line with the JERC Tariff Regulations.

The Commission has considered the WPI index upto August 2012 (as available on the website of Economic Advisor, Ministry of Commerce and Industry) for estimation of the increase in the average of WPI index from FY 2010-11 to FY 2011-12. The actual expenses for FY 2011-12 have been escalated by the WPI factor of 8.94[18]% to determine the expenses for FY 2012-13.

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

Commission considers the Administration and General Expenses of Rs. 2.40 Crores as reasonable and approves the same for Review of ARR for FY 2012-13.

5.7.3 Repair and Maintenance Expenses

Petitioner's submission

The petitioner has submitted that they have been undertaking various Repairs and Maintenance activities as a step towards improvement of systems, reduction in breakdowns, reduction in response time and increasing preventive maintenance. The R&M expenses for FY 2012-13 are escalated by 8.76% over actual expenses for FY 2011-12 to capture the inflationary increases in the costs. The petitioner therefore has requested the Commission to approve R&M expenses of Rs. 34.23 Crores for FY 2012-13.

Commission's Analysis

Commission observes the Repair and Maintenance expenses approved for FY 2012-13 as Rs. 34.36 Crores and the actuals figures of Repair and Maintenance expenses of FY 2011-12 is Rs. 31.48 Crores. Commission has analyzed the past trends, the Repair and Maintenance expenses of Rs. 34.36 Crores approved in the tariff order dated June 04' 2012 for FY 2012-13, actuals of past years as submitted by the petitioner.

The Commission recognizes the requirement of the maintenance activities and also observes that the R&M expenses proposed by the petitioner amounting to Rs 34.23 Crores are lower than that approved in the order dated June 04'2012.

The Commission has considered the WPI index upto August 2012 (as available on the website of Economic Advisor, Ministry of Commerce and Industry) for estimation of the increase in the average of WPI index from FY 2010-11 to FY 2011-12. The actual expenses for FY 2011-12 have been escalated by the WPI factor of 8.94[19]% to determine the expenses for FY 2012-13.

Therefore the Commission considers the Repair and Maintenance expenses of Rs. 34.29 Crores as reasonable and approves the same for Review of ARR for FY 2012-13.

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

5.7.4 Summary of O & M Expenses

The overall summary of O&M expenditure estimated by the petitioner vis-à-vis approved by the Commission in its previous tariff order for FY 2012-13 and revised estimates submitted by the Petitioner for review for FY 2012-13 is given below:

Table 5.7.4.1 : Summary of O & M expenses (in Rs. Crores)

Sr. No.	Particulars	2011-12	2012-13			
		Actuals	**Petitioner Submission**	**Approved in TO dated 04.06.2012**	**Petitioner's estimates for review**	**Approved by the Commission**
1	2	3	4	5	6	7
1	Employee Expenses	44.46	49.71	49.30	49.30	49.43
2	A&G Expenses	2.20	2.39	2.39	2.40	2.40
3	R&M Expenses	31.48	32.09	34.36	34.23	34.29
4	Total O&M Expenses	**78.14**	**84.19**	**86.05**	**85.93**	**86.12**

5.8 Capital Expenditure and Capitalization

Petitioner's Submission

The petitioner has submitted the infrastructure inherited by ED A&N is insufficient to cater to the present load and hence to meet the increasing demand it is absolutely necessary to undertake significant capital expenditure.

The objective of incurring the capital expenditure is also to upgrade and strengthen the distribution network to meet the desirable standards of performance and provide better network reliability and sustainable performance to the consumers of EDA&N. The capital expenditure plan envisaged will also assist in reducing system losses. The petitioner proposes to incur the capital expenditure of Rs.54.15 Crores for FY 2012-13. Out of total capital expenditure of Rs. 54.15 Crores, Rs.36.55[20] Crores are to be capitalized during the FY-2012-13.

Commission's analysis

[20] The petitioner has submitted Rs. 30 Crores to be capitalised in FY 2012-13 in table 4.5 of the petition and in the table 4.15 has submitted Rs. 28.69 Crores to be added during FY 2011-12 and Rs. 36.55 Crores to be added during FY 2012-13. Further the petitioner in format no. 6 submitted Rs. 35.52 as the addition in the capital expenditure during the FY 2012-13 and Rs. 36.55 Crores in format no. 7 to be added during FY 2012-13 in the gross fixed assets. The petitioner again in format 8 submitted Rs. 30 Crores as investments to be capitalised. In view of the variations in the submissions of the petitioner; the Commission has considered Rs. 36.55 Crores during FY 2012-13 as the final submission on account of capitalisation during the FY 2012-13.

Commission observes that the capital expenditure and the capitalization submitted by the petitioner for FY 2012-13 is required to meet the increasing demand.

As per the regulation 21 of JERC for the State of Goa and UTs (Terms and conditions for determination of Tariff), Regulation 2009 specifies that the licensee shall propose in their filings, a detailed capital investment plan, showing ongoing projects separately, that will spill into the ensuing year and new projects (along with their justification), that will commence in the ensuing year. The petitioner had not submitted the capital investment plan as per the regulations and did not give the present status of the capital expenditure incurred/capitalised.

Commission has taken a note of the inconsistencies in the submissions of the petitioner. As observed there are inconsistency in the submissions of the petitioner which shows the absence of actual figures at the licensee's end. It seems the licensee is not monitoring the actual capital expenditure and capitalization achieved in previous years. The licensee therefore is not able to envisage the same for remaining part of the current year and ensuing year. However for the purpose of this ARR computation, Commission provisionally considers the revised capitalization of Rs. 28.69 Crores for FY 2011-12 as submitted by the petitioner and **the capitalization of Rs. 36.55 Crores proposed by the petitioner for FY 2012-13.** Further, Petitioner is directed to submit the detailed statement of the capital expenditure incurred quarterly and asset capitalization during the year for review and true up. The figures of capitalization of the assets includes the value of those assets, which after the required certificate from the Electrical Inspector have been commissioned on ground, put to use and commenced the commercial operation during the concerned year.

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

5.9 GFA and Depreciation

Petitioner's Submission

The petitioner has submitted that the value of gross fixed assets (GFA) for 2011-12 has been taken from the audited accounts for the FY 2010-11 and the same has been increased by addition of assets during the FY 2011-12 & estimated addition during FY 2012-13. The GFA movement is given in the table below:

Table 5.9.1 : Gross Fixed Asset Movement submitted by the petitioner

Financial Year	Opening Balance (Rs. Crores)	Addition during year (Rs. Crores)	Closing Balance (Rs. Crores)
2011-12	59.58	28.69	88.27
2012-13	88.27	36.55	124.82
2013-14	124.82	35.52	160.34

Commission's analysis

The petitioner has submitted that the value of gross fixed asset for FY 2010-11 has been taken from audited accounts of FY 2010-11 and the same has been increased by addition of assets during the FY 2011-12 & estimated addition during FY 2012-13. Further , the petitioner in its submission to compliance to directive no. 3 has submitted the following

Quote

"Hiring of consultants for preparation of fixed assets register in line with JERC regulations is under process. Records are required to be collected & compiled from various power houses spread across A&N Islands. In view of the above EDA&N prays for more time to comply with the directive."

Unquote

Commission observes in the tariff order dated June 04'2012 that the expenditure registers were used to record the planned expenditure incurred by the utility. As was observed by the Commission (during finalization of tariff order for FY 2012-13), the fixed asset registers were last updated in 2001 before Tsunami and thereafter, an expenditure register is maintained, which records the total planned expenditure during the year and other related particulars. Commission is of the view that fixed asset register records with the asset wise details and various types of information can be extracted from the same including the aging schedule of the asset, present value and capital works in progress etc.

In the instant case, the Petitioner had not used fixed asset register, instead, as stated in the petition had used value of gross fixed assets as appearing in the audited accounts to arrive at the historical value of fixed assets. The entire assets considered by the petitioner may not have been used for rendering the services for which the tariff is being claimed/fixed. As such the statement of assets in the audited accounts could not provide the crucial information to ascertain whether assets are effectively/actually put to use for the year for which tariff is being claimed or fixed. Commission therefore directs the petitioner to update the fixed asset register to arrive at the actual historical value of assets and file the same along with the next ARR and tariff petition or indicate the list of value of Assets being used for rendering the services in the ARR of 2014-15 or alternatively indicate as to what %age of Gross block be considered on ad hoc basis & the basis thereof which can be considered in the true up which is due after the review for the ARR for FY

2012-13. The Commission has considered the revised capitalization as submitted by the petitioner for FY 2011-12 as the opening value of assets for FY 2012-13 for the purpose of review of ARR of FY 2012-13. As discussed in earlier para, Commission has provisionally considered capitalizing Rs. 28.69 Crores and Rs. 36.55 Crores during the FY 11-12 and FY 2012-13 respectively.

Regulation 26 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 specifies that depreciation for the assets shall be calculated annually at the rates specified by CERC from time to time. The effective rate of depreciation for assets linked to Plant & Machinery & Vehicles is 5.28%, Buildings is 3.34% and Furniture is 6.33% vide Appendix-III (Depreciation schedule of CERC (Terms and Conditions of Tariff) Regulations, 2009. The depreciation for the FY 2012-13 has been worked out at Rs. 2.03 Crores.

As discussed in earlier para, Rs. 28.69 Crores has been considered as capitalization for FY 2011-12. In view of above, Commission considers the depreciation of Rs. 1.86 Crores as reasonable considering Rs. 28.69 Crores as the opening value of assets at the beginning of the year as being the capitalization submitted for FY 2011-12 by the petitioner is given below**:**

Table 5.9.2 : Depreciation approved by the Commission for FY 2012-13 (in Rs. Crores)

Sr. No.	Particulars	2012-13			
		Petitioner Submission	**Approved in TO dated 04.06.2012**	**Petitioner's estimates for review**	**Approved**
1	2	3	4	5	6
1	Opening Value of Assets at the beginning of the year	84.45	22.14	88.27	28.69
2	Additions during the year	30.00	30.00	36.55	36.55
3	Gross Fixed Assets at the end of year	114.45	52.14	124.82	65.24
4	Average Assets	**99.45**	**37.14**	**106.55**	**46.97**
5	Depreciation for the year	**5.00**	**2.03**	**4.98**	**1.86**

Table 5.9.3 : Calculation of the Depreciation for FY 2012-13 (in Rs. Crores)

Sr. No.	Particulars	Opening GFA	Additions	GFA at end	Average Assets	Depn Rates (%)	Depreciation
1	2	3	4	5	6	7	8
1	Plant & Machinery	22.14	20.00	42.14	32.14	5.28%	1.70
2	Buildings	0	10.00	10.00	5.00	3.34%	0.17
3	Vehicles		-	-	-	5.28%	-

Sr. No.	Particulars	Opening GFA	Additions	GFA at end	Average Assets	Depn Rates (%)	Depreciation
1	2	3	4	5	6	7	8
4	Furniture and Fixtures		-	-	-	6.33%	-
5	Land	6.55	6.55	13.10	9.83	0.00%	-
6	Total	**28.69**	**36.55**	**65.24**	**46.97**		**1.86**

Commission therefore considers the depreciation of Rs. 1.86 Crores as reasonable and approves the same for Review of ARR of FY 2012-13.

5.10 Interest and Finance Charges

5.10.1 Interest on Loan

Petitioner's Submission

The petitioner has submitted that the entire capital employed till date has been funded through equity infusion by the Central Government through Budgetary support without any external borrowings. ED A&N is now migrating to regulatory regime under the aegis of the Hon'ble Commission and will begin to function as a commercial utility under the Electricity Act, 2003. The petitioner has therefore taken 01.04.2011 as the base date for the above change and from 01.04.2011 onwards, ED A&N will be subjected to tariff determination under the provisions of the Tariff Regulations to be issued by the Hon'ble Commission.

Commission's analysis

Commission observes that the petitioner has not calculated the interest on normative loan as per the regulations.

As per the JERC tariff regulations 2009:

"25. Interest and Finance Charges on Loan

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

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

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

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

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

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

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

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

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

The petitioner has claimed interest on the sum of 'Capital Work in Progress' and 'Gross fixed assets' at the end of the year and has not considered the debt equity ratio as per the regulations. The Petitioner has not borrowed any loans in the past upto 31st September 2011 and has also not borrowed any loan to meet the capital expenditure for FY 2012-13. Therefore in the absence of actual value of gross fixed assets and considering the petitioner's submission that 'the ED A&N being a Government Department, the entire capital employed till date has been funded through equity infusion by the Central Government through Budgetary support without any external borrowings.' The interest charges projected by the ED A&N for FY 2012-13 are on computed on the sum of 'Capital Work in Progress' & 'Assumed value of Gross Fixed Assets' without any external borrowings.

As discussed in para 5.9; In the instant case, the licensee has not provided the crucial information to ascertain that assets that are effectively/actually deployed for the year for which tariff is being claimed or fixed; Hence the servicing of assets in the form of interest on loan and return on assets is indeterminate at this stage on the opening GFA, hence not been considered on the submitted value of assets. The same shall be considered at true-up stage if full details along with audit report, are made available.

As discussed in para 5.8, 5.9, the Commission has now considered an opening normative loan of Rs. 20.08 Crores for FY 2012-13 (being 70% of Rs. 28.69 Crores provisionally considered as capitalized during FY 2011-12) and added normative loan for FY 2012-13 of Rs. 25.59 Crores being 70% of capitalization considered for FY 2012-13 to calculate the interest on normative loan amount. Commission has considered the SBI PLR rate which is now substituted as SBI advance rate, at 14.61%[21] (average rate of interest) for FY 2012-13. The Commission approves the total interest charges for the year at Rs. 4.67 crores as given below:

Table 5.10.1.1 : Normative Interest Charges approved by the Commission for FY 2012-13 (in Rs. Crores)

Sr. No.	Particulars	2012-13			
		Petitioner Submission	**Approved in TO 04.06.2012**	**Petitioner's estimates for review**	**Approved by the Commission**
1	2	3	4	5	6
1	Opening Normative Loan/WIP	376.70	15.50	379.02	20.08
2	Add: Normative Loan during the year/GFA during the year	114.44	21.00	121.05	25.59
3	Less: Normative Repayment	-	1.55	-	1.86
4	Closing Normative Loan/GFA	**491.14**	**34.95**	**500.07**	**43.80**
5	Average Normative Loan	-	25.22	-	31.94
6	Rate of Interest (@SBI SBAR rate)	11.25%	14.75%	11.25%	14.61%
7	Interest on Normative Loan	55.25	4.42	56.26	4.67

Accordingly, the Commission has considered the Normative Interest on loans as Rs. 4.67 Crores as reasonable and approves the same for review of FY 2012-13.

5.10.2 Interest on Working Capital

Petitioner's Submission

The petitioner has submitted that Interest on Working Capital for FY 2012-13 is computed on normative basis. As per the JERC Tariff Regulations, for the purpose of computation of normative working capital and Interest on working capital, the components of working capital are as follows:

- Power Purchase Cost
- One month's employee costs
- Administration & General expenses

[21] SBI advance rate notified on 14.02.2011; Thereafter four revisions in the SBI advance rate was notified in FY 2011-12 and are as under: 25.04.2011-13.25%; 12.05.2011-14% ; 11.07.2011-14.25%; 13.08.2011 – 14.75%.; 27.09.2012-14.50% and 04.02.2013-14.45%

- One month's R&M Cost

The rate of interest on working capital has been considered as per SBI Prime lending rate as on 1st April of the respective year, which is 14.75% as on 1st April 2011. The interest on normative working capital for FY 2012-13 works out to Rs. 5.39 Crores.

Commission's analysis

As per the regulation 29 of JERC tariff regulations

"

29. WORKING CAPITAL AND INTEREST RATE ON WORKING CAPITAL

1) For generation and transmission business, the working capital shall be as per CERC norms.

2) Subject to prudence check, the working capital for distribution business shall be the sum of one month requirement for meeting:

a. Power purchase cost.

b. Employees cost.

c. Administration & general expenses and

d. Repair & Maintenance expenses.

3) Subject to prudence check, the working capital for integrated utility shall be the sum of one month requirement for meeting :

a. Power purchase cost

b. Employees cost

c. Administration & general expenses

d. Repair & Maintenance expenses.

e. Sum of two month requirement for meeting Fuel cost.

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

In accordance with Section 47(4) of the Electricity Act 2003, the distribution licensee is required to pay interest on security deposit collected from the consumers. If this security deposit is invested in the form of interest earning fixed deposits or other similar instruments. The interest earned from such investment could be utilized to pay the interest to the consumers under section 47(4) of the Electricity Act 2003. However it is noted that the petitioner has not invested any of the security deposit held and the said amount is available to the petitioner. Accordingly, the Commission has allowed the interest payable to the consumer as expense in this order. Commission has considered the security deposit (on account of misc. deposits) available with the Petitioner as a source to meet working capital requirements and has deducted this amount from the working capital requirement considered for interest for review of FY 2012-13 (also dealt in para 5.10.3 of this order).

Further, Commission clarifies that SBI PLR rate has now been substituted as SBI Advance Rate at 14.61%[22] (average rate of interest) for FY 2012-13. Commission has computed the requirement of working capital based on the provisions of the regulations. Working capital has been reduced by the amount of Consumer Security Deposit/Misc. deposit available with the petitioner considering its usage for meeting part of working capital requirements.

Table 5.10.2.1 : Interest on Working Capital approved by the Commission for FY 2012-13 (in Rs. Crores)

Sr. No.	Particulars	2012-13			
		Petitioner Submission	**Approved in TO dated 04.06.2012**	**Petitioner's estimates for review**	**Approved**
1	2	3	4	5	6
1	Fuel[23] Cost for 2 months	7.77	15.84	16.82	24.58
2	Power Purchase Cost for one month	12.89	13.27	13.86	10.68
3	Employee Cost for one month	4.14	4.11	4.11	4.11
4	A&G Expenses for one month	2.39	0.20	0.20	0.20
5	R&M Expenses for one month	2.59	2.86	2.85	2.86
6	**Total Working Capital for one month**	**29.78**	**36.28**	**37.84**	**42.43**
7	**Net Working Capital for one month after deducting security deposit**	**28.44**	**34.94**	**-**	**41.10**
8	SBI PLR Rate	11.25%	14.75%	-	14.61%
9	Interest on Working Capital	**3.35**	**5.15**	**5.39**	**6.00**

[22] SBI advance rate notified on 14.02.2011; Thereafter four revisions in the SBI advance rate was notified in FY 2011-12 and are as under: 25.04.2011-13.25%; 12.05.2011-14% ; 11.07.2011-14.25%; 13.08.2011 – 14.75%.; 27.09.2012-14.50% and 04.02.2013-14.45%

[23] The total fuel cost includes the cost for procuring lubricating oil.

The Commission considers Rs. 6.00 Crores as Interest on Working Capital as reasonable and approves the same for Review of ARR for FY 2012-13.

5.10.3 Interest on Security Deposit

Petitioner's Submission

The petitioner submits that the

Quote

"ED A&N collects deposits from consumers and contractors (as Earnest Money Deposit or security). While security deposit from consumers is taken at the time of providing the connection and has to be repaid to the consumers at the time of surrender of the connection; security deposit from contractors is adjusted subsequent to satisfactory completion of the contracted work. These deposits are in the form of Fixed Deposits Receipts (FDR)/ Bank Guarantee and in case of FDR the interest is directly paid to the consumer."

Unquote

Commission's analysis

As can be observed, the petitioner has indirectly indicated that petitioner has the security deposit of the consumers and the petitioner has not paid any interest on the security deposit from the consumers except fixed deposits where interest is directly paid to the consumers as stated by the petitioner.

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

In terms of the section 47 (4) of the Electricity Act, 2003 'the distribution licensee is required to pay interest on security deposit collected from consumers equivalent to bank rate or more as may be specified by the Commission.'

The petitioner in audited accounts for FY 2010-11 had submitted that the misc. deposit is available with the petitioner during FY 2011-12 and FY 2012-13; Further, the petitioner had submitted that the consumers are required to make a deposit equivalent to the security amount in bank in their name with a lien in favour of Electricity Department. The bank is authorized to release the fixed deposit only after the receipt of 'no objections/instruction' from the department. In the event of surrender of connection by the consumer and clearance of all dues;

the department issues a NOC to the bank for releasing the fixed deposit. The interest accrued on the deposit is credited to the consumer's account.

The Commission in its ARR and tariff order dated June 04'2012 had directed the petitioner should follow the relevant provision in the regulation and provisions of Sub regulation no. 6.10 of JERC (Electricity Supply Code) Regulations, 2010. Wherever existing mode of consumer security deposit i.e. bank guarantee, fixed deposit etc. is different from those provided in the Regulation, the same be replaced by those as specified therein, as per section 47(1) Electricity Act 2003 and pay interest as per section 47(4) Electricity Act, 2003.

On account of provisions mentioned in the Act and regulation, Commission directs the Petitioner to pay the interest on security deposit collected from the consumers with effect from April 1st 2012.

As per Clause 47(4) of the Electricity Act, 2003 and as specified in regulation 25 of JERC Tariff Regulations 2009, *the distribution licenses shall pay interest on security deposit collected from the consumers, equivalent to the bank rate or more as may be specified by the Commission*. On account of provisions mentioned in the Act and regulation, Commission directs the petitioner, that the petitioner must pay the interest on consumer security deposit for FY 2012-13 (at the Bank Rate i.e. 9.50[24]% per annum applicable as on 1st April 2012) with effect from 1st April 2012 to the consumers on their security deposit irrespective of petitioner's constraints and this needs to be explicitly indicated on the consumers bill, a sum of Rs. *(calculated amount)* as 'Interest on security deposit' at the rate of 9.50%[25] per annum for the FY 2012-13 in the consumer bill of April 2013. **Any non-compliance in this regard shall be viewed seriously by the Commission.**

In view of the above, the Commission allowed Rs. 0.13 Crores as the interest on security deposits as expenditure in ARR in Review for FY 2012-13.

5.11 Return on Capital Base/Equity

Petitioner's Submission

The petitioner has estimated Rs. 2.39 Crores as the reasonable return on net fixed assets for FY 2012-13 as per the JERC regulations.

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

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

Commission's analysis

ED A&N being 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 and ED A&N is not restructured and corporatized till date. As of now, it is an integrated utility and it is entitled to return on capital base under the provisions of Schedule VI of the repealed Electricity (Supply) Act, 1948 vide provision under Regulation 23 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009. The basic requirement for consideration of either return on capital base or return on equity is the basic information of assets in the form of the assets & depreciation registers besides other data. ED A&N has not been maintaining the adequate information.

As discussed in earlier para 5.8, 5.9, and 5.10; the Commission has considered Rs. 28.69 Crores as the gross block at the beginning of FY 2012-13 as discussed in para 5.9 of this order and accumulated depreciation of Rs. 1.51 Crores. Commission has therefore considered the reasonable return of 0.82 Crores at the rate of 3% on net fixed asset of Rs. 27.18 Crores at the beginning of FY 2012-13.

In view of the above, Commission considers the Return on Net Fixed Assets of Rs. 0.82 Crores as reasonable and approves the same for Review of ARR of FY 2012-13.

5.12 Non-Tariff Income

Petitioner's Submission

The petitioner has estimated Rs. 2.00 Crores for FY 2012-13 based on the actuals of FY 2011-12 as the non-tariff income in the form of meter rent, late payment charges & misc. charges from various categories of consumers.

Commission's analysis

Commission observes the submission made by the petitioner for FY 2010-11 and FY 2011-12 and **has considered Rs. 2.00 Crores as reasonable and approves the same for Review of ARR for FY 2012-13.**

5.13 Revenue at existing tariff for FY 2012-13

Petitioner's Submission

The petitioner has estimated Rs. 100.03 Crores as the revenue for FY 2012-13.

Commission's analysis

Commission has estimated the revenue based on six months actual energy sales submitted by the Petitioner for FY 2012-13 and revenue for the remaining six months on the estimated energy sales estimated by the Commission. Commission has estimated the revenue on the basis of revised estimates of energy sales for FY 2012-13. The petitioner has not submitted the slab wise sales and revenue in accordance with the existing Tariff schedule, the Commission therefore directs the petitioner to maintain slab wise details of sales and revenue and should submit the same in the next ARR and tariff petition. In absence of slab wise details of sales and revenue, Commission has therefore considered the average billing rate estimated by the petitioner of existing tariff for domestic, industrial and commercial category for calculation of revenue for FY 2012-13 at existing tariff.

Table 5.13.1 : Revenue at existing tariff for FY 2012-13 approved by the Commission (in Rs. Crores)

S. No.	Category	FY 2012-13			
		Petitioner's submission for review	H1	H2	Approved for full year
1	Domestic	26.99	12.98	13.97	26.94
2	Commercial	35.38	18.92	20.63	39.54
3	Industry	5.38	2.32	3.37	5.69
4	Bulk	27.97	12.53	13.18	25.70
5	Public Lighting	4.20	0.13	0.14	0.28
6	Irrigation Pumps & Agriculture	0.11	0.02	0.02	0.04
	Total	**100.03**	**46.89**	**51.31**	**98.20**

Commission has estimated Rs. 98.20 Crores based on the actual sales for first six months and projections for second half of the FY 2012-13 as reasonable and approves the same for Review of ARR for ARR for FY 2012-13.

5.14 Review of Aggregate Revenue Requirement for FY 2012-13

Commission's analysis

The Commission has considered and approved the review of ARR for FY 2012-13 based on the items of expenditure discussed in the preceding Chapters and the actuals submitted by the petitioner of Power purchase costs, revenue and sales and the same has been summarized in the table below:

Table 5.14.1 : Aggregate Revenue Requirement for FY 2012-13 approved for review for FY 2012-13 (Rs. in Crores)

Sr. No.	Particulars	2012-13			
		Petitioner Submission	**Approved in TO dated 04.06.2012**	**Petitioner's estimates for review**	**Approved for review**
1	2	3	4	5	6
1	Cost of fuel	93.22	95.03	100.93	147.46
2	Cost of power purchase for full year	154.68	159.20	166.27	128.18
3	Employee costs excluding arrears	49.71	49.30	49.30	49.43
4	Repair & Maintenance Expenses	32.09	34.36	34.23	34.29
5	Administration and general expenses	2.39	2.39	2.40	2.40
6	Depreciation	5.00	2.03	4.98	1.86
7	Interest and finance charges	55.25	4.42	56.26	4.67
8	Interest on working capital & Interest on Security Deposit	3.35	5.28	5.39	6.13
9	Return on NFA /Equity	2.19	0.63	2.39	0.82
10	Provision for Bad Debt	-	-	-	-
11	Advance Against Depreciation	-	-	-	-
12	**Total Revenue Requirement**	**397.88**	**352.65**	**422.15**	**375.24**
13	Less: Non-Tariff Income	2.00	2.00	2.00	2.00
14	**Net Revenue Requirement (12-13)**	**395.88**	**350.65**	**420.15**	**373.24**

The estimated (surplus)/gap have been mentioned in the following table for FY 2012-13:

Table 5.14.2 : Approved Revenue Gap for FY 2012-13 (Rs. in Crores)

Sr. No.	Particulars	2012-13			
		Petitioner Submission	**Approved**	**Petitioner's estimates for review**	**Approved**
1	2	3	4	5	6
14	**Net Revenue Requirement (12-13)**	**395.88**	**350.65**	**420.15**	**373.24**
15	Revenue from Retail Sales at Existing Tariff	87.06	85.58	100.03	98.20
16	**Net Gap (14-15)**	**308.82**	**265.06**	**320.13**	**275.04**
17	Gap for the previous year	-	-		
18	**Total gap (16+17)**	**308.82**	**265.06**	**320.13**	**275.04**
19	Additional revenue from proposed tariff	35.29	14.80	-	-
20	**Revenue Gap/ (Surplus), if any, after proposed tariffs (18-19)**	273.53	250.27	320.13	275.04

Sr. No.	Particulars	2012-13			
		Petitioner Submission	**Approved**	**Petitioner's estimates for review**	**Approved**
1	2	3	4	5	6
21	Budgetary Support from Government	-	-		275.04
22	**Net Final Revenue Gap/ (Surplus) (20-21)**	273.53	250.27	320.13	-

As can be seen from the table mentioned above, there is a revenue gap of Rs. 275.04 Crores at the end of FY 2012-13 as estimated by the Commission against the gap of Rs. 320.13 Crores furnished by the petitioner in the petition and formats. Commission considers the estimated revenue gap of Rs. 275.04 Crores as reasonable and approves the same for review of FY 2012-13.

Historically, there has been substantial gap between the actual cost of supply and revenue realized. This gap so far has been borne by the administration of A&N. Therefore keeping this fact in view the assessed gap of FY 2012-13 will be borne by the Andaman & Nicobar Administration through the Non-Plan funding in Annual Plan by the Govt. of India to the Electricity Department of the Andaman & Nicobar Islands.

6. AGGREGATE REVENUE REQUIREMENT OF FY 2013-14

6.1 Background

The ARR & Tariff Petition filed by the Electricity Department, UT of Andaman & Nicobar Islands for FY 2013-14 as per the relevant provisions mentioned in the tariff regulations 2009. The petitioner has submitted its Aggregate Revenue Requirement and Tariff application as per the Regulation no. 12 & 13 of JERC Tariff regulations 2009 to estimate the revenue requirement for FY 2013-14 on the basis of actual figures of FY 2010-11, FY 2011-12, reviewed estimates for the FY 2012-13 and forecasted figures for FY 2013-14.

The Petitioner in its petition has submitted its Aggregate Revenue Requirement for FY 2013-14 and has considered the actual performance in FY 2010-11, FY 2011-12, estimated performance for FY 2012-13 based on the actual performance for the period 01.04.2012 to 30.09.2012 and principles outlined in tariff regulations of JERC. In this chapter, the Commission has analyzed the petition of ED-A&N based on the provisions mentioned in the regulations, actual figures for FY 2011- 12, revised estimates of FY 2012-13 submitted by the petitioner. The Commission has taken into consideration the following:

1. Actual Performance in FY 2010-11 (as per the audited accounts[26]);
2. Actual Performance in FY 2011-12;
3. Reviewed estimates of FY 2012-13 including the category wise sales, revenue and expenditure

6.2 Analysis of Aggregate Revenue Requirement of FY 2013-14

The determination of Aggregate Revenue Requirement requires assessment of quantum of energy sales, T&D loss as well as various cost elements like power purchase cost, O&M expenses, interest cost and depreciation etc. Revised estimates/actuals submitted by the petitioner as regards to various components of ARR of previous year, the Commission's analysis thereon and decision in respect of items given below as discussed in the following paras:

- Assessment of Energy Requirement
  - i. Sales Projections
  - ii. T&D Loss Trajectory

[26] Audited Accounts of FY 2010-11 provided by the Petitioner.

iii. Energy Balance

iv. Power Purchase Sources

- Assessment of the Aggregate Revenue Requirement

i. Power Purchase Costs & Transmission Charges;

ii. Operation and Maintenance Expenses;

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

iii. Capital Expenditure and Asset Capitalization

iv. Gross Fixed Assets;

v. Depreciation;

vi. Interest on Long Term Loans;

vii. Interest on Working Capital & Security Deposits;

viii. Return on Capital Base/ Net Fixed Assets;

ix. Provision for Bad and Doubtful Debts

x. Other expenses.

xi. Non-Tariff Income

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

Quote"

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

i. Fuel Cost for own generation, if applicable.

ii. Cost of Power Purchase, if any

iii. Operation and Maintenance Expenses,

iv. Depreciation, including Advance Against Depreciation, *v. Interest and Cost of Finance,*

vi. Return on Equity,

vii. Income Tax

viii. Provision for Bad & Doubtful Debts

ix. Other Expenses.

2) The data should be provided for three years

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

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

iii. Forecasted figures for the ensuing year should be based on the current year figures with adjustments that reflect known and measurable changes expected to occur between them. These adjustments must be specifically documented and justified."

"

4) The Aggregate Revenue Requirement of the generating company or the licensee shall be worked out by adjusting the following in the revenue requirement computed under Clause (1) above:

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

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

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

*iv. Authorized portion of Income/revenue from Other Business engaged in by the licensee for optimum utilization of assets, if any, in accordance. " **Unquote***

6.3 Consumers, Connected load and Energy Sales

Petitioner's Submission

Energy Sales

The petitioner has stated that

"The consumer base of ED A&N consists of Domestic, Commercial and Industry, consumers. Sales mix is primarily dominated by Domestic consumers, followed by Commercial consumers. The total consumption for Domestic consumers is approximate 47 percent and Commercial consumers contribute to around 27.17 percent of total sales. Thus, the sales forecast would completely depend on the sales expected in the Domestic & Commercial Category.

The sales forecast is based on the trends observed in the sales pattern of various categories over the past years, new developments on account of Government Policies, Socio economic changes, industrial growth, etc. that would affect consumption across various categories of consumers. The CAGR (%) for period of five years (FY 2011-12 over FY 2007-08) for different categories has been adopted for estimating the energy sales for the FY 2012-13 & for projecting the energy sales for FY 2013-14. Energy sales towards temporary connections has been added to commercial category as it observed that temporary connection are predominantly availed for commercial purposes. Consumption in temporary connection category in 2011-12 was 0.93 MUs. The same has been assumed for the year FY 2012-13 & FY 2013-14 as CAGR for the category reflected abnormal growth trend. In addition to this, the growth trend in number of consumers and connected load has been taken as guiding factors in arriving at the requirement of demand and energy."

The petitioner has considered the past trend for projecting the Energy Sales (MUs) and No. of Consumers based, as mentioned in the following table:

Table 6.3.1 : Details of Energy Sales during Past years and estimations for FY 2013-14 (Sales in Million Units)

S. No.	Category	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14
		Actuals	Actuals	Actuals	Actuals	Actuals	Revised Estimates	Estimates
1	Domestic	72.16	75.49	83.96	90.20	93.98	99.08	104.46
2	Commercial	39.15	42.61	49.12	52.17	54.02	57.56	61.32
3	Industry	8.03	7.67	8.72	8.64	10.89	11.57	12.30
4	Bulk	22.44	25.40	25.99	26.02	29.57	31.25	33.02
5	Public Lighting	7.35	8.62	8.36	9.15	9.26	9.69	10.15
6	Irrigation Pumps & Agriculture	0.72	0.69	0.74	0.83	0.90	0.94	0.98
	Total	149.85	160.48	176.89	187.01	198.62	**210.09**	**222.23**

Source : Table 4.1 of the Petition submitted by ED A&N

The petitioner has considered the average growth rate (%) for projecting the Energy Sales (MUs) for FY 2012-13 as mentioned in the following table:

Table 6.3.2 : Growth rate considered for FY 2012-13 (in %age)

S. No.	Category	Assumed Growth rate for FY 2012-13
1	Domestic	5.42%
2	Commercial	6.65%
3	Industry	6.28%
4	Bulk	5.67%
5	Public Lighting	4.72%
6	Irrigation Pumps & Agriculture	4.60%
	Total	**5.78%**

Source : Table 4.1 of the Petition submitted by ED A&N

As part of additional information submission, the petitioner has submitted the month wise actual category wise energy sales of FY 2011-12 and FY 2012-13 (upto September).

Number of Consumers

The petitioner has stated that the forecast of number of consumers is based on the trends observed in the connections pattern of various categories over the past years, new developments on account of Government Policies, Socio economic changes, industrial growth, etc. that would affect consumption across various categories of consumers. The CAGR (%) for period of five years (FY 2011-12 over FY 2007-08) for different categories has been adopted for estimating the number of consumers for the FY 2012-13 & for projection for the FY 2013-14. However, normalization has been undertaken for certain categories where an abnormal rise or reduction has been observed Temporary Connections has been added to commercial category as it is observed that temporary connections are predominantly availed for commercial purposes.

Table 6.3.3 : Details of Number of Consumers during Past years (in Numbers)

S. No.	Category	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14
		Actuals	Actuals	Actuals	Actuals	Actuals	Revised Estimates	Estimates
1	Domestic	65282	67990	76479	81741	91843	98333	105281
2	Commercial	14677	15160	15626	16131	16767	17220	17627
3	Industry	450	451	461	457	493	502	511
4	Bulk	40	46	44	48	55	59	63
5	Public Lighting	346	375	434	505	552	606	665
6	Irrigation Pumps &	161	211	177	186	292	256	276

S. No.	Category	FY 2007-08 Actuals	FY 2008-09 Actuals	FY 2009-10 Actuals	FY 2010-11 Actuals	FY 2011-12 Actuals	FY 2012-13 Revised Estimates	FY 2013-14 Estimates
	Agriculture							
	Total	80956	84233	93221	99068	110002	116976	124423

Source : Table 4.2 of the Petition submitted by ED A&N

Commission's analysis

As per the sub-regulation (2) (ii) of regulation 13 of JERC tariff regulations 2009,

Quote

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

Unquote

Commission has considered the actual figures for the first half of FY 2011-12 and FY 2012-13 and has accordingly estimated the second half of the current financial year based on the actual figures of second half of FY 2011-12 with overall adjustments of 1.99% which is reflective and measurable change expected to occur between them.

The minimum of modified CAGR (%) of five years (from FY 2011-2012 over FY 2006-2007) and three years (from 2011-12 over FY 2008-09) for different consumer categories and the growth rate, accordingly adopted by the Commission on the revised estimates of FY 2012-13 (as approved by the Commission) to assess the Energy Sales and number of consumers for FY 2013-14. Year on Year increase from FY 2011-12 to FY 2012-13 has been used to assess the connected load for FY 2013-14. Further , as discussed in the para 5.3 of this order regarding variation noted in the petitioner submission on account of energy sales especially to 'public lighting' and 'Irrigation Pumps & agriculture'. The approved Sales, Connected load and number of consumers for the FY 2013-14 have been shown in the table below:

Table 6.3.4 : Modified CAGR(%) considered by the Commission for estimation of Sales, Consumer Base and Connected load for FY 13-14

S. No.	Category	Sales	Consumer Base	Connected Load
1	Domestic	7.58%	7.90%	1.3%
2	Commercial	8.23%	3.42%	1.3%
3	Industry	12.17%	1.98%	1.3%
4	Bulk	4.87%	6.05%	1.3%
6	Public Lighting	2.41%	10.05%	1.3%
7	Irrigation Pumps & Agriculture	8.75%	11.44%	1.3%

Table 6.3.5 : Category wise Sales approved by the Commission for FY 2013-14 (in million units)

S. No.	Category	FY 2013-14	
		Petitioner's estimates	Approved
1	Domestic	104.46	106.77
2	Commercial	61.32	65.06
3	Industry	12.30	13.69
4	Bulk	33.02	30.12
5	Public Lighting	10.15	0.65
6	Irrigation Pumps & Agriculture	0.98	0.38
	Total	**222.23**	**216.68**

Table 6.3.6 : Category wise number of consumers approved by the Commission for FY 2013-14 (in numbers)

S. No.	Category	FY 2013-14	
		Petitioner's estimates	Approved
1	Domestic	105281	99808
2	Commercial	17627	17691
3	Industry	511	570
4	Bulk	63	60
5	Public Lighting	665	644
6	Irrigation Pumps & Agriculture	276	237
	Total	124423	119010

Table 6.3.7 : Category wise connected load approved by the Commission for FY 2012-13 (in KW)

S.No.	Category	Approved (FY 2013-14)
1	Domestic	93029
2	Commercial	49508
3	Industry	10989
4	Bulk	9126
5	Public Lighting	2607
6	Irrigation Pumps & Agriculture	680
	Total (in KW)	**165939**

6.4 Transmission & Distribution Loss

Petitioner's Submission

The petitioner has submitted that the significant reduction has been achieved in distribution losses during recent years. The petitioner further submits that the system improvement works executed every year under the plan schemes which have also contributed to the reduction of distribution losses. However, it may also be noted that reduction of distribution losses may not be possible beyond a certain level due to topographical conditions and technical limitation. The distribution losses in the ED A&N distribution network have been in the range of approximately 19% to 20% in the past. For the purpose of ARR of FY 2013-14, the losses have been retained at 18.03% for the FY 2012-13 and FY 2013-2014 respectively.

Commission's Analysis

The Commission in its ARR and Tariff Order for FY 2012-13 had approved the targeted T&D loss level of 19.16%. However the petitioner owing to overachievement in FY 2011-12 has projected an aggressive T&D targets for FY 2012-13 and FY 2013-14. As discussed in para 5.4 of this order, Commission feels that the loss levels targeted by the petitioner are not un-achievable in view of the topography of these islands; therefore keeping in view the loss level trajectory proposed by the petitioner to retain the 18.03% as the loss level for FY 2013-14.

Accordingly, for the purpose of this order the Commission considering the coastal atmosphere and topography of these islands, **considers the loss level of 18.03% as reasonable and approves the same for FY 2013-14.**

6.5 Energy Balance

Petitioner's Submission

The petitioner submits the energy requirement for the sale within the islands is 271.12 Million Units, after considering the T&D losses of 18.03% for FY 2013-14.

As submitted by the petitioner,

Quote

"The energy requirement of EDA&N is mainly met from own generation and power purchase from M/s SuryaChakra Corporation Limited. There is no availability of power from Central Generating Stations or from other sources/ open market/ power exchanges, etc. Own generation accounts for around 40.08% & 43.48% of the total power requirement for FY 2010-11 & 2011-12 respectively and power purchase accounts for around 59.20% &56.52 of the total power requirement for 2010-11 & 2011-12 respectively and is estimated that approximately 41.59% & 58.41% of the total energy requirement for FY 2012-13 shall be met by own generation and power purchase respectively. The present scenario is likely to continue and is projected that approximately 41.59 % & 58.41% of the total energy requirement for FY 2013-14 shall be met by own generation and power purchase respectively. " **Unquote**

Commission's Analysis

The Commission has approved the T&D losses, energy sales in the foregoing paragraphs and as discussed in para 5.5 of this order. The Energy requirement and projected purchase for the FY 2013-14 is shown in the table below:

Table 6.5.1 : Energy Balance

Sr. No.	Particulars	2013-14	
		Petitioner's estimates	**Approved**
1	2	3	4
A)	**ENERGY REQUIREMENT** (in Mus)		
1	Energy sales within the State/UT (in Mus)	222.23	216.68
2	Energy sales to Agriculture consumers (included in total sales) (in Mus)		
3	**Total sales within the State/UT**	**222.23**	**216.68**
4	**Transmission & Distribution losses**		
i)	%	18.03%	18.03%
ii)	MU	48.89	47.67
5	**Energy required for Sale to Retail Consumers**	**271.11**	**264.35**
6	**Total Energy Requirement for State/UT (5)**	**271.11**	**264.35**

Sr. No.	Particulars	2013-14	
		Petitioner's estimates	Approved
1	2	3	4
B)	**ENERGY AVAILABILITY / PURCHASED**		
1	**Net Generation after auxillary consumption (in MUs)**	**271.11**	**264.35**
a	IPP	158.36	133.75
b	Own Generation	99.62	110.44
c	Hydel	13.13	13.21
d	Solar Power Plant		6.941[27]
5	**Energy (Surplus)/Gap**	**0.00**	**(0.00)**

Source: Table 4.3 of the Petition submitted by ED A&N

6.6 Power Purchase Quantum and Cost

Petitioner's Submission

Source of Power

The petitioner submits that ED A&N has 43 own generating stations and meets around 50% its total energy requirement from own generation. Balance requirement of power is met from purchase from SPCL. The electricity department has 42 Power houses at different locations in 29 electrified islands having 135 no. of installed Diesel Generating sets with capacity ranging from 12 KW to 2500 KW and one Hydro Power Station having 5.25 MW capacity at Kalpong at North Andaman. The aggregate installed capacity is 81.21 MW as on 31.03.2011 (including IPP of 20 MW) and firm capacity of 49.21 MW. The details of power generating stations are given below submitted as part of additional submission:

Table 6.6.1 : Details of power generating stations operational for FY 2011-12

S. No.	Source	Location	Installed Capacity (in MW)			Make	Derated Capacity (in MW)
			DG Size (KW)	No.s	MW		
Power Purchase from SPCL							
1	IPP – SPCL	South Andaman	5000	4	20	Mak-Catterpillar	20
Own Generation							
2	Chatham	South Andaman	2500	5	12.5	Bergen	10
3	Phoneix Bay	South Andaman	1000	2	2	Cummins	6.6
			1200	5	6	Cummins	
4	Raj Niwas	South Andaman	256	2	0.512	Cummins	0.512

27 As submitted by the petitioner

S. No.	Source	Location	Installed Capacity (in MW)			Make	Derated Capacity (in MW)
			DG Size (KW)	No.s	MW		
5	Secretariat	South Andaman	256	1	0.256	Cummins	0.200
6	Neil Island	Neil Island	128	3	0.384	Greaves	0.500
			100	2	0.2	Cummins	
			50	1	0.05	Cummins	
7	Havelock	Havelock	256	5	1.28	Greaves	1.330
			50	1	0.05	Greaves	
8	RutLand	Rutland	12	1	0.012	Cummins	0.012
9	Baratang	Middle Andaman	256	1	0.256	Cummins	0.512
			256	1	0.256	Cummins	
10	Rangat Bay	Middle Andaman	800	4	3.2	Cummins	10.036
			1000	5	5	Cummins	
			248	7	1.736	Kirloskar	
			100	1	0.1	Cummins	
11	Long Island	Middle Andaman	128	4	0.512	Greaves	0.551
			65	2	0.13	Greaves	
			50	5	0.25	Ruston	
12	Strait Island	Strait Island	15	1	0.015	Cummins	0.015
13	Hanspuri	North Andaman	12	1	0.012	Cummins	0.027
			15	1	0.015	Cummins	
14	Jagannath Dera	North Andaman	24	1	0.024	Cummins	0.4275
			18.75	1	0.01875	Cummins	
15	Paschim Sagar	North Andaman	65	2	0.13	Cummins	0.18
			50	1	0.05	Cummins	
16	Smith Island	North Andaman	21	1	0.021	Ruston	0.045
			12	2	0.024	Ruston	
17	Sita Nagar	North Andaman	256	3	0.768	Cummins	1.800
			800	2	1.6	Cummins	
18	KHEP**	North Andaman	1750	3	5.25		5.25
19	Hutbay	Little Andaman	250	1	0.25	Cummins	5.756
			800	3	2.4	Cummins	
			1000	4	4	Cummins	
20	Dugong Creek	Little Andaman	16	2	0.032	Cummins	0.044
			15	1	0.015	Greaves	
21	NPH Car Nicobar	Car Nicobar	256	7	1.792	Geaves Cotton	5.255
			128	1	0.128	Cummins	
			1000	4	4	Cummins	
22	Kamorta	Nancowry	256	4	1.024	Cummins	1.024
23	Pillpillow	Nancowry	24	1	0.024	Kirloskar	0.032

S. No.	Source	Location	Installed Capacity (in MW)			Make	Derated Capacity (in MW)
			DG Size (KW)	No.s	MW		
			32	1	0.032	Kirloskar	
24	Kakana	Nancowry	24	1	0.024	Kirloskar	0.056
			32	1	0.032	Kirloskar	
25	Champion	Nancowry	65	3	0.195	Greaves	0.295
			50	2	0.1	Ruston	
26	Katchal	Katchal	250	3	0.75	Cummins	0.924
			50	3	0.15	Kirloskar	
			12	2	0.024	Cummins	
27	Teressa	Teressa	50	4	0.2	Kirloskar	0.662
			256	2	0.512	Cummins	
			32	1	0.032	Cummins	
			12	1	0.012	Kirloskar	
28	Chowra	Chowra	50	2	0.1	Kirloskar	0.164
			32	2	0.064	Kirloskar	
29	Campbell Bay	Great Nicobar	800	3	2.4	Cummins	2.295
			256	1	0.256	Cummins	
			50	1	0.05	Ruston	
	Total		**22547.75**	**142**	**81.21**	**0.00**	**74.50**
	Own Generation		**17547.75**	**138**	**61.21**		**54.50**

<u>Assumptions for Power Generation/Projections of Power Purchase</u>

The merit order dispatch principles are typically adopted when determining the power purchases from various generating stations. However, in the present case there is only one source of purchase of power and 100% of it's generation is available to EDA&N. Accordingly, EDA&N has considered utilization /purchase of the entire power available from all the possible sources during FY 2013-14 to meet the demand to the extent possible.

Power Purchase cost is a function of the energy requirement and price of available power from the different sources for meeting the energy requirement. The energy requirement of EDA&N for FY 2013-14 is proposed to be met from own generation & power purchase from SPCL. EDA&N has projected the quantum of power generation from own generating stations based on the units generated for the FY 2010-11 & 2011-12. The details of the computation of power generation and purchases are provided in Format-4 of the formats submitted along with the filing.

Table 6.6.2 : Summary of Power Purchase expenses submitted by the petitioner for FY 2013-14

Source	Purchase (MUs)	Pooled Losses	Energy recd. By Licensee (MUs)	FC (Rs. Crores)	VC (Rs. Crores)	Others (Rs. Crores)	Total (Rs. Crores)	Avg. Cost (Rs./Unit)
SPCL	158.36	0	158.36	16.38	171.51	-	187.89	11.86

Estimation of Power Purchase and Cost

The generation forecast is based on the plant availability and energy demand for the period. Accordingly, generation for FY 2013-14 is estimated.

Table 6.6.3 : Estimated Power Generation for FY 2012-13 (in million units)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14
Units Generated	88.34	79.28	94.28	99.24	109.41	110.26	116.63
Auxiliary consumption	3.04	3.43	3.57	4.14	4.05	3.67	3.88
Sent out	85.3	75.84	90.72	95.09	105.36	106.59	112.75

Cost of Fuel

Quote

"Out of total generation of 105.36 MUs in FY 2011-12, 98.07 MUs were generated from Diesel power houses and only 11.33 MUs were generated from Hydro Power Station. Hence cost of fuel (HSD and lubricants) is a major component of the cost of generation. Details of cost of fuel are provided below:" Unquote

Table 6.6.4 : Estimated Cost of Fuel for FY 2013-14 (in Rs. Crores)

Type of Fuel	FY 2011-12	FY 2012-13	FY 2013-14
HSD	89.96	98.65	112.00
Lubricant	2.05	2.29	2.60
Total	92.02	100.93	114.60

Commission's Analysis

Quantum and Cost of Power Generation and Purchase of Power

Diesel Generating Station – IPP- M/s SPCL[28]

As observed the Power purchase cost estimated by ED A&N with respect to procurement of power from M/s SPCL is treated as provisional and is subject to final outcome of petition no. 89/2012 before the Commission. While estimating the energy availability and cost for FY 2013-14, the following has been considered for estimating the energy availability and cost for FY 2013-14 from M/s SPCL:

- The Plant availability has been considered at more than 82% after considering the impact of overhauling on the DG sets, on an average 15 days shutdown have been considered for each DG set for FY 2013-14 on account of overhauling as submitted by M/s SPCL.
- Auxillary Consumption of 3.46% verified from the power purchase bills submitted by the petitioner for FY 2012-13 has been considered for FY 2013-14.
- HSD and Lubricating oil consumption has been calculated considering the following as per the power purchase bills of FY 2012-13:
    - For consumption & cost of HSD
        - Gross heat rate of 2010 Kcal/Kwh;
        - Average Calorific value and Density of HSD of FY 2012-13 (refer table 6.6.5);
        - Actual Cost of HSD of Rs. 54180/- per Kilo liter as on March 2013, as submitted by the petitioner during presentation at public hearing.
    - For consumption & cost of Lubricating Oil
        - Normative usage has been considered (1.1 gm per unit);
        - Average Density of Lub. Oil of FY 2012-13;
        - Actual Cost of Lub. Oil as on September 2012.
- Actual fixed cost as per the estimates of the petitioner for FY 2013-14.
- Rebate has not been considered as calculated for previous year for maintaining the high PLF.

[28] Power purchase cost estimated by ED A&N with respect to procurement of power from M/s SPCL is treated as provisional and is subject to final outcome of petition no. 89/2012 before the Commission.

Table 6.6.5 : Details of HSD and Lub. Oil considered for FY 2013-14

S. No.	Particulars	FY 2013-14
1	Wt. Avg. Calorific Value of 1 Kg. HSD (K.Cal./KWh)	10265
2	Density of HSD (ambient) (Kg/m^3)	0.8233
3	Density of Lub. Oil (Kg/m^3)	0.889
4	Cost of HSD (Rs. per Kilo litre) for March 2013	54180
5	Cost of Lub. Oil (Rs. per litre) for September 2012	181.52

Department's Own Generation

Inconsistencies has been observed in the submitted information in the petition in the absence of actual data in respect of PLF, heat rate, consumption of HSD, lubricating oil of the DG Sets owned by the ED- A&N. Further with reference to page xxxiv (a) & (b), the petitioner has used the Station heat rate and lubricating oil consumption norm of the IPP to project the consumption of HSD and lubricating oil for FY 2012-13 and FY 2013-14 for its own DG sets, Commission desired the information with regard to actual consumption of HSD, Lubricating oil, actual generation, auxiliary consumption, calorific value of fuel and its density to determine the actual heat rate for FY 2011-12, FY 2012-13(H1) and as such the additional information as submitted by the petitioner is accordingly considered for estimating the cost of power purchase and fuel & lubricants. As can be observed from the actual data, the PLFs, worked out station heat rate of the DG sets owned by the ED-A&N compare poorly with DG sets of IPP.

Following submission of Petition 91/2012, the Petitioner has informed the Commission about the hiring of the DG Sets of 10 MW and 5 MW without prior approval of the same under section 86(1) or Section 62 of EA 2003, thus making the situation fate accompli, which may or may not turn out to be falling in merit order procurement of Power in respect of Power Purchase Cost. This will distort the assessment of quantities of Power Purchase under Self Generation or Purchase from IPP or generated through hired sets. It is hereby concluded that the petitioner should follow a consistency in the submissions made to the Commission.

Commission for the purpose of ARR for FY 2013-14, has considered the auxillary consumption, heat rate considered for estimating the HSD consumption for FY 2012-13 (H2), average calorific value of fuel, density of fuel & lubricating oil of first half of FY 2012-13 (H1), cost of HSD as on March 2013 & lubricating oil in the month of September 2012 of existing DG sets and consumption of lubricating oil per liter, derated capacity of first half of FY 2012-13 (H1) for estimating the energy availability and cost for FY 2013-14. Commission has considered the growth in the plant load factor to cater to the demand estimated for FY 2013-14.

Accordingly, the Commission approves the following availability from below mentioned stations based on the merit order dispatch principles for FY 2013-14:

Table 6.6.6 : Summary of power purchase units for FY 2013-14

S. No.	Source	Generation at its full load (in KWh)	Estimated Generation (in MUs)	Auxillary Consumption (%)	Net Energy available/sent out (MU)
Power Purchase from SPCL					
1	IPP – SPCL	168000000	138.54	3.46	133.8
Own Generation					
2	Chatham	87600000	25.10	3.59	24.2
3	Phoneix Bay	57816000	32.94	2.54	32.1
4	Raj Niwas	4485120	0.09	0.00	0.1
5	Secretariat	1752000	0.01	0.00	0.0
6	Solar Power Plant	-	-	-	6.9
7	Neil Island	4380000	1.04	1.72	1.0
8	Havelock	11650800	4.37	0.20	4.4
9	RutLand	105120	0.01	2.81	0.0
10	Baratang	4485120	0.25	0.64	0.3
11	Rangat Bay	87915360	20.26	4.97	19.2
12	Long Island	4826760	0.44	5.65	0.4
13	Strait Island	131400	0.06	0.10	0.1
14	Hanspuri	236520	0.02	10.00	0.0
15	Jagannath Dera	3744900	0.05	8.12	0.0
16	Paschim Sagar	1576800	0.00	0.00	0.0
17	Smith Island	394200	0.05	3.95	0.0
18	Sita Nagar	15768000	2.72	0.98	2.7
19	KHEP**	45990000	13.33	0.89	13.2
20	Hutbay	49494000	9.75	4.46	9.3
21	Dugong Creek	385440	0.03	1.80	0.0
22	NPH Car Nicobar	46033800	9.03	5.08	8.6
23	Kamorta	8970240	2.48	0.37	2.5
24	Pillpillow	280320	0.00	0.00	0.0
25	Kakana	490560	0.00	0.00	0.0
26	Champion	2584200	0.29	2.08	0.3
27	Katchal	8094240	1.22	2.07	1.2
28	Teressa	5799120	0.79	1.57	0.8
29	Chowra	1436640	0.24	3.76	0.2
30	Campbell Bay	20104200	3.09	2.65	3.0
	Total	**644530860**	**266.19**	**3.35**	**264.35**

Table 6.6.7 : Summary of power purchase and fuel cost for FY 2013-14

S. No.	Source	Estimated Generation (in MUs)	Heat Rate (2012-13)	HSD Consumption (in liters)	Consumption (in gm./ kWh)	Lube Oil Consumption (in liters)	HSD Cost (Rs. Crores)	Lube Oil Cost (Rs. Crores)	Total Amount (Rs. Crores)
Power Purchase from SPCL									
1	IPP - SPCL	138.54	2010	32950146	1.10	171345.92	178.52	3.11	198.01
Own Generation									
2	Chatham	25.10	2417	7178557	1.73	48835.20	38.89	0.89	39.78
3	Phoneix Bay	32.94	2364	9211192	0.82	30247.28	49.91	0.55	50.46
4	Raj Niwas	0.09	3951	42857	2.86	295.29	0.23	0.01	0.24
5	Secretariat	0.01	3494	3152	0.00	0.00	0.02	0.00	0.02
6	Solar Power Plant			0		0.00	0.00	0.00	6.07
7	Neil Island	1.04	3439	422883	2.86	3340.35	2.29	0.06	2.35
8	Havelock	4.37	2676	1384511	0.62	3070.19	7.50	0.06	7.56
9	RutLand	0.01	2368	3234	5.00	64.92	0.02	0.00	0.02
10	Baratang	0.25	2596	77645	1.02	289.01	0.42	0.01	0.43
11	Rangat Bay	20.26	2396	5742554	1.00	22737.41	31.11	0.41	31.53
12	Long Island	0.44	2964	153321	3.78	1859.70	0.83	0.03	0.86
13	Strait Island	0.06	2172	14149	2.95	182.41	0.08	0.00	0.08
14	Hanspuri	0.02	2696	7479	2.38	62.83	0.04	0.00	0.04
15	Jagannath Dera	0.05	3968	22193	2.72	144.38	0.12	0.00	0.12
16	Paschim Sagar	0.00	0	0		0.00	0.00	0.00	0.00
17	Smith Island	0.05	2821	16354	2.55	140.32	0.09	0.00	0.09
18	Sita Nagar	2.72	2685	864491	0.93	2850.29	4.68	0.05	4.74
19	KHEP**	13.33	2	3304	0.00	65.32	0.02	0.00	0.02
20	Hutbay	9.75	2338	2696352	0.72	7901.65	14.61	0.14	14.75
21	Dugong Creek	0.03	3995	14437	7.50	257.59	0.08	0.00	0.08
22	NPH Car Nicobar	9.03	2360	2521020	0.79	8052.44	13.66	0.15	13.81
23	Kamorta	2.48	2545	746674	1.05	2936.16	4.05	0.05	4.10
24	Pillpillow	0.00	0	0		0.00	0.00	0.00	0.00
25	Kakana	0.00	0	0		0.00	0.00	0.00	0.00
26	Champion	0.29	3221	109613	2.67	862.84	0.59	0.02	0.61
27	Katchal	1.22	2587	372967	2.66	3648.20	2.02	0.07	2.09
28	Teressa	0.79	2635	247037	1.34	1197.92	1.34	0.02	1.36
29	Chowra	0.24	3042	85647	2.16	578.02	0.46	0.01	0.47
30	Campbell Bay	3.09	2517	920341	1.26	4377.01	4.99	0.08	5.07
	Total	**266.19**	**2144**	**65812108.69**	**1.12**	**315343**	**356.5**	**5.72**	**384.75**

Renewable Purchase Obligations

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

"

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

"

The petitioner has to purchase 3% of total consumption of all the consumers in its area as power purchase from renewable sources for FY 2013-14 including 0.40% for Solar and 2.60% for Non-Solar. As submitted by the petitioner in its submission dated March 18'2013; 5 MW solar power plant to be commissioned at Garacharama, Port Blair by March 31'2013 and expected generation for the 1st year is 6.941 million units which shall account for 2.52% of the total generation. Thereby the target quantum of RPO (Solar) including carries forward RPO likely to be achieved in the FY 2013-14. Commission has considered the availability from solar power plant and hydro power plant as submitted by the petitioner for FY 2013-14

As regards, the comment made by the stakeholder during public hearing, it is informed that the impact of actual cost of Solar Power Purchase from the Plant being set up by NTPC as a Commercial project on the land provided by the Administration of A&N may be examined at the time of True Up of petition no. 91/2012. However for the purpose of considering a provision[29] in the ARR for FY 2013-14, a generic Tariff of Rs 7.87/ Kwh as per CERC Tariff order no 243/SM/2012 dated October 25'2012 for the Project with Accelerated Depreciation considered to be availed by the Project Developer. The actual impact of provision of Land or any other issue will be examined at the time of True up of Petition no. 91/2012. The Petitioner has not made any provision in its ARR Petition for FY 2013-14.

In the light of 100 KWp solar projects installed on the Andaman & Nicobar Islands, the petitioner is directed to revive the operations of the said plants and may go in for Annual Maintenance Contract of these small solar power plants with the organization responsible for carrying out the maintenance activity of proposed 5 MW solar power plant; so that the AMC contractor shall not be hesitant to come from mainland for such a small contract and as such the consumers of A&N shall be able to get un-interrupted green power and the burden of the Administration of A&N due to high cost of diesel power is reduced. Besides it also helps A&N to meet RPOs.

Additionally, four to six engineers/technicians of ED A&N who shall be actually deployed for the job of maintenance of solar power plants; should be initially trained at new site of 5 MW Solar Power Plant for upkeep and maintenance of 2 x 50 kWp plants, so as to equip the officials of department

[29] The petitioner has not considered the solar power in the total power purchase cost of FY 2013-14. However the petitioner has made a separate petition (93/2012) to the Commission for approval of the PPA to be signed with NTPC for procurement of Power from solar power plant for which the power is envisaged to be available from April 2013.

with the available technologies and spares for such purpose. This may reduce the frequent dependency on the mainland for the purpose of maintenance.

Summary of total approved Power Purchase Cost for ARR of FY 2013-14

While estimating the total power purchase cost, station wise energy availability and power purchase cost & fuel cost as discussed in earlier paras has been considered. **Commission considers the total Power purchase cost of Rs. 204.09 Crores and the fuel cost of own generating stations of Rs. 180.66 Crores for procuring 140.7 million units of energy (including solar energy) and generating 127.64 million units of electricity as reasonable and approves the same for FY 2013-14.** The summary of total power purchase quantum and cost including own generation is mentioned below:

Table 6.6.8 : Power Purchase Cost including Fuel cost of own generation for FY 2013-14

S. No.	Source	Estimated Generation (in MUs)	Net Energy available/sent out (MU)	HSD Cost (Rs. Crores)	Lube Oil Cost (Rs. Crores)	Total Billed Amount (Rs. Crores)	Rs./KWh
Power Purchase from SPCL and NTPC							
1	IPP - SPCL	138.54	133.8	178.52	3.11	198.01	14.80
2	Solar Power Plant		6.9	0.00	0.00	6.07	8.75[30]
Own Generation							
3	Chatham	25.10	24.2	38.89	0.89	39.78	15.85
4	Phoneix Bay	32.94	32.1	49.91	0.55	50.46	15.32
5	Raj Niwas	0.09	0.1	0.23	0.01	0.24	25.91
6	Secretariat	0.01	0.0	0.02	0.00	0.02	22.40
7	Neil Island	1.04	1.0	2.29	0.06	2.35	22.63
8	Havelock	4.37	4.4	7.50	0.06	7.56	17.28
9	RutLand	0.01	0.0	0.02	0.00	0.02	16.20
10	Baratang	0.25	0.3	0.42	0.01	0.43	16.85
11	Rangat Bay	20.26	19.2	31.11	0.41	31.53	15.56
12	Long Island	0.44	0.4	0.83	0.03	0.86	19.77
13	Strait Island	0.06	0.1	0.08	0.00	0.08	14.53
14	Hanspuri	0.02	0.0	0.04	0.00	0.04	17.77
15	Jagannath Dera	0.05	0.0	0.12	0.00	0.12	25.99
16	Paschim Sagar	0.00	0.0	0.00	0.00	0.00	
17	Smith Island	0.05	0.0	0.09	0.00	0.09	18.60
18	Sita Nagar	2.72	2.7	4.68	0.05	4.74	17.40
19	KHEP**	13.33	13.2	0.02	0.00	0.02	0.01

[30] The petitioner has not made any provision in the petition. As such the rate specified by CERC will be applicable and for the purpose of this order, the rates has been taken from latest CERC order no. 243/SM/2012 dated 25.10.2012 according to which the first of the tariff control period i.e. FY 2012-13 shall be applicable.

S. No.	Source	Estimated Generation (in MUs)	Net Energy available/sent out (MU)	HSD Cost (Rs. Crores)	Lube Oil Cost (Rs. Crores)	Total Billed Amount (Rs. Crores)	Rs./KWh
20	Hutbay	9.75	9.3	14.61	0.14	14.75	15.13
21	Dugong Creek	0.03	0.0	0.08	0.00	0.08	27.14
22	NPH Car Nicobar	9.03	8.6	13.66	0.15	13.81	15.29
23	Kamorta	2.48	2.5	4.05	0.05	4.10	16.53
24	Pillpillow	0.00	0.0	0.00	0.00	0.00	
25	Kakana	0.00	0.0	0.00	0.00	0.00	
26	Champion	0.29	0.3	0.59	0.02	0.61	21.20
27	Katchal	1.22	1.2	2.02	0.07	2.09	17.13
28	Teressa	0.79	0.8	1.34	0.02	1.36	17.16
29	Chowra	0.24	0.2	0.46	0.01	0.47	19.95
30	Campbell Bay	3.09	3.0	4.99	0.08	5.07	16.39
	Total	**266.19**	**264.35**	**356.6**	**5.7**	**384.75**	**14.45**

** Hydro Power Plant

It is seen that in the case of A&N, majority of the generation is diesel based, making per unit cost of generation very high compared to other utilities. **If the units generated by hydro-electric plant are excluded from the total generation, the average fuel cost of DG sets of own generation works out at Rs. 15.80 per unit for FY 2013-14.** In view of the higher cost of diesel generation, the approved tariff is not covering the full cost of supply. Historically, there has been substantial gap between the actual cost of supply and revenue realized. This gap so far has been borne by the administration of A&N.

Keeping the above fact in view, the Commission is of the view that any variation is power purchase cost (including variation in cost of their own generation) should, for the time being, be borne by the utility and efforts to enforce energy efficiency be enhanced.

6.7 Operation and Maintenance Expenses

Petitioner's Submission

The petitioner has submitted that the Operation and Maintenance expenses comprise of the following heads:

- **Employees Expenses** which includes the salaries, dearness allowances, dearness pay, other allowances and retirement benefits paid to the staff;

- **Repair and Maintenance (R&M) Expenses**, which include all expenditure incurred on the maintenance and upkeep of transmission and distribution assets; and
- **Administrative and General Expenses**, which include all expenditure incurred in operating a business such as telephone charges, regulatory and consultancy fees such as energy auditing and chartered accountant fees, conveyance and travel expenses, water charges etc.

The petitioner has submitted the operation and maintenance cost of previous years for consideration by the Hon'ble Commission as mentioned below:

Table 6.7.1 : O&M expenses of previous years

Year	O&M Expenses (Rs. Crores)
2005-06	53.60
2006-07	57.10
2007-08	60.70
2008-09	63.90
2009-10	68.70
2010-11	71.60
2011-12	78.26
2012-13 (RE)	85.93
2013-14 (P)	93.60

Source: Table 4.12 of the Petition submitted by ED A&N

6.7.1 Employee Expenses

Petitioner's submission

The expense head of employee cost consists of salary and allowance, bonus, Leave Travel Concession (LTC) & Honorarium etc. EDA&N has projected the employee cost for FY 2013-14 taking into consideration increase in the basic salary and related other remunerations at the rate of 8.76% i.e (WPI from 2010-11 to 2011-12) over cost for the year 2011-12. The petitioner therefore requested the Commission to approve the employee expenses of Rs. 49.30 Crores for FY 2012-13 and Rs. 53.62 Crores for FY 2013-14.

Commission's Analysis

As per the regulation 27 of JERC tariff regulations 2009

"

27. Operation and Maintenance Expenses

1) *'Operation & Maintenance expenses' or 'O&M expenses' shall mean repair and maintenance (R&M) expenses, employee expenses and administrative & general (A&G) expenses including insurance.*

   While determining the O&M expenses for generation functions within the State, the Commission shall be guided, as far as feasible, by the principles and methodologies of CERC on the manner, as amended from time to time.

2) *While determining the O&M expenses for transmission functions within the State, the Commission shall be guided, as far as feasible by the principles and methodologies specified by CERC on the matter, as amended from time to time:*

   Provided further that the Commission may, if it considers it just, practical and proper considering the size of the total transmission system of, and the quantum of electricity handled by, an integrated utility, treat its transmission system as an integral part of its distribution system itself.

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

   - *O&M expenses as approved by the Commission for the first time for a year shall be considered as base O&M expenses for determination of O&M expenses for subsequent years;*
   - *Base O&M expenses as above shall be adjusted according to variation in the rate of WPI per annum to determine the O&M expenses for subsequent year, where WPI is the Wholesale Price Index on April 1 of the relevant year;*
   - *In case of unbundling of the Electricity Department and formation of separate distribution companies, the Commission will make suitable assessment of base O&M expenses of individual distribution companies separately and allow O&M expenses for subsequent years for individual companies on the basis of such estimation and above principle.*

4) *O&M expenses of assets taken on lease/hire-purchase and those created out of the consumers' contribution shall be considered in case the generating company or the licensee has the responsibility for its operation and maintenance and bear O&M expenses.*

5) *O&M expenses for gross fixed assets added during the year shall be considered from the date of commissioning on pro-rata basis.*

6) *O&M expenses for integrated utility shall be determined by the Commission on the norms and principles indicated above. "*

As may be seen from para 5.7.1, Commission has considered the employee cost (including capitalization of Rs. 36.05 Crores) as Rs. 85.47 Crores for FY 2012-13 for reasons explained therein. Taking Rs. 85.47 Crores as a base for FY 2013-14 and after applying the escalation of 8.94[31]%, employee expenses for FY 2013-14 works out to Rs. 93.11 Crores; Commission has considered the capitalization in the employee cost at Rs. 39.20 Crores as submitted by the petitioner for FY 2013-14 and has deducted the same from above estimates of employee expenses.

Commission considers the employee cost of Rs. 53.91 Crores as reasonable and approves the same for FY 2013-14.

6.7.2 Administration and General Expenses

Petitioner's submission

The petitioner has submitted that the A&G expenses comprise of the following broad sub-heads of expenditure, viz.

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

The A&G expenses of ED A&N for FY 2011-12 are Rs. 2.20 Crores. A&G expenses for the FY 2012-13 is estimated at Rs. 2.40 Crores which are escalated by 8.76% i.e (WPI from 2010-11 to 2011-12) over cost for the year 2011-12.The petitioner therefore has requested the Commission to approve the A&G expenses of Rs. 2.40 Crores for FY 2012-13 and Rs. 2.61 Crores for FY 2013-14. The escalation is to absorb the normal inflationary increases in the costs. The Administration & General expense of previous years is presented below:

Table 6.7.2.1 : A&G expenses of previous years

Year	A&G Expenses (Rs. Crores)
2004-05	1.40
2005-06	1.51

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

Year	A&G Expenses (Rs. Crores)
2006-07	1.60
2007-08	1.69
2008-09	1.71
2009-10	1.88
2010-11	2.02
2011-12	2.20

Source: Table 4.13 of the Petition submitted by ED A&N

Commission's Analysis

As may be seen from para 5.7.2, Commission has considered the administration and general expenses as Rs. 2.40 Crores for FY 2012-13 for reasons explained therein. Taking Rs. 2.40 Crores as a base for FY 2013-14 and after applying the escalation of 8.94[32]%, Administration & general expenses for FY 2013-14 works out to Rs. 2.61 Crores

Commission considers the Administration and General Expenses of Rs. 2.61 Crores as reasonable and approves the same for FY 2013-14.

6.7.3 Repair and Maintenance Expenses

Petitioner's submission

The petitioner has submitted that they have been undertaking various Repairs and Maintenance activities as a step towards improvement of systems, reduction in breakdowns, reduction in response time and increasing preventive maintenance. The R&M expenses for FY 2013-14 are escalated by 8.76% over estimated expenses for FY 2012-13 to capture the inflationary increases in the costs. The petitioner therefore has requested the Commission to approve R&M expenses of Rs. 34.23 Crores for FY 2012-13 and Rs. 37.23[33] Crores for FY 2013-14.

Commission's Analysis

As may be seen from para 5.7.3, Commission has considered the repair & maintenance expenses as Rs. 34.29 Crores for FY 2012-13 for reasons explained therein. Taking Rs. 34.29

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

33 The petitioner has submitted Rs. 37.37 Crores in the para 4.4.3 and table 4.4.4 of petition and has submitted Rs. 37.23 Crores in format-14. Commission has therefore condoned the error and has considered Rs. 37.23 Crores (as minimum of two) as submission of the petitioner.

Crores as a base for FY 2013-14 and after applying the escalation of 8.94[34]%, employee expenses for FY 2013-14 works out to Rs. 37.36 Crores

Therefore the Commission considers the Repair and Maintenance expenses of Rs. 37.36 Crores as reasonable and approves the same for FY 2013-14.

6.7.4 Summary of O & M Expenses

The overall summary of O&M expenditure approved by the Commission for FY 2013-14 vis-à-vis submission of the petitioner is given below:

Table 6.7.4.1 : Summary of O & M expenses

Sr. No.	Particulars	2013-14	
		Petitioner's estimates	**Approved**
1	2	3	4
1	Employee Expenses	53.62	53.91
2	A&G Expenses	2.61	2.61
3	R&M Expenses	37.23	37.36
4	Total O&M Expenses	**93.46**	**93.88**

6.8 Capital Expenditure and Capitalization

Petitioner's Submission

The petitioner has submitted the infrastructure inherited by ED A&N is insufficient to cater to the present load and hence to meet the increasing demand it is absolutely necessary to undertake significant capital expenditure.

The objective of incurring the capital expenditure is to upgrade and strengthen the distribution network to meet the desirable standards of performance and provide better network reliability and sustainable performance to the consumers. The capital expenditure plan envisaged will also assist in reducing system losses. The petitioner proposes to incur the capital expenditure of Rs.54.15 Crores for FY 2012-13. Out of total capital expenditure of Rs. 54.15 Crores, Rs.36.55[35]

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

35 The petitioner has submitted Rs. 30 Crores to be capitalised in FY 2012-13 in table 4.5 of the petition and in the table 4.15 has submitted Rs. 28.69 Crores to be added during FY 2011-12 and Rs. 36.55 Crores to be added during FY 2012-13. Further the petitioner in format no. 6 submitted Rs. 35.52 as the addition in the capital expenditure during the FY 2012-13 and Rs. 36.55 Crores in format no. 7 to be added during FY 2012-13 in the gross fixed assets. The petitioner again in format 8 submitted Rs. 30 Crores as investments to be capitalised. In view of the variations in the submissions of the

Crores are to be capitalized during the FY-2012-13. Further ,, estimated capital expenditure for FY 2013-14 is Rs. 140.36 Crores. Out of the total capital expenditure during the year and capital work in progress on account of ongoing schemes, The petitioner based on the progress of the works proposes to capitalized assets amounting to Rs. 35.52 Crores.

Commission's analysis

Commission observes that the capital expenditure and the capitalization submitted by the petitioner for FY 2013-14 and the requirement of maintaining the reliable supply for the consumers of UT of Andaman & Nicobar Islands.

As per the regulation 21 of JERC for the State of Goa and UTs (Terms and conditions for determination of Tariff), Regulation 2009 specifies that the licensee shall propose in their filings, a detailed capital investment plan, showing ongoing projects separately, that will spill into the ensuing year and new projects (along with their justification), that will commence in the ensuing year. The petitioner had not submitted the capital investment plan as per the regulations and did not give the present status of the capital expenditure incurred/capitalised.

As discussed in para 5.8 of this order, Commission **provisionally approves the capitalization of Rs. 35.52 Crores proposed by the petitioner for FY 2013-14.** Further, Petitioner is directed to submit the detailed statement of the capital expenditure incurred quarterly and asset capitalization during the year for review and true up. The figures of capitalization of the assets includes the value of those assets, which after the required certificate from the Electrical Inspector have been commissioned on ground and commenced the commercial operation during the concerned year.

As in case of review of FY 2012-13, this expenditure is being permitted as a special case to ensure the creation of infrastructure for adherence to Standard of Performance and Supply Code Regulations.

6.9 GFA and Depreciation

Petitioner's Submission

The petitioner has submitted that the value of gross fixed assets (GFA) for 2011-12 has been taken From the audited accounts for the FY 2010-11 and the same has been increased by addition of assets during the FY 2011-12 & estimated addition during FY 2012-13. Thereafter, planned additions during 2013-14 have been added and accordingly GFA has been computed for FY 2013-14. The GFA movement is given in the table below:

petitioner; the Commission has considered Rs. 36.55 Crores during FY 2012-13 as the final submission on account of capitalisation during the FY 2012-13.

Table 6.9.1 : Gross Fixed Asset Movement submitted by the petitioner

Financial Year	Opening Balance (Rs. Crores)	Addition during year (Rs. Crores)	Closing Balance (Rs. Crores)
2011-12	59.58	28.69	88.27
2012-13	88.27	36.55	124.82
2013-14	124.82	35.52	160.34

Commission's analysis

The petitioner has submitted in the petition that the value of gross fixed asset for FY 2010-11 has been taken from audited accounts of FY 2010-11 and the same has been increased by addition of assets during the FY 2011-12 & estimated addition during FY 2012-13 and FY 2013-14. Further the petitioner in its submission to compliance to directive no. 3 has submitted the following

Quote

"Hiring of consultants for preparation of fixed assets register in line with JERC regulations is under process. Records are required to be collected & compiled from various power houses spread across A&N Islands. In view of the above EDA&N prays for more time to comply with the directive."

Unquote

As discussed in para 5.8 and 5.9 of this order, Commission has therefore considered the capitalization of FY 2011-12 and FY 2012-13 as a base for estimating the depreciation for FY 2013-14.

As per Regulation 26 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 specifies that depreciation for the assets shall be calculated annually at the rates specified by CERC from time to time. The effective rate of depreciation for assets linked to Plant & Machinery & Vehicles is 5.28%, Buildings is 3.34% and Furniture is 6.33% vide Appendix-III (Depreciation schedule of CERC (Terms and Conditions of Tariff) Regulations, 2009. The depreciation for the FY 2012-13 has been worked out at Rs. 2.03 Crores.

As discussed in earlier para 5.8, 5.9, 6.8 of this order, Rs. 65.24 Crores has been considered as capitalization at the end of FY 2012-13. In view of above, Commission considers the depreciation of Rs. 3.31 Crores as reasonable considering Rs. 65.24 Crores as the opening value of assets at the beginning of the year as being the capitalization submitted for FY 2012-13 considered by the Commission is given below**:**

Table 6.9.2 : Depreciation approved by the Commission for FY 2013-14 (in Rs. Crores)

Sr. No.	Particulars	2013-14	
		Petitioner Submission	**Approved**
1	2	3	4
1	Opening Value of Assets at the beginning of the year	124.82	65.24
2	Additions during the year	35.52	35.52
3	Gross Fixed Assets at the end of year	160.34	100.76
4	Average Assets	**142.58**	**83.00**
5	Depreciation for the year	**5.50**	**3.31**

Table 6.9.3 : Calculation of the Depreciation for FY 2013-14 (in Rs. Crores)

Sr. No.	Particulars	Opening GFA	Additions	GFA at end	Average Assets	Depn Rates (%)	Depreciation
1	2	3	4	5	6	7	8
1	Plant & Machinery	42.14	16.38	58.52	50.33	5.28%	2.66
2	Buildings	10.00	19.14	29.14	19.57	3.34%	0.65
3	Vehicles	-	-	-	-	5.28%	-
4	Furniture and Fixtures	-	-	-	-	6.33%	-
5	Land	13.10	0.00	13.10	13.10	0.00%	-
6	Total	**65.24**	**35.52**	**100.76**	**83.00**		**3.31**

Commission therefore considers the depreciation of Rs. 3.31 Crores as reasonable and approves the same for FY 2013-14.

6.10 Interest and Finance Charges

6.10.1 Interest on Loan

Petitioner's Submission

The petitioner has submitted that the entire capital employed till date has been funded through equity infusion by the Central Government through Budgetary support without any external borrowings. ED A&N is now migrating to regulatory regime under the aegis of the Hon'ble Commission and will begin to function as a commercial utility under the Electricity Act, 2003. The petitioner has therefore taken 01.04.2011 as the base date for the above change and from 01.04.2011 onwards, ED A&N will be subjected to tariff determination under the provisions of the Tariff Regulations to be issued by the Hon'ble Commission.

Commission's analysis

Commission observes that the petitioner has not calculated the interest on normative loan as per the regulations.

As per the JERC tariff regulations 2009:

"25. Interest and Finance Charges on Loan

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

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

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

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

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

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

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

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

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

The petitioner has claimed interest on the sum of 'Capital Work in Progress' and 'Gross fixed assets' at the end of the year and has not considered the debt equity ratio as per the regulations. The Petitioner has not borrowed any loans in the past upto 31st September 2011 and has also not borrowed any loan to meet the capital expenditure for FY 2013-14. Therefore in the absence of actual value of gross fixed assets and considering the petitioner's submission that 'the ED A&N being a Government Department, the entire capital employed till date has been funded through equity infusion by the Central Government through Budgetary support without any external borrowings.' The interest charges projected by the ED A&N for FY 2013-14 are on computed on the sum of 'Capital Work in Progress' & 'Assumed value of Gross Fixed Assets' without any external borrowings.

As discussed in para 5.8, 5.9 of this order; In the instant case, the licensee has not provided the crucial information to ascertain that assets that are effectively/actually deployed for the year for which tariff is being claimed or fixed; Hence the servicing of assets in the form of interest on loan and return on assets is indeterminate at this stage on the opening GFA, hence not been considered on the submitted value of assets. The same shall be considered at true-up stage if full details are made available.

As discussed in para 5.8, 5.9, 6.8 and 6.9 of this order, the Commission has now considered an opening normative loan of Rs. 43.64 Crores for FY 2013-14 and added normative loan for FY 2013-14 of Rs. 24.86 Crores being 70% of capitalization considered for FY 2013-14 to calculate the interest on normative loan amount. Commission has considered the SBI PLR rate which is now substituted as SBI advance rate, at 14.45%[36] as on 1st April 2013 for FY 2013-14. The Commission approves the total interest charges for the year at Rs. 7.86 Crores as given below:

Table 6.10.1.1 : Normative Interest Charges approved by the Commission for FY 2013-14 (in Rs. Crores)

Sr. No.	Particulars	2012-13	
		Petitioner Submission	**Approved**
1	2	3	4
1	Opening Normative Loan/WIP	483.85	43.80
2	Add: Normative Loan during the year/GFA during the year	151.58	24.86
3	Less: Normative Repayment		3.31

[36] SBI advance rate notified on 14.02.2011; Thereafter four revisions in the SBI advance rate was notified in FY 2011-12 and are as under: 25.04.2011-13.25%; 12.05.2011-14% ; 11.07.2011-14.25%; 13.08.2011 – 14.75%.; 27.09.2012-14.50% and 04.02.2013-14.45%

Sr. No.	Particulars	2012-13	
		Petitioner Submission	**Approved**
1	2	3	4
4	Closing Normative Loan/GFA	**635.43**	**65.36**
5	Average Normative Loan		54.58
6	Rate of Interest (@SBI SBAR rate)	14.75%	14.45%
7	Interest on Normative Loan	6.73[37]	7.89

Accordingly, the Commission has considered the Normative Interest on loans as Rs. 7.89 Crores as reasonable and approves the same for FY 2013-14.

6.10.2 Interest on Working Capital

Petitioner's Submission

The petitioner has submitted that Interest on Working Capital for FY 2012-13 is computed on normative basis. As per the JERC Tariff Regulations, for the purpose of computation of normative working capital and Interest on working capital, the components of working capital are as follows:

- Power Purchase Cost
- One month's employee costs
- Administration & General expenses
- One month's R&M Cost

The rate of interest on working capital has been considered as per SBI Prime lending rate as on 1st April of the respective year, which is 14.75% as on 1st April 2011. The interest on normative working capital for FY 2012-13 works out to Rs. 5.39 Crores and Rs. 6.08 Crores for FY 2013-14.

Commission's analysis

As per the regulation 29 of JERC tariff regulations

"

29. WORKING CAPITAL AND INTEREST RATE ON WORKING CAPITAL

[37] The petitioner has submitted Rs. 12.94 Crores in the table 4.23 of the petition against the 'Interest Charges (including interest on working capital)' and has also calculated Rs. 71.49 Crores as interest charges for FY 2013-14 in the table 4.19 of the petition. Further the petitioner showed Rs. 72.47 Crores as 'Interest Charges' in format no. 9 for FY 2013-14 and Rs. 12.81 Crores against the 'Interest Charges (including interest on working capital)' in format no. 27. In view of the variations in the submissions of the petitioner, Commission has accordingly considered the Rs. 12.81 Crores as the Interest Charges including Interest on working capital as Rs. 6.08 Crores as submitted in table 4.20 of the petition and format no. 19 of the petition.

5) *For generation and transmission business, the working capital shall be as per CERC norms.*

6) *Subject to prudence check, the working capital for distribution business shall be the sum of one month requirement for meeting:*

   a. *Power purchase cost.*

   b. *Employees cost.*

   c. *Administration & general expenses and*

   d. *Repair & Maintenance expenses.*

7) *Subject to prudence check, the working capital for integrated utility shall be the sum of one month requirement for meeting :*

   a. *Power purchase cost*

   b. *Employees cost*

   c. *Administration & general expenses*

   d. *Repair & Maintenance expenses.*

   e. *Sum of two month requirement for meeting Fuel cost.*

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

In accordance with Section 47(4) of the Electricity Act 2003, the distribution licensee is required to pay interest on security deposit collected from the consumers. If this security deposit is invested in the form of interest earning fixed deposits or other similar instruments. The interest earned from such investment could be utilized to pay the interest to the consumers under section 47(4) of the Electricity Act 2003. However it is noted that the petitioner has not invested any of the security deposit held and the said amount is available to the petitioner. Accordingly, the Commission has allowed the interest payable to the consumer as expense in this order. Commission has considered the security deposit (on account of misc. deposits) available with the Petitioner as a source to meet working capital requirements and has deducted this amount from the working capital requirement considered for interest for FY 2013-14.

Further, Commission clarifies that SBI PLR rate has now been substituted as SBI Advance Rate at 14.45%[38] applicable as on 1st April 2013 for FY 2013-14. Commission has computed the requirement of working capital based on the provisions of the regulations. Working capital has been reduced by the amount of Consumer Security Deposit/Misc. deposit available with the petitioner considering its usage for meeting part of working capital requirements.

Table 6.10.2.1 : Interest on Working Capital approved by the Commission for FY 2013-14 (in Rs. Crores)

Sr. No.	Particulars	2013-14	
		Petitioner Submission	**Approved**
1	2	3	4
1	Fuel Cost for 2 months	19.10	30.11
2	Power Purchase Cost for one month	15.66	17.01
3	Employee Cost for one month	4.47	4.47
4	A&G Expenses for one month	0.22	0.22
5	R&M Expenses for one month	3.10	3.11
6	**Total Working Capital for one month**	**42.56**	**54.92**
7	**Net Working Capital for one month after deducting security deposit**		**53.58**
8	SBI PLR Rate	14.75%	14.45%
9	Interest on Working Capital	**6.08**	**7.74**

Commission considers Rs. 7.74 Crores as Interest on Working Capital as reasonable and approves the same for FY 2013-14.

6.10.3 Interest on Security Deposit

Petitioner's Submission

The petitioner submits that the ED A&N collects deposits from consumers and contractors (as Earnest Money Deposit or security). While security deposit from consumers is taken at the time of providing the connection and has to be repaid to the consumers at the time of surrender of

[38] SBI advance rate notified on 14.02.2011; Thereafter four revisions in the SBI advance rate was notified in FY 2011-12 and are as under: 25.04.2011-13.25%; 12.05.2011-14% ; 11.07.2011-14.25%; 13.08.2011 – 14.75%.; 27.09.2012-14.50% and 04.02.2013-14.45%

the connection; security deposit from contractors is adjusted subsequent to satisfactory completion of the contracted work. These deposits are in the form of Fixed Deposits Receipts (FDR)/ Bank Guarantee and in case of FDR the interest is directly paid to the consumer.

Commission's analysis

As can be observed, the petitioner has silently indicated that they have the security deposit of the consumers and the petitioner has not paid any interest on the security deposit from the consumers except fixed deposits where interest is directly paid to the consumers as stated by the petitioner.

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

In terms of the section 47 (4) of the Electricity Act, 2003 'the distribution licensee is required to pay interest on security deposit collected from consumers equivalent to bank rate or more as may be specified by the Commission.'

The petitioner in their audited accounts for FY 2010-11 had submitted that the misc. deposit is available with the petitioner during FY 2011-12, FY 2012-13 and FY 2013-14; Further, the petitioner had submitted that the consumers are required to make a deposit equivalent to the security amount in bank in their name with a lien in favour of Electricity Department. The bank is authorized to release the fixed deposit only after the receipt of 'no objections/instruction' from the department. In the event of surrender of connection by the consumer and clearance of all dues; the department issues a NOC to the bank for releasing the fixed deposit. The interest accrued on the deposit is credited to the consumer's account.

As discussed in para 5.10.3 of this order and On account of provisions mentioned in the Act and regulation, Commission directs the petitioner, that the petitioner must pay the interest on consumer security deposit for FY 2013-14 (at the Bank Rate i.e. 8.45[39]% per annum applicable as on 1st April 2013) with effect from January 29' 2013 to the consumers on their security deposit irrespective of petitioner's constraints and this needs to be explicitly indicated on the consumers bill, a sum of Rs. ***<u>(calculated amount)</u>*** as 'Interest on security deposit' at the rate of 8.45%[40] per

[39] As per RBI circular no. RBI/2012-13/402 Ref:DBOD.No.Ret.BC. 77/12.01.001/2012-13 dated January 29, 2013 on bank rate.

[40] As per RBI circular no. RBI/2012-13/402 Ref:DBOD.No.Ret.BC. 77/12.01.001/2012-13 dated January 29, 2013 on bank rate.

annum for the FY 2013-14 in the consumer bill of April 2014. **Any non-compliance in this regard shall be viewed seriously by the Commission.**

In view of the above, the Commission allowed Rs. 0.12 Crores as the interest on security deposits as expenditure for FY 2013-14.

6.11 Return on Capital Base/Equity

Petitioner's Submission

The petitioner has estimated Rs. 3.29 Crores as the reasonable return on net fixed assets for FY 2012-13 as per the JERC regulations. The petitioner has also calculated the return on equity of Rs. 4.91 Crores for FY 2013-14 and has submitted that the Distribution Business has always been perceived to be a business having a greater inherent risk than the Generation or Transmission Business due to various factors amongst which the direct interface with the retail consumers is the biggest risk. The same has been recognized by many Commissions across the country and they have proposed a higher rate of return on the equity invested in distribution business as compared to generation and transmission business. This has been demonstrated by the various Commissions by offering rate of return @16% for distribution business in their Tariff Regulations. The petitioner further submitted that CERC in its recent Tariff Regulations of 2009 for Generation and Transmission has fixed pretax return on equity at 15.50% with an additional return of 0.50% for projects completing within specified timelines.

Commission's analysis

ED A&N being 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 and ED A&N is not restructured and corporatized till date. As of now, it is an integrated utility and it is entitled to return on capital base under the provisions of Schedule VI of the repealed Electricity (Supply) Act, 1948 vide provision under Regulation 23 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009. The basic requirement for consideration of either return on capital base or return on equity is the basic information of assets in the form of the assets & depreciation registers besides other data. ED A&N has not been maintaining the adequate information.

As discussed in earlier para 5.8, 5.9, 5.10, 6.8, 6.9 and 6.10; the Commission has considered Rs. 65.24 Crores as the gross block at the beginning of FY 2013-14 and accumulated depreciation of Rs. 3.55 Crores. Commission has therefore considered the reasonable return of 1.85 Crores at the rate of 3% on net fixed asset of Rs. 61.69 Crores at the beginning of FY 2013-14.

In view of the above, Commission considers the Return on Net Fixed Assets of Rs. 1.85 Crores as reasonable and approves the same for FY 2013-14.

6.12 Non-Tariff Income

Petitioner's Submission

The petitioner has estimated Rs. 2.10 Crores for FY 2013-14 based on the actuals of FY 2011-12 and revised estimates of FY 2012-13 as the non-tariff income in the form of meter rent, late payment charges & misc. charges from various categories of consumers.

Commission's analysis

Commission observes the submission made by the petitioner for FY 2010-11 and FY 2011-12 and as discussed in para 5.12 of this order; **Commission considers Rs. 2.10 Crores as reasonable and approves the same for FY 2013-14.**

6.13 Revenue at existing tariff for FY 2013-14

Petitioner's Submission

The petitioner has estimated Rs. 108.64 Crores as the revenue for FY 2013-14.

Commission's analysis

Commission has estimated the revenue on the basis of revised estimates of energy sales for FY 2013-14. The petitioner has not submitted the slab wise sales and revenue in accordance with the existing Tariff schedule, the Commission therefore directs the petitioner to maintain slab wise details of sales and revenue and should submit the same in the next ARR and tariff petition. In absence of slab wise details of sales and revenue, Commission has therefore considered the average billing rate estimated by the petitioner of existing tariff for domestic, industrial and commercial category for calculation of revenue for FY 2013-14 at existing tariff.

Table 6.13.1 : Revenue at existing tariff for FY 2013-14 approved by the Commission

S. No.	Category	FY 2013-14	
		Petitioner's submission	Approved
1	Domestic	29.15	29.67

S. No.	Category	FY 2013-14	
		Petitioner's submission	**Approved**
2	Commercial	38.53	44.25
3	Industry	5.89	6.55
4	Bulk	30.38	27.71
5	Public Lighting	4.57	0.29
6	Irrigation Pumps & Agriculture	0.12	0.05
	Total	**108.64**	**108.52**

Commission has estimated Rs. 108.52 Crores based on the estimated sales as reasonable and approves the same for FY 2013-14.

6.14 Aggregate Revenue Requirement for FY 2013-14

Commission's analysis

The Commission has considered and approved the ARR for FY 2013-14 based on the items of expenditure discussed in the preceding Chapters and the actuals submitted by the petitioner of Power purchase costs, revenue and sales and the same has been summarized in the table below:

Table 6.14.1 : Aggregate Revenue Requirement approved for FY 2013-14
(Rs. in Crores)

Sr. No.	Particulars	2013-14	
		Petitioner Submission	**Approved**
1	2	3	4
1	Cost of fuel	114.60	180.66
2	Cost of power purchase for full year	187.89	204.09
3	Employee costs excluding arrears	53.62	53.91
4	Repair & Maintenance Expenses	37.23	37.36
5	Administration and general expenses	2.61	2.61
6	Depreciation	5.50	3.31
7	Interest and finance charges	6.73	7.89
8	Interest on working capital & Interest on Security Deposit	6.08	7.86
9	Return on NFA /Equity	3.29	1.85
10	Provision for Bad Debt	-	-
11	Advance Against Depreciation	-	-
12	**Total Revenue Requirement**	**417.55**	**499.54**
13	Less: Non-Tariff Income	2.10	2.10
14	**Net Revenue Requirement (12-13)**	**415.46**	**497.45**

The estimated (surplus)/gap have been mentioned in the following table for FY 2013-14:

Table 6.14.2 : Approved Revenue Gap for FY 2013-14 (Rs. in Crores)

Sr. No.	Particulars	2013-14	
		Petitioner Submission	**Approved**
1	2	3	4
14	**Net Revenue Requirement (12-13)**	**415.46**	**497.45**
15	Revenue from Retail Sales at Existing Tariff	108.64	108.52
16	**Net Gap (14-15)**	**306.82**	**388.92**
17	Gap for the previous year		
18	**Total gap (16+17)**	**306.82**	**388.92**
19	Additional revenue from proposed tariff	-	-
20	**Revenue Gap/ (Surplus), if any, after proposed tariffs (18-19)**	306.82	388.92[41]
21	Budgetary Support from Government		388.92
22	**Net Final Revenue Gap/ (Surplus) (20-21)**	306.82	-

As can be seen from the table mentioned above, there is a revenue gap of Rs. 388.92 Crores at the end of FY 2013-14 as estimated by the Commission against the gap of Rs. 306.82 Crores furnished by the petitioner in the petition, formats and additional submissions. Commission considers the estimated revenue gap of Rs. 388.92 Crores as reasonable and approves the same for FY 2013-14. The increase in the revenue gap is on account of increase in the price of the diesel to Rs. 54.18/- Liter for FY 2013-14 as indicated by the petitioner during presentation in public hearing.

Historically, there has been substantial gap between the actual cost of supply and revenue realized. This gap so far has been borne by the administration of A&N. Therefore keeping this fact in view the assessed gap of FY 2013-14 will be borne by the Administration of A&N through the Non-Plan funding in Annual Plan by the Govt. of India to the Electricity Department of the Andaman & Nicobar Islands.

[41] The petitioner has considered the escalation of 5% on HSD rate as on September 2012 (i.e. Rs. 40801.57/kL) to estimate the fuel cost. Commission has considered the prevailing rate (of Rs. 54180/- kL -as on March 2013 as indicated by the petitioner during presentation in public hearing. Variation during the year shall be addressed in the True-up.

7. DIRECTIVES

7.1 Background

While examining the compliance note and supporting documents submitted by the Petitioner in the proposed ARR and Tariff Petition for FY 2013-14, it has been observed that the some of the directives issued in tariff order for Petition no. 65/2012 dated June 04'2012 for FY 2012-13 have not been fully complied with by ED-A&N. *Though Commission appreciates the efforts made by the petitioner in reduction of T&D losses, Actions taken on the directions need more efforts and seriousness on the part of the petitioner.*

It has been observed that the distribution licensee has not been maintaining the required information and has used assumptions for computation of several components of ARR. ED A&N requires substantial improvement in maintenance of data relating to operational and financial parameters. Andaman & Nicobar being the cluster of 572 islands and out of these only 38 are permanently inhabited and 100 % villages have been electrified electrified through 135 no. of Diesel Generating sets with capacity from 12 KW to 2500 KW at 43 power houses located in these 29 islands including one hydro-electric power generating station and solar power plant having capacity of 5.25 MW, 0.10 MW(non – operational) , and a new 5 MW Solar project (expected to be commissioned shortly) respectively. Besides this the Electricity Department has been purchasing Energy from M/s Surya Chakara Power Corporation Limited (SPCL), an Independent Power Producer since 22nd April 2003 having capacity of 20 MW with 4 units of 5 MW Diesel Generating Sets to meet their Energy requirement.

As such no separate accounts for various components of cost of each Diesel Generating Set (owned & maintained by the department), Hydro power generation (Cost of Manpower recently received), Solar power generation are being maintained and as stated above the petitioner has used assumptions for computation of several components of ARR. In spite of constraints, the petitioner had attempted to submit its first ARR and tariff petition for FY 2012-13 and second ARR and tariff petition for FY 2013-14. The Commission has therefore has taken a pragmatic view after looking at the operational constraints and hereby directed to comply with the following direction in order to evolve and develop an accounting mechanism in the larger interest of stakeholders.

Compliance of Directives issued by the Commission in the tariff order on Petition no 65/2012 for FY 2012-13 dated June 04'2012.

Quote "

Directive 1: Filing of Review and True-up Petition for FY 2012-13:

As per the regulation no. 8 of JERC tariff regulations 2009, the petitioner is directed to submit the Review of FY 2012-13 along with the ARR and Tariff Petition for FY 2013-14 in line with JERC regulations as modified from time to time. The Commission shall consider variations between approvals and revised estimates/pre-actuals of sale of electricity, income and expenditure for the relevant year and permit necessary adjustments/ changes in case such variations are for adequate and justifiable reasons for FY 2012-13 during Review.

After audited accounts of FY 2012-13 are made available, the Commission shall undertake similar exercise as mentioned above with reference to the final actual figures as per the audited accounts. This exercise with reference to audited accounts shall be called 'Truing Up', for which True-up petition should be submitted along with audited accounts for consideration by the Hon'ble Commission.

" **Unquote**

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14

Petitioner's submission

Quote

"*Account for the period April'12 to September'12 is under compilation. Review petition will be filed after preparation accounts for the period. Hon'ble Commission may kindly allow the same*"

Unquote

Commission's Comments

In view of the revised estimates submitted by the petitioner for FY 2012-13 along with half yearly actuals along with ARR and Tariff Petition for FY 2013-14, Commission has undertaken the review of FY 2012-13.

After audited accounts of FY 2012-13 are made available; the Commission shall undertake similar exercise as mentioned above with reference to the final actual figures as per the audited accounts. This exercise with reference to audited accounts shall be called 'Truing Up', for which

True-up petition should be submitted along with audited accounts for consideration by the Commission along with ARR & Tariff Petition for FY 2014-15.

Directive 2: Fuel and Power Purchase Cost Adjustment Formula (FPPCA): - Ref Petition 65/2012 –TO June 04,2012

Quote "

FPPCA formula is under finalization and will be separately notified. It is seen that in the case of A&N, majority of the generation is diesel based, making per unit cost of generation very high compared to other utilities. In view of this, the approved tariff is not covering the full cost of supply. Historically, there has been substantial gap between the actual cost of supply and revenue realized. This gap so far has been borne by the administration of A&N.

Keeping the above fact in view, the Commission is of the view that any variation is power purchase cost (including variation in cost of their own generation) should, for the time being, be borne by the utility. Further , the utility is directed to propose a scheme for sharing of the increase in power purchase cost with the consumers for Commission's consideration and approval.

Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14

Petitioner's submission

Quote

"*The EDA&N is not proposing to share the increase in Power Purchase cost with the consumers during year 2012-13. This shall for the time being be borne by the EDA &N. It is submitted that the Hon'ble Commission may kindly approve the same.*"

Unquote

Commission's Comments

Commission has noted the submission made by the petitioner that the Electricity Department, A&N shall borne the increase in Power purchase cost and in view of the strategic importance of the islands; Commission considers the submission of the petitioner till the time, the alternative and cheaper sources of power is available to the consumers of A&N.

Directive 3: Preparation of Fixed Asset Register: - Ref Petition 65/2012 –TO June 04,2012

Quote "

ED A&N has stated that the complete updated data of fixed assets is not available. Unless the function wise, asset wise data is updated, correct asset value and depreciation thereon cannot be ascertained.

The petitioner is directed to submit the updated fixed asset register in line with JERC regulations as modified from time to time, with next ARR & Tariff Petition.

Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14
Petitioner's submission
Quote

"*Hiring of consultants for preparation of fixed assets register in line with JERC regulations is under process. Records are required to be collected & compiled from various power houses spread across A&N Islands. In view of the above EDA&N prays for more time to comply with the directive.*" **Unquote**

Commission's Comments
The submission of the Petitioner is noted. The timeline stipulated for the submission as per the direction should be adhered to and progress report should be made available by September 30'2013.
Directive 4: Load Forecasting study: -- Ref Petition 65/2012 –TO June 04,2012
Quote "

The Petitioner is directed to conduct a detailed load forecasting study for short term (2-5 years), medium term (7-10 years) and long term (15-25 years) in order to understand the load requirements in their area at various periods and submits to Commission along with next tariff petition.
Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14
Petitioner's submission
Quote

"*The Central Electricity Authority (CEA), New Delhi under MOP, Govt. of India had conducted 18th EPS (Electric Power Survey) and submitted report containing forecast detail of A&N Islands also………*" **Unquote**

Commission's Comments
Action taken is noted. The growth projections of the load, sales and consumers etc as per ED (A&N) are at variance with 18^{th} EPS. This may be taken up with CEA for alignment. The Petitioner is directed to submit the status report and progress in this regard by September 30' 2013.

Directive 5: Optimization of Fuel Cost-- Ref Petition 65/2012 –TO June 04,2012

Quote "

There are 135 no. of diesel generating sets excluding 4 DG sets of M/s SPCL located in 29 islands of Andaman & Nicobar catering to their electricity needs; the capacity of diesel generating sets of ED A&N varies from 12 KW to 2500 KW. The diesel is generally received in bulk in big tankers, thereafter it is transported to various islands in drums. Obviously, there are losses in transportation, storage and handling of which no assessment is available. It is understood that presently there is no system through which actual fuel consumption per generating station can be ascertained for generation of one unit of energy. In fact, there should also be proper accounting of generating unit wise fuel receipts & issues. The ED A&N is directed to evolve a system of accounting of fuel received at port, dispatched island wise, actual quantity received on the islands and actual quantity consumed island wise for generating electricity; so that actual fuel consumption per unit generation along with the variation could be worked out. Accordingly the petitioner is directed to furnish such details along with the next filing.

Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14

Petitioner's submission

Quote

"*As per the Directive of the Hon'ble Commission the ED, A&N has already implemented a system of accounting of power house wise fuel consumption and actual fuel consumption per unit of generation is being submitted."* **Unquote**

Commission's Comments

Inconsistencies has been observed in the submitted information in the petition in the absence of actual data in respect of PLF, heat rate, consumption of HSD, lubricating oil of the DG Sets owned by the ED- A&N. Further with reference to page xxxiv (a) & (b), the petitioner has used the Station heat rate and lubricating oil consumption norm of the IPP to project the consumption of HSD and lubricating oil for FY 2012-13 and FY 2013-14 for its own DG sets, Commission desired the information with regard to actual consumption of HSD, Lubricating oil, actual generation, auxiliary consumption, calorific value of fuel and its density to determine the actual heat rate for FY 2011-12, FY 2012-13(H1) and as such the additional information as submitted by the petitioner is accordingly considered for estimating the cost of power purchase and fuel & lubricants. As can be observed from the actual data, the PLFs, worked out station heat rate of the DG sets owned by the ED-A&N compare poorly with DG sets of IPP.

Following submission of Petition 91/2012, the Petitioner has informed the Commission about the hiring of the DG Sets of 10 MW and 5 MW without prior approval of the same under section 86(1) or Section 62 of EA 2003, thus making the situation fate accompli, which may or may not turn out to be falling in merit order procurement of Power in respect of Power Purchase Cost. This will distort the assessment of quantities of Power Purchase under Self Generation or Purchase from IPP or generated through hired sets. It is hereby concluded that the petitioner should follow a consistency in the submissions made to the Commission.

In view of the above, the petitioner is also directed to carry out an energy audit to ascertain the pilferage and technical loss and list them separately.

Directive 6: Bill Payment:- - Ref Petition 65/2012 –TO June 04,2012

Quote "

The Petitioner is directed to explore options for multiple payment points/gateways for online collection and status of existing system of bill payment be submitted within three months.

Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14

Petitioner's submission

Quote

"*Collection of energy bill through 10 Consumer Service Centre (CSCs) under National e-Governance Programme has already been started in Port Blair Municipal area for the benefit of domestic consumers since December' 2011. For remaining consumers the same is under process. Online process is not in place and will be implemented in the 2nd phase."* **Unquote**

Commission's Comments

Action taken is noted and the Petitioner is directed to submit the status report and progress in this regard by September 30' 2013.

Directive 7 : Collection of Arrears: -- Ref Petition 65/2012 –TO June 04,2012

Quote "

The Petitioner is directed to analyze the outstanding dues, bad debts etc. & construct a data base of such consumers including the particulars like amount, aging schedule and category. The Petitioner should identify those consumers having an outstanding of Rs. 50 thousand and above for more than six months from the due date.

Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14
Petitioner's submission
Quote

"*Outstanding dues & unrecoverable dues are being analysed and identification of outstanding of Rs. 50,000/- and above and more than six months from the consumers will be done. Compliance will be submitted to the Hon'ble Commission after completion of the exercise."* **Unquote**

Commission's Comments
Action taken is noted and the Petitioner is directed to submit the status report and progress in this regard by September 30'2013.

Directive 8: Rural Electrification: -- Ref Petition 65/2012 –TO June 04,2012
Quote "
The Petitioner is directed to submit the status of rural electrification in their area along with the detailed plan for rural electrification with the timeline proposed to achieve the complete electrification of rural area as per definition of electrification in the Rural Electrification Policy.
" Unquote

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14
Petitioner's submission
Quote

"*100% of the villages have been electrified as on October, 2012 (last two villages electrified in 10/2012.)"*

Unquote

Commission's Comments
Action taken is noted.

Directive 9: Capital expenditure: - Ref Petition 65/2012 –TO June 04,2012
Quote "
The Petitioner is directed to submit the detailed statement of capital expenditure incurred and capitalization for every quarter, within 15 days in the subsequent quarter.
Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14

Petitioner's submission

Quote

"Statement enclosed as Annexure -II."

Unquote

Commission's Comments

The submission of the Petitioner is noted. As can be observed the submitted statement does not show the capitalization achieved. The timeline stipulated for the submission as per the direction should be adhered to and quarterly submissions should be made for the remaining quarters of FY 2012-13 and going forward for the coming years.

Directive 10 : Metering of consumer installations / replacement of Non-Functional or defective Meters:- Ref Petition 65/2012 –TO June 04,2012

Quote "

Under Section 55 (1) of Electricity Act 2003, no licensee shall supply electricity after expiry of 2 years from the appointed date except through installation of correct meter in accordance with the regulation to be made in this behalf by the authority. Accordingly, metering is required to be done in line with CEA (installation and operation of meters) Regulations 2006 to all consumers. ED A&N is directed to submit an action plan regarding installation/replacement of meters by 30th October 2012.

Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14

Petitioner's submission

Quote

"100% metering has been done. Action plan is furnished below for replacement of defective meters. It is submitted that all the non-functional/ defective meters in operational area of the department shall be replaced within the schedule as provided below.

S.No.	Date	%
1.	31/03/2013	10
2.	31/03/2014	50
3.	31/03/2015	40

Unquote

Commission's Comments

Action taken is noted and the Petitioner is directed to expedite the work for completeing the same on earlier schedules than shown abobe and to submit the status report and progress in this regard by September 30' 2013.

Directive 11: Strengthening of the Consumer redressal system: - Ref Petition 65/2012 –TO June 04,2012

Quote "

The Commission directs the petitioner to find a way to dispose all pending application as per provision under section 43 of the Electricity Act, and relevant JERC Regulations, other than the cases pending due to lack of documentary evidence of legal heirs after the death of original owner of the premises.

The Commission also direct to follow the Standard of Performance notified by the Commission strictly and the status report are submitted for all the new/shifting connection application's pending with the reason for their pendency by more than 45 days.

The petitioner is directed to promote and give publicity to the functioning of the Consumer Grievance Redressal Forum, so that each consumer could approach to CGRF, for redressal of their grievances regarding electricity unresolved complaints/concerns.

Commission directs the petitioner to publicize the benefit to consumers, highlighting the steps and necessary documents required & to initiate the action on the following:

- *Complaint against fast meters/defective meters*
- *Application for Shifting of electricity connection*
- *Application for New Connection*
- *Complaint regarding no-supply.*
- *Any other complaints*

Commission further directs to prepare monthly/ quarterly schedule for visit to different Islands by officers i.e. S.D.O., Ex. En., and SE A&N to hear and settle the public grievances and complaints of Electricity at spot so that no consumer is forced to visit to the Port Blair.

Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14
Petitioner's submission
Quote

"*The directive of the Hon'ble Commission in this regard is being complied. Schedule for visit to different Islands by officers of the ED A&N to hear and settle the public grievances and complaints of electricity has been made & the same is being followed.*"

Unquote

Commission's Comments
Action taken is noted and the Petitioner is directed to submit the status report and progress in this regard by September 30' 2013.

Directive 12: Demand Side Management and Energy Conservation: - Ref Petition 65/2012 –TO June 04,2012
Quote "
The petitioner should focus on Demand Side Management and Energy Conservation particularly in context of Peak load. ED A&N is directed to conduct a detailed study on demand side management and energy conservation for efficient use of electricity by various means. An action plan for the same shall be submitted by ED A&N to the Commission by 30th October 2012.

Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14
Petitioner's submission
Quote

"*The ED, A&N has already taken initiatives in this regard. Energy Conservation schemes are being implemented. Action plan for the same will be submitted by 31.12.2012. It is submitted that Hon'ble Commission may kindly allow the same.*"

Unquote

Commission's Comments
Action taken is noted. The action plan was to be submitted by 31.12.2012 is still awaited .The Petitioner is directed to submit the status report and progress report on quarterly basis in this regard.

Directive 13: Exploration of Alternative sources of Electrical Energy: - Ref Petition 65/2012 –TO June 04,2012

Quote "

Commission observed that there is huge dependency on diesel for generating electricity, which not only increased the average cost of supply but also puts a burden on the utility's financial health. Commission has noticed that the Petitioner has taken few initiatives in this regard but the firm execution is required so as to speed up the process of their construction and achievement of commercial operation date in the given timelines. Therefore, it is inevitable for this distribution licensee to explore alternative sources of Power, and also consumer's contribution in this regard is required in terms of installation of roof top solar, wind or hybrid equipments to reduce their load on the existing power stations of the utility.

The petitioner is directed to submit a quarterly progress report for the initiatives taken in this regard so as to speed up the process of its execution.

Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14

Petitioner's submission

Quote

"*Reports of initiatives taken for renewable energy sources are attached …..*"

Unquote

Commission's Comments

Action taken is noted and the Petitioner is directed to submit the status report and progress in this regard by September 30' 2013.

Directive 14: Energy Audit: - Ref Petition 65/2012 –TO June 04,2012

Quote "

The Petitioner is directed to get an Energy Audit conducted to assess actual technical and commercial losses. The Energy audit of generating stations is also required for an actual assessment of losses. Based on the studies, ED A&N shall propose reduction of losses in subsequent years along with the investment required for reduction of such losses and augmentation of transmission and distribution system. Effective technical and administrative measures shall be taken to reduce the commercial losses. The action plan for energy audit and loss reduction measures shall be furnished to the Commission by 30th October 2012.

Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14
Petitioner's submission
Quote

"*The appointment of agency is under process. Energy audit is required to be done by visiting various Islands and will take time to get completed. The Hon'ble Commission may kindly allow to submit the report along with next ARR."*

Unquote

Commission's Comments
Action taken is noted and the Petitioner is directed to submit the status report and progress in this regard by September 30' 2013.

Directive 15: Management Information System: - Ref Petition 65/2012 –TO June 04,2012
Quote "
Commission observes that the petitioner is not maintaining the sales and revenue data in the regulatory formats specified in the JERC tariff regulations. The slab wise and category wise data is required to be maintained monthly for proper analysis of sales and revenue.

The Petitioner is directed to take steps to build credible & accurate and verifiable data base and management information system (MIS) to meet the requirements for filing ARR & Tariff Petition as per regulatory requirement of the Commission.

The ED A&N should conduct a study for a computerization of data and shall give a proposal for the same along with an action plan with target dates.

Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14
Petitioner's submission
Quote

"*Study for computerization is being done. Action plan and target will be submitted to the Hon'ble Commission will be submitted after completion of the study."*

Unquote

Commission's Comments
Action taken is noted and the Petitioner is directed to submit the status report and progress in this regard by September 30'2013.

Directive 16: Annual Statement of Accounts: - Ref Petition 65/2012 –TO June 04,2012

Quote "

Commission observes that the department of Andaman & Nicobar is not maintaining the separate accounts for the electricity business. The Petitioner is directed to segregate the accounts pertaining to Electricity business as per the Electricity Act 2003 and get them duly audited.

Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14

Petitioner's submission

Quote

"*EDA&N has already compiled the Annual Accounts upto FY 2010-11 and same also been Audited. Annual Accounts for FY 2010-11 is attached. ….."*

Unquote

Commission's Comments

Action taken is noted.

Directive 17: Statement of Cross-Subsidy : - Ref Petition 65/2012 –TO June 04,2012

Quote "

As per the regulation 6 of JERC tariff regulations 2009:

"

(1) "Cross-subsidy for a consumer category" in the first phase (as defined in subregulation 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.

"

As per the regulation 6 of JERC Tariff regulations 2009 for Cross subsidy, the petitioner is directed to provide the detailed statement of cross-subsidy prevailing in the Andaman & Nicobar Islands as per the present arrangements and road-map for reduction of the cross-subsidies within a reasonable period to be submitted along with the next ARR and Tariff Petition. The road map shall be decided in the public hearing for next ARR and Tariff petition in consultation with stakeholders.

Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14
Petitioner's submission
Quote

"*The road map being notified by JERC by regulation on "Principles for determination of road map for Cross-subsidy reduction for Distribution Licensees) Regulations- 2012 will be implemented in A&N Islands."*

Unquote

Commission's Comments
Commission noted the submission of the Petitioner.

Directive 18: Cost of Power Generation: - Ref Petition 65/2012 –TO June 04,2012
Quote "
Commission observes that the department of Andaman & Nicobar is not maintaining the separate accounts for their Diesel generating sets, Hydro and Solar plants. Commission directs the petitioner to provide separate details of cost of Power Purchase and final arrived tariff from the following stations/sets:

i. *Power Purchase Cost and Tariff from each Diesel Generating set.*
ii. *Power Purchase Cost and Tariff from Hydro – Generating Station.*
iii. *Power Purchase Cost and Tariff from Solar Power Plant.*
iv. *Power Purchase Cost and Tariff from other Renewable Power Plants.*

Unquote"

Compliance/Action Taken mentioned in ARR and tariff petition for FY 2013-14
Petitioner's submission

Quote
"*Detailed statement of cost of power purchase & generation is attached –……..*"
Unquote

Commission's Comments
The petitioner noted the submission of the petitioner

8. Rationalization and Reform of Tariff Schedule and Terms & Conditions of Supply

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

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

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

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

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

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

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

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

The complete draft consultation paper is available on the Commission's website www.jercuts.gov.in.

Proposed Uniform Tariff Schedule and Terms & Conditions of Supply
(To be implemented in Tariff Orders of FY 2014-15 and onwards)

PART - A: LOW TENSION (LT) SUPPLY

System of supply: Low Tension – Alternating Current, 50 cycles per second
Single Phase supply at 230 Volts
Three Phase supply at 400 Volts
The tariffs are applicable for supply of electricity to LT consumers with a contracted load/demand upto 75 kW (100 HP) for Domestic, non-domestic, Public lighting, Industrial, Agricultural and Public water works categories.
Single Phase supply - contracted load upto 5.0 kW
Three Phase supply - contracted load above 5.0 kW

CATEGORY OF SERVICE AND TARIFF RATES

1. DOMESTIC SERVICE

Applicability

This tariff shall be applicable for supply of electricity for a contracted load/demand upto 75 KW for domestic purposes such as lights, fans, radios, televisions, heaters, air-conditioners, washing machines, air-coolers, geysers, refrigerators, ovens, mixers and other domestic appliances including motor-pumps for lifting water for domestic purposes in residential houses, bungalows, multi-storied flats, farm houses, ashrams, mutts, housing colonies etc. This shall also be applicable to the common facilities in the multi-storied, purely residential apartments, buildings having contracted load/demand upto 75 kW.

1.1 DOMESTIC SERVICE-I (DS-I)

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

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

1.2 DOMESTIC SERVICE-II (DS-II)

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

Note

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

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

TARIFF RATES

1.0 DOMESTIC SERVICE

1.1 DOMESTIC SERVICE-I (DS-I)

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

	Metered	x	
	unmetered		X

1.2 DOMESTIC SERVICE-II (DS-II)

Sl.	Category of consumers	Fixed charge (Rs/KW/ month or part thereof)	Energy charge	
			Consumption/ month (Units)	Rate (Ps/unit)
	Single / Three Phases		Upto 100	
			101-300	
			301-500	
			Above 500	

OPTIONAL

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

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

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

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

2.0 NON-DOMESTIC SERVICE

Applicability

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

This shall also be applicable to government educational institutions, their hostels and libraries, government hospitals, government research institutions, government sport institutions and non–

profitable government aided educational institutions, their hostels and libraries, government run youth hostels, harijan hostels, rehabilitation centres, anganwadies, balwadies etc, non-profitable recognized charitable institutions, orphanage homes and old-age homes run by religious and charitable organisations recognised by government, etc.

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

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

This shall be applicable for supply of electrical energy for non-domestic services such as shops, offices, government and semi–government offices, show rooms, laundries, photo-studios, bakery shops, parlours, bars, coffee houses, advertisement hoardings, neon sign-boards, hospitals, nursing homes, clinics, dispensaries, diagnostic centres, X-ray plants, private schools, colleges, libraries, coaching institutes and research institutes, restaurants, hotels, clubs, gymnasium, sport institutions, stadiums, guest houses, boarding / lodging houses, marriage houses, public halls, auditorium, exhibitions, theatres, circus, cinemas, fuel/oil stations, service stations, printing presses, museums, banks, race-course, burial /crematorium grounds, bus-stations, railway stations, telephone exchanges, All India Radio / T.V. installations, shops having welding set, small lathe, electric drill etc, IT establishments, common facilities in multi-storied commercial office / buildings, commercial trusts, societies, shopping malls, multiplexes, commercial establishments and other installations not covered under any other tariff schedule for single phase supply for contracted load/demand upto 5 kW and three phase supply for contracted /demand above 5 KW upto 75 KW.

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

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

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

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

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

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

TARIFF RATES
2.0 NON-DOMESTIC SERVICE

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

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

OPTIONAL

2.1.1 NON-DOMESTIC SERVICE-I/D (NDS-I/D)
All those consumers under NDS-I category with 3 phase supply opting for demand based tariff shall be required to pay at the rates indicated below:

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

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

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

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

OPTIONAL
2.2.1 NON-DOMESTIC SERVICE-II/D (NDS-II/D)
All those consumers under NDS-II category with 3 phase supply opting for demand based tariff shall be required to pay at the rates indicated below:

2.2.1 NON-DOMESTIC SERVICE-II/D (NDS-II/D)

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

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

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

OPTIONAL

2.3.1 NON-DOMESTIC SERVICE-III/D (NDS-III/D)

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

2.3.1 NON-DOMESTIC SERVICE-III/D (NDS-III/D)

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

3.0 IRRIGATION AND AGRICULTURAL SERVICE (IAS)

Applicability

This shall be applicable for supply of electrical energy for contracted load/demand upto 100 HP for bonafide use for irrigation pumping and agricultural purposes including processing of Agricultural Produce, confined to chaff - cutter, thrasher, cane crusher and rice Huller including lighting loads when operated by the agriculturist in the field or farm. This is also applicable to nurseries growing flowers/ plants/ saplings/ fruits, hatcheries, poultries (with more than 1000 birds) and fisheries (fish ponds), piggery, aquaculture, sericulture, cattle breeding farms, mushroom growing farms, and those dairy units where only extraction of milk and its processing such as chilling, pasteurisation, etc is done.

3.1 IRRIGATION AND AGRICULTURAL SERVICE-I (IAS-I)

This shall be applicable for supply of electrical energy for contracted load/demand upto 25 HP for bonafide use for irrigation pumping and agricultural purposes including processing of Agricultural Produce

3.2 IRRIGATION AND AGRICULTURAL SERVICE-II (IAS-II)

This shall be applicable for supply of electrical energy for contracted load/demand above 25 HP upto 100 HP for bonafide use for irrigation pumping and agricultural purposes including processing of Agricultural Produce

3.3 IRRIGATION AND AGRICULTURAL SERVICE-III (IAS-III)

This shall be applicable for supply of electrical energy for contracted load/demand upto 100 HP for allied activities such as nurseries growing flowers/ plants/ saplings/ fruits, hatcheries, poultries (with more than 1000 birds) and fisheries (fish ponds), piggery, aquaculture, sericulture, cattle breeding farms, mushroom growing farms, and those dairy units where only extraction of milk and its processing such as chilling, pasteurisation, etc is done.

Tariff Rates

3.0 IRRIGATION AND AGRICULTURAL SERVICE (IAS)

3.1 IRRIGATION AND AGRICULTURAL SERVICE-I (IAS-I)

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

3.2 IRRIGATION AND AGRICULTURAL SERVICE-II (IAS-II)

Sl.	Category of consumers	Fixed charge (Rs/HP/ month or part thereof)	Energy charge (Paisa/kwh)

3.3 IRRIGATION AND AGRICULTURAL SERVICE-III (IAS-III)

Sl.	Category of consumers	Fixed charge (Rs/HP/ month or part thereof)	Energy charge (Paisa/kwh)
	Metered		

4.0 LOW TENSION INDUSTRIAL SERVICE (LTIS)

Applicability

This shall be applicable for supply of electricity to low tension industrial consumers with a contracted load/demand upto 100 HP for industrial processing or agro-industries purposes, cold storage, arc welding sets, workshops, flour mills, wet grinding, oil mills, rice mills, dal mills, atta chakki, Huller, expellers, saw mills, milk dairies (where milk is processed other than chilling, pasteurisation etc to produce other milk products), ice cream manufacturing units, power-looms, garment manufacturing units, tyre retreading units, bakery manufacturing units, etc including lighting loads.

4.1 LOW TENSION INDUSTRIAL SERVICE-I (LTIS-I)
This shall be applicable for supply of electricity to low tension industrial consumers with a contracted load/demand upto 25 HP

4.2 LOW TENSION INDUSTRIAL SERVICE-II (LTIS-II)
This shall be applicable for supply of electricity to low tension industrial consumers with a contracted load/demand above 25 HP upto 100 HP

Tariff Rates

4.0 LOW TENSION INDUSTRIAL SERVICE (LTIS)

4.1 LOW TENSION INDUSTRIAL SERVICE-I (LTIS-I)

Sl.	Category of consumers	Fixed charge (Rs/HP/ month or part thereof)	Energy charge Rate (Ps/unit)

OPTIONAL
4.1.1 LOW TENSION INDUSTRIAL SERVICE-I/D (LTIS-I/D)
All those consumers under LTIS-I category with 3 phase supply and with contract demand upto 25 HP opting for demand based tariff shall be required to pay at the rates indicated below:

4.1.1 LOW TENSION INDUSTRIAL SERVICE-I/D (LTIS-I/D)

Sl.	Category of consumers	Demand charge (Rs/HP/ month or part thereof)	Energy charge	
			Consumption/ months(Units)	Rate (Ps/unit)
	All Three Phase upto 25 HP			

4.2 LOW TENSION INDUSTRIAL SERVICE-II (LTIS-II)

Sl.	Category of consumers	Fixed charge (Rs/HP/ month or part thereof)	Energy charge Rate (Ps/unit)

OPTIONAL

4.2.1 LOW TENSION INDUSTRIAL SERVICE-II/D (LTIS-II/D)

All those consumers under LTIS-II category with 3 phase supply and with contract demand above 25 HP upto upto 100 HP opting for demand based tariff shall be required to pay at the rates indicated below:

4.2.1 LOW TENSION INDUSTRIAL SERVICE-II/D (LTIS-II/D)

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

5.0 PUBLIC WATER WORKS & PUBLIC LIGHTING

Applicability

This shall be applicable to public water works, sewerage treatment plant and sewerage pumping stations including lighting loads functioning under state government and state government undertakings and local bodies for contracted load/demand upto 100 HP.

This shall also be applicable for supply of electricity for contracted load/demand upto 75 KW to street light system including signal system belonging to state / central government / local bodies. Also applicable to traffic lights, mast lights / blinkers etc.

5.1 PUBLIC WATER WORKS (PWW)

This shall be applicable to public water works, sewerage treatment plant and sewerage pumping stations including lighting loads functioning under state government and state government undertakings and local bodies for contracted load/demand upto 100 HP.

5.2 PUBLIC LIGHTING (PL)

This shall be applicable for supply of electricity for contracted load/demand upto 75 KW to street light system including signal system belonging to state / central government / local bodies. Also applicable to traffic lights, mast lights / blinkers etc.

Tariff Rates

5.0 PUBLIC WATER WORKS (PWW)

5.1 PUBLIC WATER WORKS-I (PWW-I)

Sl.	Category of consumers	Fixed charge (Rs/HP/ month or part thereof)	Energy charge
			Rate (Ps/unit)

]

OPTIONAL

5.1.1 PUBLIC WATER WORKS/D (PWW/D)

All those consumers under PWW category with 3 phase supply and with contract demand upto 100 HP opting for demand based tariff shall be required to pay at the rates indicated below:

5.1.1 PUBLIC WATER WORKS/D (PWW/D)

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

5.2 PUBLIC LIGHTING (PL)

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

6.0 BULK SUPPLY SERVICES (BS)

Applicability

This tariff shall be applicable to supply of electrical energy for contracted load/demand above 30 KW upto 75 KW at three phase low tension at single point where onward distribution lines / service lines are owned and maintained by the consumers for domestic purpose or non-domestic purpose as specified in the respective tariff category.

6.1 BULK SUPPLY SERVICES-I (BS-I)

This tariff shall be applicable to supply of electrical energy for domestic services for contracted load/demand above 30 KW upto 75 KW at three phase low tension at single point where onward distribution lines / service lines are owned and maintained by the consumers as specified in the domestic service category above.

6.2 BULK SUPPLY SERVICES-II (BS-II)

This tariff shall be applicable to supply of electrical energy for non-domestic services for contracted load/demand above 30 KW upto 75 KW at three phase low tension at single point where onward distribution lines / service lines are owned and maintained by the consumers as specified in the non-domestic services category above.

Tariff Rates

6.1 BULK SUPPLY SERVICES-I (BS-I)

Sl.	Category of consumers	Fixed charge (Rs/KW/ month or part thereof)	Energy charge (Paisa/kwh)

OPTIONAL

6.1.1 BULK SUPPLY SERVICES-I/D (BS-I/D)

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

6.1.1 BULK SUPPLY SERVICES-I/D (BS-I/D)

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

6.2 BULK SUPPLY SERVICES-II (BS-II)

Sl.	Category of consumers	Fixed charge (Rs/KW/ month or part thereof)	Energy charge (Paisa/kwh)

OPTIONAL

6.2.1 BULK SUPPLY SERVICES-II/D (BS-II/D)

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

6.2.1 BULK SUPPLY SERVICES-II (BS-II/D)

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

<u>TERMS AND CONDITIONS OF LOW TENSION (LT) TARIFF</u>

1. Unless otherwise agreed to, these tariffs are applicable for power supply at one point only.

2. Unless otherwise specifically stated to the contrary, the figures of energy charges relates to paise per unit (kwh) for energy consumed during the month.

3. These tariffs are exclusive of statutory levies like electricity duty/cess or any other taxes, duties/cess etc, imposed by the State Government / Central Government or any other competent authority and shall be charged extra.

4. In case payment is made through cheque and the cheque is dishonoured, an amount of Rs.200/- shall be levied as cheque return charges. The licensee may initiate action u/s 138 of the Negotiable Instrument Act, 1981 in addition to disconnection of the service.

5. Fixed/Demand charges, wherever applicable, shall be charged on pro-rata basis from the date of release of connection. Fixed/Demand charges, wherever applicable, shall be double as and when bi-monthly billing is done. Similarly, slabs of energy consumption shall also be doubled in case of bi-monthly billing.

6. The electricity bill shall be rounded off in whole rupees. Amount less than 50 paisa shall be ignored and amount of 50 paisa and above shall be considered as one rupee.

7. Advance Payment Rebate: If payment is made in advance well before commencement of consumption period for which bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding security deposit) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

8. Prompt Payment Rebate: If payment is made at least 7 days in advance of the due date of payment a rebate for prompt payment @ 0.25 % of the bill amount shall be given. Those consumers having arrears shall not be entitled for such rebate.

9. Delayed payment surcharge: In case a consumer does not pay energy bills in full by the due date specified in the bill, a delayed payment surcharge of one and half (1.5) percent per month or part thereof on the outstanding arrears shall be levied from the due date for payment until the payment is made in full without prejudice to right of the licensee to disconnect the supply in accordance with Section 56 of the Electricity Act, 2003.

10. Shunt Capacitor Installation

    a) Every LT consumer including irrigation pump set consumers whose connected load includes induction motor (s) of capacity 3 HP and above and other low power factor consuming appliances shall arrange to install low tension shunt capacitors of appropriate capacity at his cost across terminals of his motor (s). The consumer shall ensure that the capacitors installed by him are properly matched with the actual rating of the motor so as to ensure power factor of 90% (0.9 lagging).

b) All LT consumers having welding transformers will be required to install suitable shunt capacitor(s) of adequate capacity so as to ensure power factor of not less than 90% (0.9 lagging).

c) The capacitors shall be of standard manufacture and meet the Bureau of Indian Standards specification.

d) Consumers not complying to above shall be liable to pay a power factor surcharge at the following rates:

(i) For the LT consumers whose meter is capable of recording average monthly power factor and If the monthly average power factor of a consumer falls below 90% (0.9 lagging), such consumer shall pay a surcharge in addition to his normal tariff @ 0.5% on billed demand and energy charges for each fall of 0.01 in power factor upto 0.7(lagging). If such consumers maintains power factor more than 95% (0.95 lagging), a power factor incentive @ 0.25% on demand and energy charges shall be given for each increase of 0.01 in power factor above 0.95 (lagging)

(ii) For the LT consumers whose meter is not capable of recording average monthly power factor and such LT Consumers not complying to conditions a to c above shall be liable to pay a power factor surcharge of 10% (ten percent) of the billed fixed/demand and energy charges till the capacitors in healthy condition are installed.

e) If the average power factor falls below 0.70 (lagging) consecutively for 3 months, the licensee reserves the right to disconnect the consumer’s service connection without prejudice for the levy of the surcharge.

f) No new supply to LT installations having low power factor consuming equipment such as induction motor of 3 HP and above or welding transformers etc., will be released unless shunt capacitors are installed to the satisfaction of the Board.

11. **Maximum Demand:** The maximum demand of supply of electricity during a month shall be twice the largest number of Kilo-Volt Ampere Hours (KVAH) delivered at the point of supply to the consumers during any consecutive 30 minutes in the month.

12. **Billing Demand:** Any LT consumer who has opted for demand based tariff, the billing of such consumer shall be on the maximum demand recorded during the month or contracted demand, whichever is higher. Such billing demand shall be rounded off to next higher digit for the purpose of billing.

13. **Excess Demand:** If in any month, the recorded maximum demand of the consumer exceeds 105% of its contracted demand, the normal tariff shall be applicable upto the 105% of the contract demand and that portion of demand which is in excess of 105% of the contracted demand shall be billed at double the normal rate. If the actual recorded demand of a consumer exceeds 105% of the contracted demand consecutively for three months, the licensee may issue a notice and inform the consumer to get additional contract demand sanctioned or to limit their drawl as per their contract. Otherwise the licensee shall take action as per provisions of the Act/Rules/Regulations.

Illustration: If contract demand is 60 kw whereas maximum demand recorded during the month is 70 kw, then demand for 63 kw (105% of 60 kw) shall be billed at normal rate and demand for 7 kw (70 kva-63 kw) shall be billed at twice the normal rate.

14. **Defective / Damaged / Burnt Meter:** In case of meter being defective / damaged / burnt the Licensee or the consumer as the case may be shall replace the same within the period specified in "Standards of Performance" Regulations issued by the Commission. Till defective meter is replaced the consumption shall be assessed and billed on an average consumption of last six meter reading cycles or average monthly consumption of corresponding six meter reading cycles of the preceding year whichever is higher from the date of meter being out of order. Such consumption shall be treated as actual consumption for all practical purposes until the meter is replaced/ rectified.

    In case a functional check-meter is available then the readings of the check meter shall be used for billing purposes when main meter becomes defective/damaged/burnt.
    In case the meter becomes defective within three meter reading cycles after its installation and prior consumption is not available, then billing shall be done provisionally on the basis of following load factor subject to adjustment on the average consumption of three meter reading cycles of the replaced meter:

Sl	Category of consumers	Load Factor	Average Unit
1.	Domestic	0.15	100 units/kW
2.	Non-domestic	0.20	150 units/kW
3.	Public Water Works	0.20	100 units/HP for water works 125 unit/kW for street light
4.	Irrigation & Agicultural	0.15	80 units/HP
5.	LT Industrial	0.25	135 units/HP
6.	HT Industrial (at P.F.=0.0.90 lag)	0.40	260 units/kVA

15. **Contracted/Connected load/Demand exceeding LT load limit:** In case of existing LT consumers whose contracted/connected load or demand exceeds the upper limit of LT supply, such consumers may either shift to HT supply or optionally continue to remain as LT consumers subject to payment of 10% surcharge on fixed and energy charges. The licensee shall not release any new connection or enhance load of existing consumers whose contracted load/demand exceeds LT limits.

16. **Usage of electricity for other purpose than authorized:** If either more than one room or only one room having monthly consumption exceeding 150 KWH for consecutive three months are detected in the domestic premises being used for mixed purposes having DS-II connection or any other premises which is used for a purpose other than for which it was authorized and the tariff applicable for which is higher, it shall be considered under unauthorised use of electricity and shall be dealt as per JERC

Electricity Supply Code Regulations, 2010 and such connection shall further be billed on appropriate higher tariff category until a separate connection of appropriate tariff is taken for that portion.

17. **FPPCA:** The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with FPPCA formula notified by the Commission. The value of K-factor shall be applicable to the different consumer categories as per the values approved in this tariff order. Such charges shall be recovered / refunded in accordance with terms & conditions specified in the FPPCA formula.

18. **Temporary Supply (LT)**

(i) Temporary Supply is for connection temporary in nature for a maximum period of two year. The applicability shall be as given in the respective tariff category. Temporary supply cannot be claimed by a prospective consumer as a matter of right but will normally be arranged by the licensee when a requisition is made giving due notice subject to technical feasibility and in accordance with electricity supply code issued by the Commission.
(ii) The tariff shall be chargeable as applicable to the corresponding appropriate tariff category at the following rates subject to minimum Rs ....:

Sl	Period of Supply	Tariff Rate
1.	Upto 12 months	150% of normal rate of appropriate tariff category
2.	More than 12 months and upto 18 months	175% of normal rate of appropriate tariff category
3.	More than 18 months and upto 24 months	200% of normal rate of appropriate tariff category

Fixed/Demand charges, wherever applicable, shall be charged on pro-rata basis from the date of release of connection.
(iii) Terms of Supply of Temporary Supply shall be as below:
a) Temporary supply may be given for a period not exceeding 3 months in the first instance, the duration of which, may be extended on quarter to quarter basis subject to maximum total duration of two year.
b) In addition to the tariff charges, the consumer shall have to deposit the following charges before commencement of the temporary supply:
(i) Estimated cost of erection of temporary service line and dismantling.
(ii) Cost of irretrievable materials which cannot be taken back to service.
(iii) Meter rent for the full period of temporary connection as per appropriate tariff schedule and other miscellaneous charges.
(iv) Rental on the cost of materials of the licensee as per estimate at the rate of Rs. 15/- per month on every Rs. 100/- or part thereof.
(v) Ten per cent on the total cost of the estimate for the temporary service connection to cover as security for loss of materials and contingencies. In case such loss is not noticed, the amount will be refunded.

c) The applicants for temporary supply shall be required to make a deposit in advance of the cost as detailed above including fixed/demand charges and the energy consumption charges estimated for full period on the basis of contracted load/demand. This will however, be adjusted against the final bill that will be rendered on disconnection of supply.
d) If the consumer intends to extend the temporary supply beyond the period originally applied for, he will have to deposit in advance all applicable charges as detailed above including the estimated electricity consumption charges, for the period to be extended and final bill as well, for the previous period, if any.

19. **Seasonal Supply (LT)**

(i) Seasonal supply shall be given to any consumer on written request to the licensee subject to the following conditions.

Sl	**Period of Supply**	**Tariff Rate**
1.	Upto 3 consecutive months in a year	Appropriate tariff plus 40 percent
2.	More than 3 consecutive months and upto 6 consecutive months in a year	Appropriate tariff plus 30 percent
3.	More than 6 consecutive months and upto 9 consecutive months in a year	Appropriate tariff plus 20 percent
4.	More than 9 consecutive months but less than one year	Appropriate tariff plus 10 percent.

(ii) The meter rent and other charges as provided in the appropriate tariff are applicable to seasonal loads and would be charged extra for the entire period of supply.
(iii) The supply would be disconnected after the end of the period unless the consumer wants the supply to be continued. Any reconnection charges have to be borne by the consumer.
(iv) Consumer proposing to avail seasonal supply shall sign an agreement with the licensee to avail power supply for a minimum period of 2 years in the case of LT category of supply.
(v)The consumers must avail supply in terms of whole calendar month continuously.
(vi) The consumer is required to apply for seasonal supply and pay initial cost and security deposit as an applicant for normal electricity supply.
(vii) The consumer shall ensure payment of monthly energy bills within 7 days of its receipt. The supply will be disconnected if payment is not made on due date.

20. **Schedule** of Tariff and Other charges approved in this Tariff Order shall remain in force until it is amended by the Commission.

PART - B: HIGH TENSION (HT) SUPPLY

System of supply: High Tension – Alternating Current, 50 cycles per second, 3 phase at 11 KV / 22 KV / 33 KV

The tariffs shall be applicable for supply of electricity for use in installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA depending upon the supply voltage for different contract demand as specified below:

Sl	Supply Voltage	Contract Demand	
		Minimum	maximum
1	11 kV or 22 kV	80 kVA	1500kVA
2	33 kV	1501 kVA	5000 kVA

CATEGORY OF SERVICE AND TARIFF RATES

8.0 HIGH TENSION SERVICE-HTS

Applicability

The tariffs shall be applicable for supply of electricity for use in installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

Note:

(i) A surcharge @ 10% shall be levied on fixed/demand charge and energy charge if supply is availed at LT voltage by the existing consumers against specified 11 kV.

(ii) A surcharge @ 5% shall be levied on fixed/demand charge and energy charge if supply is availed at 11 kV or 22 kV by the existing consumers against specified 33 kV.

(iii) An incentive @ 3% shall be given on demand charge and energy charge if supply voltage is at 33 kV against specified 11 kV.

(iv) An incentive @ 3% shall be given on demand charge and energy charge if supply voltage is at 66 kV EHT voltage against specified 33 kV HT voltage.

8.1 HIGH TENSION/DS (HT/DS)

The tariffs shall be applicable for supply of electricity for domestic use defined under 1.0 above in installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

8.2 HIGH TENSION/NDS (HT/NDS)

8.2.1HIGH TENSION/NDS-I (HT/NDS-I)

The tariffs shall be applicable for supply of electricity for non-domestic use defined under 2.0 above including shopping malls, multiplexes and other commercial installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

8.2.2 HIGH TENSION/NDS-II (HT/NDS-II)

The tariffs shall be applicable for supply of electricity for non-domestic (religious and charitable) use defined under 2.0 above with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

8.3 HIGH TENSION/IAS (HT/IAS)

The tariffs shall be applicable for supply of electricity for irrigation and agricultural use defined under 3.0 above in installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

8.4 HIGH TENSION/INDUSTRIAL (HTIS-I)

The tariffs shall be applicable for supply of electricity for industrial use defined under 4.0 above other than power intensive covered under HTS-IV tariff in installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

8.5 HIGH TENSION/POWER INCENTIVE (HTIS-II)

The tariffs shall be applicable for supply of electricity for power intensive, metal alloy, steel melting, ferro-alloy, ferro-metallurgical use in installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

8.6 HIGH TENSION/PWW (HT/PWW)

The tariffs shall be applicable for supply of electricity for public water works use defined under 5.0 above in installations with a minimum contract demand of 80 KVA and maximum contract demand of 5000 KVA on high tension voltage at 11 KV / 22 KV / 33 KV as per the specified voltage wise contract demand.

Tariff Rates

8.0 HIGH TENSION SERVICE-HTS

8.1 HIGH TENSION/DS (HT/DS)

Sl.	Category of consumers	Fixed charge (Rs/KVA/ month or part thereof)	Energy charge
			Rate (Ps/unit)

8.2.1 HIGH TENSION/NDS (HT/NDS-I)

Sl.	Category of consumers	Fixed charge (Rs/KVA/ month or part thereof)	Energy charge
			Rate (Ps/unit)

8.2.2 HIGH TENSION/NDS (HT/NDS-II)

Sl.	Category of consumers	Fixed charge (Rs/KVA/ month or part thereof)	Energy charge
			Rate (Ps/unit)

8.3 HIGH TENSION/IAS (HT/IAS)

Sl.	Category of consumers	Fixed charge (Rs/KVA/ month or part thereof)	Energy charge
			Rate (Ps/unit)

8.4 HIGH TENSION/INDUSRIAL (HTIS-I)

Sl.	Category of consumers	Fixed charge (Rs/KVA/ month or part thereof)	Energy charge
			Rate (Ps/unit)

8.5 HIGH TENSION/POWER INCENTIVE (HTIS-II)

Sl.	Category of consumers	Fixed charge (Rs/KVA/ month or part thereof)	Energy charge
			Rate (Ps/unit)

8.6 HIGH TENSION/PWW (HT/PWW)

Sl.	Category of consumers	Fixed charge (Rs/KVA/ month or part thereof)	Energy charge
			Rate (Ps/unit)

PART - C: EXTRA HIGH TENSION (EHT) SUPPLY

System of supply: Extra High Tension – Alternating Current, 50 cycles per second, 3 phase at 66 KV / 110 KV / 132 KV / 220 KV

The tariffs shall be applicable for supply of electricity for use in installations with contract demand more than 5000 KVA depending upon the supply voltage for different contract demand as specified below:

Sl	Supply Voltage	Contract Demand	
		minimum	Maximum
1	66 kV	5001 kVA	25000 kVA
2	110 kV or 132 kV or 220 kV	Above 25000 kVA	

CATEGORY OF SERVICE AND TARIFF RATES

9.0 EXTRA HIGH TENSION

Applicability

The tariffs shall be applicable for supply of electricity for use in installations with a minimum contract demand of 5001 KVA on extra high tension voltage at 66 KV / 110 KV / 132 KV / 220 KV as per the specified voltage wise contract demand.

Note:

(i) A surcharge @ 5% shall be levied on fixed/demand charge and energy charge if supply is availed at 33 kV HT voltage by existing consumers against specified 66 kV EHT voltage.

(ii) A surcharge @ 5% shall be levied on fixed/demand charge and energy charge if supply is availed at 66 kV EHT voltage by existing consumers against specified 110 KV / 132 KV / 220 KV EHT voltage.

(iii) An incentive @ 3% shall be given on demand charge and energy charge if supply voltage is at 110 kV or 132 kV or 220 kV against specified 66 kV.

Tariff Rates

9.0 EXTRA HIGH TENSION SERVICES (EHTS)

Sl.	**Category of consumers**	**Fixed charge (Rs/KVA/ month or part thereof)**	**Energy charge**
			Rate (Ps/unit)

<u>TERMS AND CONDITIONS OF HT and EHT TARIFF</u>

1. Unless otherwise agreed to, these tariffs are applicable for power supply at one point only.

2. Unless otherwise specifically stated to the contrary, the figures of energy charges relates to paisa per unit for energy consumed during the month.

3. These tariffs are exclusive of statutory levies like electricity duty/cess or any other taxes, duties/cess etc., imposed by the State Government / Central Government or any other competent authority and shall be charged extra.

4. In case, payment is made through cheque and the cheque is dishonoured, an amount of Rs.200/- shall be levied as cheque return charges. The licensee may initiate action u/s 138 of the Negotiable Instrument Act, 1981 in addition to disconnection of the service.

5. The supply voltage for different contract demand as specified below:

Sl	Supply Voltage	Contract Demand	
		minimum	maximum
1	11 kV or 22 kV	80 kVA	1500kVA
2	33 kV	1501 kVA	5000 kVA
3	66 kV	5001 kVA	25000 kVA
4	110 kV or 132 kV or 220 kV	Above 25000 kVA	

6. Demand charges, wherever applicable, shall be charged on pro-rata basis from the date of release of connection. Demand charges, wherever applicable, shall be double as and when bi-monthly billing is done. Similarly, slabs of energy consumption shall also be doubled in case of bi-monthly billing.

7. The electricity bill shall be rounded off in whole rupees. Amount less than 50 paisa shall be ignored and amount of 50 paisa and above shall be considered as one rupee.

8. Advance Payment Rebate: If payment is made in advance well before commencement of consumption period for which bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding security deposit) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

9. Prompt Payment Rebate: If payment is made at least 7 days in advance of the due date of payment a rebate for prompt payment @ 0.25 % of the bill amount shall be given. Those consumers having arrears shall not be entitled for such rebate.

10. Delayed payment surcharge: In case a consumer does not pay energy bills in full by the due date specified in the bill, a delayed payment surcharge of one and half (1.5) percent per month or part thereof on the outstanding arrears shall be levied from the due date for payment until the payment is made in full without prejudice to right of the licensee to disconnect the supply in accordance with Section 56 of the Electricity Act, 2003.

11. Power Factor Surcharge / Incentive

(a)The monthly average power factor of the supply shall be maintained by the consumer not less than 0.90 (lagging). If the monthly average power factor of a consumer falls below 90% (0.9 lagging), such consumer shall pay a surcharge in addition to his normal tariff @ 1% on billed demand and energy charges for each fall of 0.01 in power factor upto 0.7(lagging)

(b) In case the monthly average power factor of the consumer is more than 95% (0.95 lagging), a power factor incentive @ 0.5% on demand and energy charges shall be given for each increase of 0.01 in power factor above 0.95 (lagging)

(c) If the average power factor falls below 0.70 (lagging) consecutively for 3 months, the licensee reserves the right to disconnect the consumer's service connection without prejudice for the levy of the surcharge.
(d) The power factor shall be rounded off to two decimal places. For example, 0.944 shall be treated as 0.94 and 0.946 shall be treated as 0.95

12. Maximum Demand: The maximum demand of supply of electricity during a month shall be twice the largest number of Kilo-Volt Ampere Hours (KVAH) delivered at the point of supply to the consumers during any consecutive 30 minutes in the month.

13. Billing Demand: The billing shall be on the maximum demand recorded during the month or 75% of contracted demand, whichever is higher. Such billing demand shall be rounded off to next higher digit for the purpose of billing.

14. Excess Demand: If in any month, the recorded maximum demand of the consumer exceeds 105% of its contracted demand, the normal tariff shall be applicable upto the 105% of the contract demand and that portion of demand which is in excess of 105% of the contracted demand shall be billed at double the normal rate. If the actual recorded demand of a consumer exceeds 105% of the contracted demand consecutively for three months, the licensee may issue a notice and inform the consumer to get additional contract demand sanctioned or to limit their drawl as per their contract. Otherwise the licensee shall take action as per provisions of the Act/Rules/Regulations.

Illustration: If contract demand is 100 kva whereas maximum demand recorded during the month is 115 kva, then demand for 105 kva (105% of 100 kva) shall be billed at normal rate and demand for 15 kva (120 kva-105 kva) shall be billed at twice the normal rate.

15. Defective / Damaged / Burnt Meter: In case of meter being defective / damaged / burnt, the licensee or the consumer as the case may be shall replace the same within the period specified in "Standards of Performance" Regulations issued by the Commission. Till defective meter is replaced the consumption shall be assessed and billed on an average consumption of last six meter reading cycles or average monthly consumption of corresponding six meter reading cycles of the preceding year whichever is higher from the date of meter being out of order. Such consumption shall be treated as actual consumption for all practical purposes until the meter is replaced/ rectified.

In case a functional check-meter is available then the readings of the check meter shall be used for billing purposes when main meter becomes defective/damaged/burnt.

In case the meter becomes defective immediately after its installation and prior consumption is available, then billing shall be done provisionally on the basis of following load factor subject to adjustment on the average consumption of three meter reading cycles of the replaced meter.

16. FPPCA: The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with FPPCA formula notified by the Commission. The value of K-factor shall be applicable to the different consumer categories as per the values approved in this tariff order. Such charges shall be recovered / refunded in accordance with terms & conditions specified in the FPPCA formula.

17. Temporary Supply (HT & EHT)

(i) Temporary Supply is for connection temporary in nature for a maximum period of two year. The applicability shall be as given in the respective tariff category. Temporary supply cannot be claimed by a prospective consumer as a matter of right but will normally be arranged by the licensee when a requisition is made giving due notice subject to technical feasibility and in accordance with electricity supply code issued by the Commission.

(ii) The tariff shall be chargeable as applicable to the corresponding appropriate tariff category at the following rates subject to minimum Rs ....:

Sl	Period of Supply	Tariff Rate
1.	Upto 12 months	150% of normal rate of appropriate tariff category
2.	More than 12 months and upto 18 months	175% of normal rate of appropriate tariff category
3.	More than 18 months and upto 24 months	200% of normal rate of appropriate tariff category

Demand charges, wherever applicable, shall be charged on pro-rata basis from the date of release of connection.

(iii) Terms of Supply of Temporary Supply shall be as below:

a) Temporary supply may be given for a period not exceeding 3 months in the first instance, the duration of which may be extended on quarter to quarter basis subject to maximum total duration of two year.

b) In addition to the tariff charges, the consumer shall have to deposit the following charges before commencement of the temporary supply:

(i) Estimated cost of erection of temporary service line and dismantling.

(ii) Cost of irretrievable materials which cannot be taken back to service.

(iii) Meter rent for the full period of temporary connection as per appropriate tariff schedule and other miscellaneous charges.

(iv) Rental on the cost of materials of the licensee as per estimate at the rate of Rs. 15/- per month on every Rs. 100/- or part thereof.

(v) Ten per cent on the total cost of the estimate for the temporary service connection to cover as security for loss of materials and contingencies. In case such loss is not noticed, the amount will be refunded.

c) The applicants for temporary supply shall be required to make a deposit in advance of the cost as detailed above including demand charges and the energy consumption charges estimated for full period on the basis of contracted demand. This will however, be adjusted against the final bill that will be rendered on disconnection of supply.

d) If the consumer intends to extend the temporary supply beyond the period originally applied for, he will have to deposit in advance all applicable charges as detailed above including the estimated electricity consumption charges, for the period to be extended and final bill as well, for the previous period, if any.

18. Seasonal Supply (HT & EHT)

(i) Seasonal supply shall be given to any consumer on written request to the Board subject to the following conditions.

Sl	Period of Supply	Tariff Rate
1.	Upto 3 consecutive months in a year	Appropriate tariff plus 40 percent
2.	More than 3 consecutive months and upto 6 consecutive months in a year	Appropriate tariff plus 30 percent
3.	More than 6 consecutive months	Appropriate tariff plus 20 percent

	and upto 9 consecutive months in a year	
4.	More than 9 consecutive months but less than one year	Appropriate tariff plus 10 percent.

(ii) The meter rent and other charges as provided in the appropriate tariff are applicable to seasonal loads and would be charged extra for the entire period of supply.
(iii) The supply would be disconnected after the end of the period unless the consumer wants the supply to be continued. Any reconnection charges have to be borne by the consumer.
(iv) Consumer proposing to avail seasonal supply shall sign an agreement with the licensee to avail power supply for a minimum period of 3 years in the case of HT category of supply.
(v) The consumers must avail supply in terms of whole calendar month continuously.
(vi) The consumer is required to apply for seasonal supply and pay initial cost and security deposit as an applicant for normal electricity supply.
(vii) The consumer shall ensure payment of monthly energy bills within 7 days of its receipt. The supply will be disconnected if payment is not made on due date.

19. Time of Day tariff (ToD)

(i) Under the Time of Day (ToD) Tariff, electricity consumption and maximum demand in respect of HT/EHT consumers for different periods of the day, i.e. normal period, peak load period and off-peak load period, shall be recorded by installing a ToD meter.
(ii)The maximum demand and consumption recorded in different periods shall be billed at the following rates on the tariff applicable to the consumer.

Time of use	**Demand Charges**	**Energy Charges**
Normal period (6:00 a.m. to 6:00 p.m)	Normal Rate	Normal rate of energy charges
Evening peak load period (6:00 p.m to 10.00 p.m)	Normal Rate	120% of normal rate of energy charges
Off-peak load period (10:00 p.m to 6:00 a.m)	Normal Rate	90% of normal rate of energy charges

(iii) Applicability and Terms and Conditions of TOD tariff:
(a) TOD tariff shall be optional unless otherwise specifically stated to the contrary in the tariff order.
(b) The facility of aforesaid TOD tariff shall not be available to HT/EHT consumers having captive power plants and/or availing supply from other sources through wheeling of power.
(c) The HT/EHT industrial consumers who have installed standby generating plants shall also be eligible for the aforesaid TOD tariff.

(d) In the event of applicability of TOD tariff to a consumer, all other terms and conditions of the applicable tariff shall continue to apply.

20. Schedule of Tariff and Other charges approved in this Tariff Order shall be as approved in the tariff order.

PART - D: MISCELLANEOUS AND GENERAL CHARGES (FOR ALL CATEGORIES OF CONSUMERS)

1 METER RENT:

i) BPL
ii) LT Single Phase except BPL
iii) LT Three Phase Upto 100 Amps
iv) LT meter with CT
v) HT meter with CTPT combined unit
vi) EHT meter with CTPT combined unit

2 APPLICATION FEE FOR NEW CONNECTION / REDUCTION OF CONTRACTED LOAD OR DEMAND / ENHANCEMENT OF CONTRACTED LOAD OR DEMAND/REQUEST FOR PERMANENT DISCONNECTION:

(i) BPL
(ii) LT Single phase except BPL
(iii) LT Three phase
(iv) HTS
(v) EHTS

3 TESTING / INSPECTION OF CONSUMER'S INSTALLATION:

(i) Initial Test / Inspection Free of cost
(ii) Subsequent test and inspection Rs. 100.00 for single phase necessitated by fault in installation or by not complying with terms and conditions of supply connection
a) for three phase LT connection
b) for HT connection.

4 METER TESTING FEE:

(i) LT Single Phase meter
(ii) LT Three Phase meter
(iii) LT Three Phase meter with CT
(iv) LT Tri-vector meter
(v) HT Tri-vector meter
(vi) EHT Tri-vector meter
(vii) LT CT set
(viii) HT metering equipment
(ix) EHT metering equipment

Note: If the meter is tested at third party testing laboratory at the request of the consumer then the fees charged by the testing laboratory will be payable by the consumer.

5 REMOVING / RE-FIXING / CHANGING OF METER / METER BOARD AT CONSUMER'S REQUEST:

(i) BPL
(ii) LT Single Phase meter
(iii) LT Three Phase meter
(iv) LT Three Phase meter with CT
(v) LT Tri-vector meter with CT
(vi) HT Tri-vector meter with metering equipment
(vii) EHT Tri-vector meter with metering equipment

Note: Cost of material, as required, will be borne by the consumer

6 RECONNECTION CHARGE:

(i) BPL
(ii) LT Single Phase supply
(iii) LT Three Phase supply
(iv) HT supply
(v) EHT supply

7 SUPERVISION, LABOUR AND ESTABLISHMENT CHARGE FOR SERVICE CONNECTION:

(i) BPL
(ii) LT Single Phase
(iii) LT Three Phase
(iv) HT As per approved estimate
(v) EHT As per approved estimate

9. CONCLUSION OF COMMISSION's ORDER

The Commission has considered the petitions submitted by Electricity Department of Andaman & Nicobar Islands for Annual Performance Review of FY 2012-13 and approval of Aggregate Revenue Requirement (ARR) and determination of retail tariffs for supply of energy for FY 2013-14 bearing petition no. 91/2012, the Commission approves the Aggregate Revenue Requirement (ARR) and the tariff structure for FY 2013-14.

1. The break-up of the Aggregate Revenue Requirement approved for ED Andaman & Nicobar for the year 2013-14 is given below.

Sr. No.	Particulars	Approved (FY 2013-14) (in Rs. Crores)
1	2	3
1	Cost of fuel	180.66
2	Cost of power purchase for full year	204.09
3	Employee costs	53.91
4	Administration and General Expenses	37.36
5	Repair and Maintenance Expenses	2.61
6	Depreciation	3.31
7	Interest and Finance charges	7.89
8	Interest on working capital & Interest on Security Deposit	7.86
9	Return on NFA /Equity	1.85
10	Provision for Bad Debt	-
11	Advance against Depreciation	-
12	**Total Revenue Requirement**	**499.54**
13	Less: Non-Tariff Income	2.10
14	**Net Revenue Requirement (12-13)**	**497.45**
15	Revenue from Retail Sales at Existing Tariff	108.52
16	**Net Gap (14-15)**	**388.92**
17	**Gap/(Surplus) for the previous year**	0
18	**Net Gap /(Surplus) (16-17)**	**388.92**

2. The approved retail tariff (as given below) for FY 2013-14 shall be as under:

S. No.	Category	Minimum Charges per connected load or part thereof per month (Rs./unit)	Rate (Rs./unit)
1	Domestic		
	Upto 100 units	Rs.30.00 per KVA	2.00
	101-200 units		3.70
	201 units & above		5.10
2	Commercial		
	upto 200 units	Rs.50.00 per KVA	5.40
	201 to 500 units		6.50
	501 units & above		7.25
3	Industry		
	Upto 500 units	a. Rs.50.00 per H.P.	4.45
	501 units & above	b. Rs.200.00 per month for Rice, Flour Millers of Rural areas who are having 15 HP capacity	5.00
4	Bulk	Rs.50.00 per KVA	9.20
5	Public Lighting	Rs.60.00 per KVA	4.50
6	Irrigation Pumps & Agriculture	Rs.15.00 per KVA	1.25

3. The approved tariff of FY 2013-14 shall come in force with effect from 1st April 2013 and shall remain valid till March 31'2014. <u>All existing provisions which are not modified by this order, shall continue to be in force. The licensee shall publish the tariff structure and the salient features of tariff within one week in three daily newspapers in Hindi, Bengali and one in English, having wide circulation in their respective areas of supply. The distribution licensee shall also publish a booklet in Hindi, Bengali and English containing all details of tariff and its applicability for the benefit of consumers. It should be made available for sale to public at a nominal price.</u>

4. It is seen that in the case of A&N, majority of the generation is diesel based, making per unit cost of generation very high compared to other utilities. In view of this, the approved tariff is not covering the full cost of supply. Historically, there has been substantial gap between the actual cost of supply and revenue realized. This gap so far has been borne by the administration of A&N. Keeping the above fact in view, the Commission is of the view that any variation is power purchase cost (including variation in cost of their own generation) should, for the time being, be borne by the utility.

5. Copy of this order may be sent to petitioner, CEA and Administration of UT of Andaman & Nicobar Islands. It shall be placed on the website of the Commission.

(Sh. S K Chaturvedi)
Member

(Dr. V K Garg)
Chairman

Place: Gurgaon
Date: March 31' 2013

Certified Copy

(R. K. Malik)
Secretary

10. TARIFF SCHEDULE

1. DOMESTIC SUPPLY (DS)

APPLICABILITY

This schedule shall apply for single delivery point including light, fan, domestic pumping sets and household appliances in the following premises:

a) Single private house/flat.

b) Housing colonies and multi storied flats/buildings as defined in Electricity Supply Code Regulations notified by the JERC.

NOTES:

i. Where a portion of the dwelling is used for the mixed load purposes the connection shall be billed for the purpose for which the tariffs are higher.

TARIFF

Consumption range	Minimum Charge per connected load or part thereof per month	Energy charge Rs./KWh
Upto 100 units	Rs.30.00 per KVA connected Load or part thereof per Month	2.00
101 units – 200 units		3.70
201 units & above		5.10

2. COMMERCIAL

APPLICABILITY

This schedule shall apply to all consumers, using electrical energy for light, fans appliances like pumping sets, motors of rating upto 3 HP used for commercial purpose, central air conditioning plant, lift ,welding set, small lathe, electric drill, heater, battery charger, embroidery machine, printing press, ice candy, dry cleaning machines, power press, small motors in commercial establishments/ non-residential premises such as Printing Press, Hotels, Rest Houses, Restaurants ,Hostels, Nursing Homes, Bus-stand, clubs, Auditorium, Communication, Cinema Theatre, Opera, Circus, Exhibition, All India Radio, SCI, Fisheries, Survey of India, Bakeries & Grinders & installations for private gains etc. Commercial supply shall also be applicable to multi consumer complex including commercial complexes as defined in the Electricity Supply Code Regulations notified by the JERC.

This schedule shall also apply to the Places of Worship, like Temples, Mosques, Churches, Gurudwaras, Buddhist Pongi Chung (not for residential or shopping complex only for pooja places) Public Pooja celebration and religious ceremonies.

No separate circuit/connection for power load including pumping set/central air conditioning plant, lifts etc. is permitted.

TARIFF

Consumption range	Minimum Charge per connected load or part thereof per month	Energy Charges Rs./KWh
upto 200 units	Rs.50.00 per KVA connected Load or part thereof per Month	5.40
201 units to 500 units		6.50
501 units & above		7.25

3. INDUSTRIAL SUPPLY

APPLICABILITY

The schedule shall apply for supply of energy for lighting , fan and power to Industrial establishments & Industries such as wood based, cottage, small scales, medium scales, finishing shell based and any other establishments/organizations engaged in the manufacturing and processing goods for sale, rice mills, flour mills, workshops, Drydock, factories base repair organization, Public water works & Gem cutting units.

TARIFF

Consumption range	Minimum Charge per connected load or part thereof per month	Energy Charges Rs./KWh
Upto 500 units	a) Rs.50.00 per H.P. connected load or part thereof. b) Rs.200.00 per month for Rice , Flour Millers of Rural areas who are having 15 HP capacity.	4.45
501 units & above		5.00

POINT OF SUPPLY

The above mentioned tariff is based on the supply being given through a single delivery and metering point and at a single voltage.

4. IRRIGATION, PUMPING & AGRICULTURE

APPLICABILITY

This schedule shall apply to all consumers for use of electrical energy for irrigation and agricultural purposes including animal husbandry.

TARIFF

Consumption range	Minimum Charge per connected load or part thereof per month	Energy Charges Rs./KWh
Upto 500 units	Rs.15.00 per KVA connected Load or part thereof per month	1.25

POINT OF SUPPLY

The above mentioned tariff is based on the supply being given through a single delivery and metering point and at a single voltage.

5. PUBLIC LIGHTING (PL)

APPLICABILITY

This tariff schedule shall apply for lighting on public road, footpath, streets & through fares in parks & markets etc. Cost of spares, materials and labour required for maintenance to be borne by respective Panchayati Raj Institutions/Local Bodies.

TARIFF

Consumption range	Minimum Charge per connected load or part thereof per month	Energy Charges Rs./KWh
Public lighting system managed by Municipal Corporation, Panchayat and Street lights maintained/outsourced to an external agency	Rs.60.00 per KVA connected Load or part thereof per month	4.50

6. BULK SUPPLY

APPLICABILITY

This tariff schedule shall apply to general or mixed loads receiving supply of energy through a bulk energy meter either at HT or LT supply and distribution is maintained by them. For dedicated transformer the complete cost of Technical transmission lines of transformers sub-station, switch gear & installation is to be borne by the consumer.

TARIFF

Consumption range	Minimum Charge per connected load or part thereof per month	Energy Charges Rs./KWh
Bulk category	Rs.50.00 per KVA connected Load or part thereof per month	9.20

POINT OF SUPPLY

The above mentioned tariff is based on the supply being given through a single delivery and metering point and at a single voltage.

7. TEMPORARY SUPPLY

APPLICABILITY

The supply may be given for a period of not more than three months. For any extension a fresh connection has to be obtained on proper fresh application. The temporary connection can only be for maximum period of six months. Rate shall be the three times the rate applicable to the relevant category of consumers.

GENERAL CONDITIONS FOR LT & HT SUPPLY

The above mentioned LT/HT Tariffs are subjected to the following conditions, applicable to all category of consumers.

1) If energy supplied for a specific purpose under a particular tariff is used for a different purpose, not contemplated in the contract for supply and / or for which higher tariff is applicable, it will be deemed as unauthorized use of electricity and shall be dealt with for assessment under the provisions of section 126 of the Electricity Act, 2003 & Supply Code Regulation notified by JERC.

   Provided that

   a) If a portion of the domestic premises limited to only one room is used for running small household business having connection under domestic category, such connection shall be billed under domestic category provided that the total monthly consumption of the consumer (including consumption for above mentioned small household business) does not exceed 150 kWh.

   b) If either more than one room or only one room having monthly consumption exceeding 150 kWh for consecutive three months is detected in the domestic premises being used for mixed purposes having domestic connection, such connection shall further be billed under commercial category until a separate connection of appropriate tariff is taken for that portion used for non-domestic purpose.

2) If connected load of a domestic category is found to be at variance from the sanctioned/contracted load as a result of increase of load or due to replacement of lamps, fans, fuses, switches, low voltage domestic appliances, fittings, etc it shall neither fall under unauthorized use of electricity (Section 126 of EA 2003) nor under theft of electricity (Section 135 of EA 2003).

3) If the consumer fails to pay the energy bill presented to him by the due date, the Department shall have the right to disconnect the supply after giving 15 days' notice as per provision of the Act & Supply Code Regulation.

4) **Additional charges for exceeding contracted load/contracted maximum demand,**

   If in any month the consumer exceeds his contracted load/contracted demand the portion of the load/demand in excess of the contracted load/demand will be dealt as per the provisions made in JERC(Electricity Supply Code), 2010.

This will not be applicable to the consumers who has self-declared their connected load as the provision under regulation 4.13 (2) of Supply Code Regulations, 2010 as amended from time to time.

5) Power Factor Incentive

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

In case the monthly average power factor is above 95%, consumer shall get a rebate at a rate of 1% on billed energy charges for each 1% increase in monthly average power factor above 95%.

For example, if the average power factor in a month is 97%, then the consumer shall be given rebate of 2% on the billed energy charges for that month.

6) Incentive for usage of alternative (Renewable) Sources of Energy:

A concession of Rs. 50/- (Rupees Fifty only) per month in electricity bill will be given to the consumers using solar water heater in domestic/commercial establishments on one-time verification of original invoice of its purchase and verification of the installation of equipment by the Engineer in charge of the area. The concession will be given to the consumers on the basis of the ownership of equipment; concession will be divided amongst the consumers, if they are sharing common equipment of solar water heater.

The concession of Rs. 1.00 per KWh over the units generated per month by the equipment generating energy using renewable energy including roof-top solar equipment, solar wind hybrid systems. The actual units generating will be verified from the energy meter to be installed in such systems for recording the electricity generated. The concession will be given to the consumers on the basis of the ownership of equipment; concession will be divided amongst the consumers, if they are sharing the equipment of roof-top solar or solar wind hybrid systems.

The incentive will be reviewed in next ARR and tariff order based on the reduction in the drawl of units of conventional power substituted by Renewable Power is based on the data from June-December 2012.

7) Late Payment Surcharge

For the existing connections, if the payment is made after the due date (as mentioned on the bill), the consumer is liable to pay additional charges on delayed amount at the rate of 2% per month. However for disconnected consumers, additional amount at the rate of 10% per annum on the outstanding amount shall be charged.

8) **Advance Payment Rebate:** If payment is made in advance well before commencement of consumption period for which bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding security deposit) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

9) **Prompt Payment Rebate:** If payment is made at least 7 days in advance of the due date of payment a rebate for prompt payment @ 0.25 % of the bill amount shall be given. Those consumers having arrears shall not be entitled for such rebate.

10) Taxes & Duties

The tariff does not include any tax or duty etc. on electricity energy that may be payable at any time in accordance with any law then in force. Such charges, if any, shall be payable by the consumer in addition to the tariff charges.

ANNEXURE – 1

ANNEXURE - 2

ANNEXURE – 3

ANNEXURE - 4

ANNEXURE – 5