



**ARUNACHAL PRADESH STATE ELECTRICITY REGULATORY  
COMMISSION (APSERC)**

**Aggregate Revenue Requirement  
And Tariff Order for FY 2014-15  
For  
Department of Power  
Government of Arunachal Pradesh**

**Issued on 03-06-2014**

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## List of Abbreviations

Abbreviation	Description
A&G	Administration & General
AC	Alternating Current
Act	Electricity Act, 2003
DOP, AP	Department of Power, Govt. of Arunachal Pradesh
APSERC	Arunachal Pradesh State Electricity Regulatory Commission
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal For Electricity
CAGR	Compound Annual Growth Rate
CD	Contract Demand
CERC	Central Electricity Regulatory Commission
Crs	Crore
CGS	Central Generating Stations
CoS	Cost of Supply
CPSU	Central Power Sector Undertakings
D/E	Debt Equity
EHT	Extra High Tension
ER	Eastern Region
FAC	Fuel Adjustment Costs
FDR	Fixed Deposits Receipts
FSTPS	Farakka Super Thermal Power Station
FY	Financial Year
GFA	Gross Fixed Assets
HP	Horse Power
HT	High Tension
KhSTPS	Kahalgaon Thermal Power Station
KV	Kilovolt
KVA	Kilo Volt Amps
kWh	Kilo Watt hour
L.T.M.D	Low Tension Maximum Demand
LNG	Liquefied Natural Gas
LT	Low Tension
LTC	Leave Travel Concession
MU	Million Units
MVA	Million Volt Amps
MW	Mega Watt
NHPC	National Hydroelectric Power Corporation
NTPC	National Thermal Power Station
O&M	Operation & Maintenance
ROE	Return On Equity
RoR	Rate of Return
Rs.	Rupees
S/s	Sub Station
SBI	State Bank of India
SERC	State Electricity Regulatory Commission
SPV	Special Purpose Vehicle
T&D	Transmission & Distribution
TSTPS	Talcher Super Thermal Power Station
UI	Unscheduled Interchange
UMPP	Ultra Mega Power Projects
NEEPCO	North Eastern Electric Power Corporation
NTI	Non-Tariff Income
RLDC	Regional Load Despatch
SLDC	State Load Despatch Centre
R&M	Repairs and Maintenance
PGCIL	Power Grid Corporation of India Limited
CEA	Central Electricity Authority

**Before**  
**The Arunachal Pradesh State Electricity Regulatory Commission**  
**(APSERC)**  
**Naharlagun, Arunachal Pradesh**

**Petition No. TP 1 of 2014**

**In the matter of:**

**Determination of Aggregate Revenue Requirement (ARR) and Retail Tariff for sale of electricity by Arunachal Pradesh Department of Power to the consumer in the State of Arunachal Pradesh for the FY 2014-15**

**AND**

**Department of Power,**  
**Government of Arunachal Pradesh, Itanagar \_\_\_\_\_ Petitioner**

**Present :**

**Digvijai Nath, Chair person**

**ORDER**

**(Passed on 03-06-2014)**

The Commission in exercise of the powers vested in it under section 62(1)(d) read with Section 62(3) and Section 64 (3)(a) of the Electricity Act, 2003 and Terms and Conditions for Determination of Tariff Regulations, 2011 issued by Arunachal Pradesh State Electricity Regulatory Commission (APSERC) and other enabling provisions in this behalf, issues this order, determining the Aggregate Revenue Requirement (ARR) and the Retail Tariff for the Financial Year 2014-15 for supply of electricity by the Department of Power, Arunachal Pradesh (DOP, AP) to the consumers in the state of Arunachal Pradesh. The Regulations state that the Distribution Licensee shall file the tariff petition for Aggregate Revenue Requirement (ARR), complete in all respects, along with requisite fee as prescribed in the Commission's Fee, Regulations, 2011 on or before 30<sup>th</sup> November of the preceding

year. Hence the tariff petition for the financial year 2014-15 should have been filed by the Licensee on or before 30<sup>th</sup> November 2013.

But the DOP, AP filed the petition for 2014-15 before the Commission on 10-3-2014. On scrutiny it was observed that it does not contain necessary information. The Commission communicated its observations regarding deficiencies in the tariff petition to DOP, AP vide its letter dated 2-5-2014. However pending receipt of additional data/ information, the Commission admitted the petition on 29-4-2014 though certain information/data was still wanting in the tariff petition, to avoid delay. The DOP, AP submitted some additional data/ information on 19-5-2014.

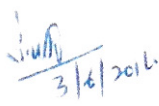
The Commission took into consideration the facts presented by the DOP, AP in its tariff petition and subsequent filings, the objections/suggestions received from consumer organizations, general public and State Advisory Committee and response of the DOP, AP to those objections. Since the Commission has to ensure transparency in the process of tariff determination, it conducted hearing at Naharlagun on 26-5-2014 providing platform to the stakeholders and members of the public to discuss the issues raised by them and response of the DOP, AP thereon. The Commission had an occasion to peruse other relevant facts and materials placed on the record.

This order is in 7 (Seven) chapters which include detailed analysis of the Aggregate Revenue Requirement (ARR) and approved Retail Tariff Rates for the financial year 2014-15. The Commission directs the DOP, AP to take all necessary steps for implementation of this order from the effective date after issuance of a public notice, so that order is made applicable to all classes of consumers and energy bills are prepared accordingly, strictly in terms of the approved tariff.

The directives contained in the Chapter-6 should be strictly adhered to and compliance thereof, as desired by the Commission must be placed before it within the stipulated time.

**This order shall be effective from 1-4-2014 and shall remain in force till the next tariff order issued by the Commission.**



  
3/6/2016  
**(DIGVIJAI NATH)**  
**Chairperson**

# 1. Introduction

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## 1.1 Arunachal Pradesh State Electricity Regulatory Commission (APSERC)

In exercise of the powers conferred by the Electricity Act, 2003, (hereinafter referred to as Act) the Government of Arunachal Pradesh constituted the Electricity Regulatory Commission for the State of Arunachal Pradesh to be known as “Arunachal Pradesh State Electricity Regulatory Commission” as notified on 07.05.2010 (hereinafter referred to as Commission). The Commission constituted is a one-member body designated to function as an autonomous authority responsible for regulation of the power sector in the State of Arunachal Pradesh. The powers and functions of the Commission are as prescribed in the Act. The head office of the Commission is presently located at Naharlagun Arunachal Pradesh. The Commission started to function with effect from 02.03.2011 with the objective and purpose for which the commission has been established.

1.1.1 In accordance with the provisions of the Act, the Commission discharges the following functions:

- (a) Determine the Tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State: Provided that where open access has been permitted to a category of consumers under Section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;
- (b) Regulate Electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;
- (c) Facilitate Intra-State transmission and wheeling of electricity;
- (d) Issue licenses to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;
- (e) Promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such



sources, a percentage of the total consumption of electricity in the area of a distribution licensee;

- (f) Adjudicate upon the disputes between the licensees and generating companies; and to refer any dispute for arbitration;
- (g) Levy fee for the purpose of this Act;
- (h) Specify State Grid Code consistent with the Grid Code specified under Clause (h) of sub-section (1) of Section 79;
- (i) Specify or enforce standards with respect to quality, continuity and reliability of services by licensees;
- (j) Fix the trading margin in the Intra-State trading of electricity, if considered, necessary;
- (k) Discharge such other function as may be assigned to it under the Act.

1.1.2 Further, the Commission also advises the State Government on all or any of the following matters namely;

- (a) Promotion of competition, efficiency and economy in activities of the electricity industry;
- (b) Promotion of investment in electricity industry;
- (c) Reorganization and restructuring of electricity industry in the State;
- (d) Matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.

1.1.3 The State Commission ensures transparency while exercising its powers and discharging its functions.

1.1.4 In discharge of its functions, the State Commission is guided by the National Tariff Policy (NTP) as brought out by GOI in compliance to Section 3 of the Act. The objectives of the NTP are to:

- (a) Ensure availability of electricity to consumers at reasonable and competitive rates;
- (b) Ensure financial viability of the sector and attract investments;
- (c) Promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimize perceptions of regulatory risks;
- (d) Promote competition, efficiency in operation and improvement in quality of supply.

The Commission has so far notified the following Regulations to facilitate its functioning.

- (i) State Advisory Committee (SAC) Notification – 2011
- (ii) Conduct of Business Regulations
- (iii) Redressal of Grievances and Ombudsmen Regulations-2011
- (iv) Fee Regulations-2011
- (v) Grant of Intra State trading Licence Regulations-2011
- (vi) Determination of ARR and retail tariffs Regulations-2011
- (vii) Terms and Conditions for Tariff Determination from Renewable Energy Sources Regulations-2012
- (viii) Renewable Power Purchase Obligations and Its Compliance Regulations-2012
- (ix) Redressal of Grievances and Ombudsman Regulation (1<sup>st</sup> Amendment)-2012
- (x) State Grid Code Regulations-2012
- (xi) Terms and Conditions of Intra-state Open Access Regulations-2012
- (xii) Electricity Supply Code Regulation-2013
- (xiii) Multi Year Tariff Regulation – 2013 superseding the Regulation of 2011 on Determination of ARR and Retail Tariff Regulation.

## **1.2 Arunachal Pradesh - Geographical Reality**

The total area of the State of Arunachal Pradesh is 83573 sq.kms. The State is having a population of around 13.82 lakhs as per 2011 census. The State of Arunachal Pradesh is bounded by Assam in South, Bhutan in West, China in North, and Nagaland and Mayanmar in East. It's Capital Itanagar is about 380 kms. from Guwahati.

### **1.2.1 Arunachal Pradesh Department of Power (DOP, AP)**

The Arunachal Pradesh Department of Power (DOP, AP) is a deemed licensee in terms of Section 14 of the Electricity Act, 2003. DOP, AP being an integrated utility, is responsible for transmission and distribution of electricity in the State of Arunachal Pradesh and also trading functions. The Department of Power of the State of Arunachal Pradesh (DOP, AP) is responsible for power supply in the State of Arunachal Pradesh. DOP, AP receives around 147 MUs of free power from Ranganadi HEP. Apart from this, the entire power requirement for DOP, AP is met through its share from Central Sector Power generation, which is wheeled through

the PGCIL network of North Eastern Region and power purchase from Deptt. of Hydro Power Development(DHPD), electricity traders/other sources. It also has small diesel generating units with annual generation of 1.60 MUs (approx.)

The present demand for Arunachal Pradesh is being met by drawing power from various central generating stations, and power from Arunachal Pradesh Hydro Power Department. DOP, AP serves about 1,91,061 consumers with an annual energy consumption of about 297.29 MUs (FY 2013-14). The consumers can be broadly classified into following four categories:

- Domestic (84%)
- Commercial (9.34%)
- Industrial both HT & LT (0.16%)
- Others-Public Lighting, water works etc.(6.50%)

### **1.3 Filing ARR and Tariff Petition for FY 2014-15**

As per the Tariff Regulations, the utility was required to submit the petition for ARR and Tariff in the month of November'2013 for fixing the Tariff for the next financial year. However, the Department filed the tariff Petition for the FY 2014-15, on 10-3-2014

In the petition, DOP, AP has estimated an ARR of Rs. 790.32 crore and worked out a net revenue gap of Rs. 670.68 crore.

### **1.4 Admission of Petition and public Hearing Process**

The Commission observed that the ARR filed by the petitioner was incomplete and lacking critical and vital information required as specified in Commission's Regulations on Terms and Conditions for Determination of Tariff.

DOP, AP was asked to submit the required information vide Commission's letter dated 2-5-2014

Pending receipt of additional information the ARR and Tariff Petition was admitted on 29-4-2014 and marked as case No. TP 1 of 2014 to avoid delay in processing of ARR. Subsequently DOP, AP submitted some additional data/ information vide its letter dated 19-5-2014 which was also considered while analyzing the petition.

The Commission directed the DOP, AP to publish the summary of the ARR and tariff proposal in the abridged form and manner as approved in accordance with section 64(2) of the Electricity Act, 2003 to ensure public participation.

The notification of proposed ARR for FY 2014-15 was published by the DOP, AP in the following newspapers.

Sl. No	Name of the newspaper	Language	Date of publication
1	Echo of Arunachal	English	3-5-2014
2	Eastern Sentinel	English	3-5-2014

Through the public notice, the stakeholders/public were invited to furnish their objections and suggestions on the petition on or before 19-5-2014

The Commission received only one objection/suggestion on the petition filed by DOP, AP. Since the DOP has not proposed any increase in the existing tariff during 2014-15, might be the reason for it. The Commission considered the objections received and sent them to DOP, AP for communicating their response to the objections raised.

### **1.5 Notice for Public hearing**

Notices were issued by the Commission to the lone consumer group viz. ACCI Naharlagun who had filed the objection and the Deptt. of Power on 22-5-2014 giving due intimation to them the hearing will be held in the Commission's office at Naharlagun from 1130 Hours to 1330 Hours.

### **1.6 Public Hearing**

As above hearing was held as scheduled on 26-5-2014 at the Naharlagun. During the public hearing the objectors were asked for presenting their views on the petition of DOP, AP before the Commission. Thereafter, the authorized Representatives of DOP, AP were also asked to present their views on the objections filed by the ACCI. The proceedings of the public hearing are briefly reproduced in Chapter-4.

The list of participants in public hearing are given in Annexure-I.

### **1.7 Meeting of State Advisory Committee**

The State Advisory Committee met on 30-5-2014 and discussed the ARR & Tariff proposal for FY 2014-15 of DOP, AP. All the Members were requested to participate in the discussion and express their views and suggestions on the proposal. The outcome of the Advisory Committee meeting is also reproduced in Chapter-4.

The list of participants in the SAC Meeting are given in Annexure-II.

## 2. Summary of Petition for Determination of ARR & Tariff

### 2.1 Aggregate Revenue Requirement (ARR)

The DOP, AP in its petition has submitted the Aggregate Revenue requirement for the year 2014-15 for meeting its expenses and the estimated revenue with the existing tariff. The ARR and revenue gap are shown in Table 2.1 below:

**Table 2.1: Aggregate Revenue Requirement for FY 2014-15**

(Rs. crore)

Sl.No.	ARR Element		Claimed by APDOP
1	Fuel cost		5.00
2	Power Purchase cost		219.30
3	O&M Expenses		
	a) Employee cost	170.23	
	b) R&M Expenses	26.70	
	c) Admn. & General Expenses	2.00	
	<b>O&amp;M Expenses</b>	<b>198.93</b>	<b>198.93</b>
4	Depreciation		111.61
5	Interest & Finance charges		99.55
6	Interest on working capital		8.06
7	Return on Equity		148.34
8	<b>Total ARR</b>		<b>790.79</b>
9	Less Non-Tariff Income		0.47
10	<b>Net ARR</b>		<b>790.32</b>
11	Revenue at Existing Tariff		107.14
12	<b>Revenue Gap</b>		<b>683.18</b>
13	Sale of power to other Distribution Licensee		12.50
14	<b>Net Gap</b>		<b>670.68</b>
15	<b>Regulatory asset</b>		<b>0.00</b>
15	Energy sales (MU)		312.15
16	Average cost of supply (Rs/kWh) (Sl. No.10/Sl. No.15)		25.33

### 2.2 DOP, AP has requested the Commission

- To accept the Annual Revenue Requirement and Tariff Petition for FY 2014-15.
- To approve partial recovery of Aggregate Revenue Requirement (ARR) for FY 2014-15.
- To approve category-wise tariff including fixed/demand/ energy charges to meet revenue requirement for FY 2014-15.
- Approve the tariff philosophy suggestions requested.
- Condone any inadvertent delay/ omissions/ errors/ rounding off differences/ short comings and to permit to add/ change/ modify/ alter the petition
- To permit to file additional data/information as may be necessary.
- To pass such further order and as the Commission may deem fit and proper, keeping in view the facts and circumstances of the case.

### 3. Power Sector in Arunachal Pradesh

#### 3.1 Power Supply

DOP, AP has a Diesel Generation plant which generates about 1.6 MU power per Annum.

DOP, AP gets about 147 MU free energy from NEEPCO, Ranganadi HEP.

DOP, AP has firm Power allocation from NHPC, NEEPCO, NTPC as stated in the Table below. DOP, AP purchases power in open market to meet its requirement in the State particularly, during peak hours and DOP, AP sells surplus from allocated energy to outside State licensees. DOP, AP receives power from CGS and other sources as per allocation from time to time as given below.

**Table 3.1: Firm Power Allocation (MW)**

Sl. No.	Source	Installed Capacity (MW)	State Share / Allocation FY 2012-13		Estimated State Share / Allocation FY 2013-14		Projected State Share/Allocation FY 2014-15	
			%	MW	%	MW	%	MW
	<b>NHPC</b>							
1	Loktak	105	4.94	5.19	4.94	5.19	4.94	5.19
	<b>NEEPCO</b>							
2	Kahndong 50 MW	50	4.19	2.10	4.19	2.10	4.19	2.10
3	Doyang	75	6.85	5.14	6.85	5.14	6.85	5.14
4	Kopili-I	200	5.19	10.38	5.19	10.38	5.19	10.38
5	Kopili-II	25	5.99	1.50	5.99	1.50	5.99	1.50
6	Ranganadi	405	18.27	73.99	18.27	73.99	18.27	73.99
7	AGTPP (Tripura)	84	6.13	5.15	6.13	5.15	6.13	5.15
8	AGBPP (Assam)	291	5.69	16.57	5.69	16.57	5.69	16.57
	<b>NTPC</b>							
9	Farakka	1600	0.21	3.36	0.21	3.36	0.21	3.36
10	Kahalgaon	840	0.21	1.76	0.21	1.76	0.21	1.76
11	Talcher	1000	0.21	2.10	0.21	2.10	0.21	2.10
	<b>Total</b>		<b>127.24</b>		<b>127.24</b>		<b>127.24</b>	

DOP, AP Purchased power from Central Generating Stations and other sources outside the state as depicted in the table below for FY 2012-13.

**Table 3.2: Power Purchase i/c free power**

(MU)

Sl. No.	Source	FY 2012-13 (Actual)
	<b>NHPC</b>	
1	Loktak	27.04
	<b>NEEPCO</b>	
2	Kahndong	6.83
3	Doyang	13.56
4	Kopili-I	33.99
5	Kopili-II	5.52
6	Ranganadi	79.29
7	AGTPP (Tripura)	37.79
8	AGBPP	88.58
	<b>NTPC</b>	
9	Farakka	36.15
10	Kahalgau	11.93
11	Talcher	14.17
12	UI	91.91
13	Free Power	147.24
	<b>Total</b>	<b>594.01</b>

Besides this DOP, AP is also drawing entire power generated by APHDP.

Thus DOP, AP is able to meet the demand by drawal of power from AP Hydro power department and purchase from Central Generating stations, including free power from NEEPCO, Ranganadi HEP.

### 3.2 Consumers base and sales profile.

The category wise consumers and sales during FY 2012-13 are as depicted in the table 3.3 below.

**Table 3.3: Energy Sales in MU for FY 2012-13**

Sl. No.	Category	No. of consumers	Energy sales (Actual)
1	Domestic including BPL	152930	69.45
2	Commercial	16942	21.27
3	Industrial Consumers	286	96.15
4	Public Lighting	1183	5.52
5	Public Water works & Sewage	78	4.02
6	Irrigation and Agriculture	-	-
7	Bulk	4485	13.51
8	General Purpose	6058	22.48
9	Outside State	-	45.53
10	<b>Total</b>	<b>181963</b>	<b>283.13</b>

### 3.3 Distribution Losses (T&D Losses)

The distribution losses for FY 2012-13 works out to 57.28% as detailed below.

**Table 3.4: Distribution Losses During FY 2012-13**

Sl. No.	Category	FY 2012-13 (Actual)
1	Power Purchase from CGS including free power	594.01
2	Less: Inter state transmission loss	3.48%
	Less: Inter state transmission loss (MU)	20.67
3	Add: Power from AP Hydro Generation 49.95 Less: Transmission Charges @ 4% 2.00	49.95
4	Add: Own Generation	1.59
5	Add: UI Power Charges	-
6	Less: Sales out side state	(-) 45.53
7	Total Power Available	579.35
8	Less intra states transmission loss @ 4%	223.17
9	Net power available for distribution	556.18
10	Sales	237.60
11	Distribution Loss (MU)	318.58
12	Distribution Loss (%)	57.28%



## 4. Proceedings of Public-Hearing and Proceedings of SAC Meeting

### 4.1 Public Response to the Petition

On admitting the ARR and Tariff Petition of DoP, AP for FY 2014-15, the Commission directed the DoP, AP to make available, the copies of Petition to general public, post the Petition on their website and also publish the names in news papers in abridged form inviting comments/objections from them.

One written objection was received from the Arunachal chamber of commerce and industries Barapani, Naharlagun.

### 4.2 Public Hearing

In Order to ensure transparency in the process of determination of Tariff as envisaged in Electricity Act 2003, public hearing was held at Naharlagun on 26-05-2014 as scheduled. During the public hearing the participants were given an opportunity to explain their views in respect of the ARR and Tariff proposal of DoP, AP. The list of stake holders who attended the public hearing is given in Annexure-I. The officers of the DoP, AP who were present during public hearing responded to the issues raised by the objectors. A copy of the response of the APDOP conveyed vide their letter Dtd. 22-5-2014 was also provided by them to the representative of ACCI.

### 4.3 Proceeding of Public Hearing

#### 4.3.1 Objector 1: Arunachal chamber of Commerce and Industries Barapani , Naharlagun.

##### Objections:

##### 1) OPTIMUM UTILIZATION OF POWER GENERATION :

It is seen from the Tariff Petition for the year 2014-2015 filed by the Department of Power that the department is purchasing power from outside the state spending huge amount of money instead of availing power from state own existing Hydro Stations which are designed to **generate 500.36 MU/Per Annum** of power (See Tariff Petition Filed by the DHPD for the year **2012-2013** (Page 32 Part-A). It appears that the department has availed only **49.95 MU** for the year 2012-13 and is proposing to avail only **49.95 MU** from our own resources. The figure of our State owned generation availed for the year is **59.22 MU (2011-2012), 61.22 MU (2012-13)**. There is a huge

and vast gap between these figures and these are contradictory. We strongly object to the action of the department by not availing the full power available from our own state resources but restored to purchase of power from Centrally Owned Power Station at the cost our State exchequer and passing the cost of power purchase to its consumers is utilization of state own power generation and reduce the cost of power purchase and increase the revenue through sale of surplus power available from our share of Central Sector Power Projects. We seek immediate attention on this very vital issue from your end.

## **2) ECONOMY & EFFICIENCIES**

**(A) Transmission & Distribution Losses :** From the petition filed by the Department of Power it is observed that the T & D losses over the years is abnormally high i.e. 60.40% for the year 2012-2013 which is almost 4 times more than the permitted loss. The following is the tabulation as per the Tariff Petition 2014-15 (Ref Page 6 of the Petition).

SI No.	Years	% T&D Losses	Trajectory of T&D Losses Approved by the Commission (%) (As per Tariff Order May 2013)	Remarks
1	2012-13	60.40	-----	Actual
2	2013-14	58.26*	53.00	*Estimated
3	2014-15	56.00*	50.00	*Projected

From the above it can be seen that the T&D losses remain as high ever and the Department fail to reduce the T & D losses as per the order of the Commission. It reflects the inefficiency of the Department to reduce the losses and the same has been passed on to poor, hapless, honest paying consumers who have been penalized. It is, therefore, humbly suggested that the inefficiencies of the Department should not pass on to the poor, hapless, honest paying consumers through Tariff.

**C) BETTER MANAGEMENT & IMPROVEMENT OF RELIABILITY OF POWER SUPPLY:** The NERLDC restricts the power drawl during the lean session to the NE constituent states against their sanctioned allocation due to lean hydro in the NE. The Commission should issue direction to the Department of Power to go for banking arrangements for the surplus power available during high hydro session (April – September) with the other power starved states during such period and the power so banked can be barter during lean session which will reduce the power purchase cost on the one hand and will improve the regular power supply and will shed away the

practice of load shedding and thereby increase the revenue substantially on the other hand.

**D) Power Purchase:** The Department of Power proposal for the purchase of power is not at all justified in view of the facts narrated above. In comparison to the past years the proposal for the power purchase and power purchased are tabulated below: (See Page 6 and Page 19 of the Tariff Petition)

Sl. No.	Years	Power Purchase (in MU)	Cost of Power Purchase (in Crores of Rupees)	Saving (in Crores of Rupees)	Remarks
1	2011-12	483.81	210.64	-	As per actual
2	2012-13	446.77	177.04	33.60 (-)	As per actual
3	2013-14	446.77	215.27		Estimated
4	2014-15	446.77	226.03		Projected

It can be seen that the power purchased for the year 2012-2013 is less than that of the cost of power purchased during 2011-2012. The saving on account of this is Rs. 33.60 crores. The benefit of saving should have been passed on to the poor, hapless, miserable honest paying consumers but was not proposed by the Department and the Commission but hiked the tariff for the ensuing years. Further optimum utilization of our own generation will be considerably reduce the cost of power purchase thereby reduce the revenue requirement for the ensuing years. Besides innovative economic utilization of the surplus power by banking arrangements during hydro heavy session will reduce the cost of power purchase, and will avoid the practice of load shedding thereby increase the revenue on account of regular and quality supply of power.

3) **EXORBITANT HIGH SURCHARGE** : The surcharge imposed on the consumers @ 2% (Compounding Interest) on the bill amount is exorbitantly high and we strongly oppose this quantum of charge levied against the consumers. No State / Commission has imposed such heavy surcharge on this account. There should be a reduction which must be equaling to Saving Bank's simple Interest rate.

4) **UNREASONABLE MINIMUM CHARGES** : As per the tariff order of 2013, the consumer shall have to pay the Minimum Charges calculated on the sanctioned connected load if the energy charge is below the minimum charge in a month. It is pertinent to mention here that the Department of Power is imposing Technical Ban and Load Shedding on technical ground to the consumers during the hydro lean session (Oct – March every year). On account of this ban the consumers

has to depend on their own arrangement for power during entire period of the load shedding but also paying the minimum charges every month which is totally unjustified. We seek intervention of the Commission to forgo this unjustified, unwarranted and irrational charges and request the Commission to issue order with retrospective effect so that the poor, hapless and honest paying consumers who has been penalized with this unreasonable minimum charges for their no fault.

It is pertinent to mention here that the duty of the State Commission to advise the State Government to promote of competition, efficiency and economic activities of the electrical department and protection of consumer interest. Therefore, we appeal to the Commission to reduce the Tariff immediately in the interest of its all types of consumers. The revenue to the Department will be increased by way of utilizing fully the power from State own generation thereby reducing the cost of power purchase. The current T & D losses which is abnormally high should be brought to the permissible level with the clear direction and bench marking and with strict regulation. The reduction in the loss of T & D on this account will increase the revenue generation. The innovative banking arrangement will avoid the practice the Load Shedding and will ensure regular quality power supply. The mid-term appraisal of the revenue requirement by the Commission will certainly ensure the department to strictly adhere the orders of the Commission.

We hope that the Commission will address our concern with due regard and we are confident that the large industries and the commercial establishments will enter and invest in our State if cheap and green, most importantly regular quality power is available. This will provide direct and indirect employment opportunities to the unemployed youth of this state increase in revenue generation to the Government, improve in the standard of life of the people and ultimately profile growth of GDP (Gross Domestic Product). It may kindly be noted that this State cannot be compared with other States so far the hike in tariff of electricity is concerned because the industrial and commercial scenario of our State is still at preliminary stage and the State is economically backward and is a special category state. To attract investment to this State we have no other option **except to reduce the tariff for all categories of the consumers**. This representation is submitted on behalf of the **poor & hapless consumers** of the **Socially and Economically backward State** who do not have the access to the internet

facilities to download the Public Notice **and on behalf of the honest paying consumers** for your consideration and immediate necessary action.

#### **4.4 Response of DoP, AP on Objections**

- 1. Optimum utilisation of power generation:** The endeavor of the Deptt. is to get maximum possible generation from the hydel stations of the DHPD and to utilize it as first preference to the extent of technical feasibility. The Deptt. wishes that the DHPD is able to increase its generation further so as to reduce the dependability of state on purchase of power from outside the state. However, DoP has to purchase the Power from DHPD also, hence there can be no reduction in the tariff proposal.
- 2. Transmission & Distribution losses:** The Dept. is taking all possible steps to reduce the AT&C losses by way of strengthening the distribution system, installation of automatic energy meters in phased manner commensurating to the availability of funds, detection of illegal connections etc.
- 3. Better management & improvement of reliability of power supply :** The Deptt. has taken note of the suggestion and shall consider it including other options to the extent of technical and financial feasibility at appropriate level of the Deptt. / Govt. to give relief to the consumers from power crisis during lean hydro season.
- 4. Passing on of saving in cost of power purchase during 2012-13 to the consumers:** It is a matter to be decided by the Commission. However the Deptt. feels that the saving or excess in any particular head of expenditure cannot be the only criterion for reducing or increasing the tariff because the tariff is determined on the overall Annual Revenue Requirement which in turn depends on many other factors and the saving in one head can get neutralized by the excess in another head of expenditure.
- 5. Exorbitant high surcharge:** It is charged for late payment with the idea mainly to motivate and to keep the consumer alert to make timely payment of the electricity bills so that the Govt. revenue does not get blocked. The Commission is requested to continue with this surcharge / penalty provision.
- 6. Unreasonable minimum charge:** Minimum charge is taken from the consumers as a return on the investment made by the Deptt. on creating the infrastructure and maintaining it to provide better services to the consumers and to reinvest it for the

betterment of the consumers. The Commission is requested to continue with the minimum charges.

Lastly, the Deptt. requests the Commission not to reduce the tariff from the existing rates. The Deptt, keeping in view the interest of the consumers, has already proposed no hike in the tariff rates during 2014-15. Any further reduction in rates shall adversely affect the financial position of the Deptt.

#### **4.5 Minutes of the State Advisory Committee Meeting Held On 30-5-2014**

The 3<sup>rd</sup> SAC meeting of the APSERC was held on 30<sup>th</sup> May'2014 with the agenda to discuss the Annual Revenue Requirement (ARR) & Tariff Petition for 2014-15 filed by the Department of Power, Government of Arunachal Pradesh before the Commission. (Total four nos. Agenda Points). The list of the SAC members who were present in the meeting is enclosed as **Annexure-II**. Following points emerged after detailed discussion of various agenda points in the SAC:

**Agenda point No. 1: Aggregate Revenue Requirement:** It was felt by the members that since Department of Power is purely a Government Department, there is no need to discuss on the figures projected by it in detail.

**Agenda point No. 2: Comparison of existing tariff with tariff proposed by the Department of Power:** It was felt by a few participants that since the tariff should reflect the cost of supply, an incremental increase may have been proposed by the APDOP which could have been a very reasonable amount absorbable by all sections of the society. There was however a general opinion that the proposal of the APDOP for not increasing the existing tariff for 2014-15 can be considered in the overall interest of the consumers and alternatively some amount of revenue can be generated by virtue of reducing the existing huge AT&C losses and also by reduction in administrative costs, O&M expenses and by increasing overall efficiency of the Department.

**Agenda point No. 3: Transmission & Distribution Losses:** It was mentioned that a plan and policy of taking up 100% metering has already been taken up by the State Government and that on its completion it may reduce the AT&C losses considerably in the state.

**Agenda point No. 4: Generation from New & Renewable Energy Sources:** All the members were of the unanimous view that the DHPD should make all out efforts to increase the generation from its small/mini/micro hydro stations so as to reduce the dependence of the APDOP on purchase of power from out side the state. The APDOP was also advised to account for the energy generated by APEDA from its solar power stations which will also help the APDOP in fulfilling its target of renewable purchase obligation from solar energy sources.

#### **4.6 Commission's Observation**

The Commission has taken note of the objections, comments and suggestions made by the stake holders, members, general public and response from DoP, AP while analyzing and finalizing different components of ARR and tariff proposal keeping in view the remarks/suggestions made by the objectors and also to meet norms of the requirements of the Act, National Electricity Policy and National Tariff Policy, the

Commission has also given certain directions to the department as an integral part of this Order.

**ANNEXURE- I**  
**LIST OF PARTICIPANTS IN THE PUBLIC HEARING**

<b>Sl. No.</b>	<b>Name</b>	<b>Organization</b>
1.	Sh. Tadar Nima	Arunachal Chamber of Commerce & Industries(ACCI)
2	Sh. R. Mohan	ACCI
3.	Er. Hage Mima	Deptt. of Power
4	Sh. Rajesh Sharma	Deptt. of Power
5.	Sh. Toko Tatung	ACCI

**ANNEXURE-II**  
**LIST OF PARTICIPANTS IN THE SAC MEETING**

<b>Sl. No.</b>	<b>Name</b>	<b>Organization</b>
1.	Sh. Digvijai Nath	Chairman, APSERC
2.	Sh. Kaling Tayeng, IAS	Secretary(Power), Govt. of A.P.
3	Sh. J. Barkakati	Ex-Chairman AERC
4	Sh. Anong Perme	Chief Engineer(Power), TPM, APDOP
5.	Sh. Takar Mara	Chief Engineer(Power), CEZ, APDOP
6.	Sh. Marki Loya	Director, APEDA
7.	Sh. O. Darung	Labour Commissioner, Govt. of A.P.
8.	Sh. Toko Anuj	MD, HPDCAPL
9.	Sh. Pura Tupe	CE, WEZ, DHPD- Special Invitee
10.	Sh. Rakesh Kumar	Secretary, APSERC – Convener SAC

In addition to above authorized representatives of two members viz. Sh. Sang Phuntsok, CE(Mon.) DHPD and Sh. Tamyo Tatak, Director of Industries Govt. of A.P. were also present in the SAC meeting.

## 5. Analysis of ARR for the FY 2014-15

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### 5.1 Energy Sales

Proper estimation of category-wise sales is essential to determine the quantum of Power Purchase and the likely assessment of revenue. This section examines in detail the Customer category-wise sales projected by the DOP, AP in their petition for assessment of ARR for FY 2014-15.

### 5.2 Consumer Categories

DOP, AP serves 2.01 lakh consumers in its licensed area and the consumers are categorized as under.

1. Domestic including Kutir Jyoti & BPL
2. Commercial
3. Industrial LT & HT
4. Public Lighting
5. Public water works & sewage
6. Irrigation and Agriculture
7. Bulk Supply
8. General Purpose

DOP, AP serves the consumers at different voltages at which the consumers avail supply. Commission directs the DOP, AP to segregate the voltage wise consumers in the categories of Domestic with separate sub-category for KJ & BPL and Bulk supply, water works and General purpose categories, since these consumers would be subsidizing the KJ & BPL and Irrigation and Agriculture Consumers, in the tariff rates that progressively may emerge at cost to serve as per the NTP.

### 5.3 Additional information/Data

The ARR and tariff petition for the FY 2014-15 filed by DOP, AP was incomplete, as many of the specified formats required under APSERC (Terms and Conditions for determination of tariff) Regulations, 2011 were not submitted. DOP, AP have submitted some ARR formats with-NIL-data or data not commensurate with the required inputs.



## 5.4 Growth of Consumers and Energy Sales

DOP, AP has furnished growth of consumers and sales for the years FY 2012-13, to FY 2014-15 without furnishing the connected load as depicted in the Tables below.

**Table 5.1: Consumers – FY 2014-15**

Category	FY 2012-13 (Actual)	FY 2013-14 (Estimated)	FY 2014-15 (Projected)
Domestic	133563	140241	147253
BPL (Kutir Jyoti)	19367	20336	21353
Commercial	16942	17789	18678
Industrial Consumers	286	300	315
Public Lighting	1183	1242	1304
Public Water works & Sewage	78	82	86
Irrigation and Agriculture	0	0	0
Bulk	4485	4709	4944
General Purpose	6058	6361	6679
Outside State	1	1	1
<b>Total</b>	<b>181963</b>	<b>191061</b>	<b>200614</b>

**Table 5.2: Projected Energy Sales – FY 2014-15**

Category	FY 2012-13 (Actual)	FY 2013-14 (Estimated)	FY 2014-15 (Projected)
Domestic	69.45	72.92	76.57
BPL (Kutir Jyoti)	5.20	5.46	5.73
Commercial	21.27	22.33	23.45
Industrial Consumers	96.15	100.96	106.01
Public Lighting	5.52	5.80	6.09
Public Water works & Sewage	4.02	4.22	4.43
Irrigation and Agriculture	0.00	0.00	0.00
Bulk	13.51	14.19	14.90
General Purpose	22.48	23.60	24.78
Outside State	45.53	47.81	50.20
<b>Total</b>	<b>283.13</b>	<b>297.29</b>	<b>312.15</b>

DOP, AP submitted that the sales forecast is based on the trends observed in the sales pattern of various categories over the past years, new development on account of Government policies, socio-economic changes, Industrial growth, etc that would affect consumption across various categories of consumers. 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.

The CAGR considering the sales for 5 years presented an abnormal trend and hence normalization has been undertaken for such categories for forecasting sales for FY 2014-15.

### **Commission's analysis**

As can be seen from tables 5.1, 5.2 above, the data on number of consumers and energy sales is available only for two years 2012-13 and 2013-14. Based on the limited data available, the energy sales for FY 2014-15 is projected considering the trend and economic growth in the State. The category-wise energy sales are mentioned below:

The details of category-wise energy sales are provided in Format-D1, of the petition.

**Domestic:** The sales to this category accounts to about 26% of total sales. It is observed that the sales growth during FY 2013-14 is about 5% more than the sales for FY 2012-13 and the sales for FY 2014-15 are projected at a growth of 5% over FY 2013-14. Considering the growth of economy in the State the projected increase is considered reasonable.

**The Commission approves energy sales at 82 MU for domestic for FY 2014-15.**

**Commercial:** The sales to this category account for about 7.5% but earns relatively high revenue. The growth for FY 2013-14 over FY 2012-13 was about 5%, the sales for FY 2014-15 are projected at 5% over the sales of FY 2013-14. In view of large-scale development taking place in the State there is a potential for growth of commercial activity in the State. The projected sales up to 24 MU is considered reasonable.

**The Commission approves energy sales of 24 MU for commercial category for FY 2014-15.**

**Industrial (LT & HT):** The sales for industry during 2012-13 and 2013-14 was as given below:

<b>Category</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>
LT	3.47	3.64	3.82
HT	92.68	97.32	102.19

The sales to industry account to about 34% of total energy sales in the State.

The sales growth in Industrial category for FY 2013-14 over the FY 2012-13 actuals works out to 5%. The sales for FY 2014-15 over FY 2013-14 are also projected at

about 5%. Since the development activity is likely to continue the growth of industry, 5% per annum over the FY 2013-14 is considered achievable.

**The Commission approved 106 MU for industrial category for FY 2014-15. The sales to the other categories – public lighting, water supply, general purpose, bulk supply etc., are approved for FY 2014-15 as below.**

Category	Sales (MU)
Public lighting	6.00
Public water works	4.00
Bulk supply	15.00
General purpose	25.00

**Commission approves the category-wise sales projected for the FY 2014-15 at 262.00 MU for sales within the State.**

**The category-wise sales considered for the FY 2014-15 as shown in the table below are approved.**

**Table 5.3: Energy sales approved by the Commission for FY 2014-15**

Sl. No.	Category	Projected by DoP, AP	Approved by the Commission
1	Kutir Jyothi	5.73	5.73
2	Domestic	76.57	76.27
3	Commercial	23.45	24.00
4	Industrial	106.01	106.00
5	Public Lighting	6.09	6.00
6	Public Water Works & Sewerage	4.03	4.00
7	Bulk Supply	14.90	15.00
8	General Purpose	24.78	25.00
9	Total	261.95	262.00

## **5.5 Distribution Losses**

DoP, AP has filed the actual distribution losses for FY 2012-13 at 60.40% and estimated for 2013-14 at 58.26% and projected for the FY 2014-15 at 56%. It is stated that since the distribution network is spread over wide geographical area serving only domestic consumers reduction of distribution losses has been low. However for the purpose of ARR for FY 2014-15 the losses have been retained at 54.68%.

### Commission's Analysis

DOP, AP has claimed distribution losses at 54.68% for FY 2014-15 which are also very high. The loss calculation furnished in energy requirement for FY 2012-13 to FY 2014-15 is not correct. The DoP, AP has not considered inter state transmission losses which are about 3.48% as per NERLDC retrospective and annual report for FY 2012-13. Since transmission wing is separated intra state transmission loss at 4% shall also to be considered. DoP, AP has considered sales to other distribution licensees which have no bearing in distribution losses as the sales to other distribution licensees will be effected at state periphery. Considering the above factors the actual distribution losses during FY 2012-13 works out to 57.37% as detailed in table below.

**Table 5.4: Distribution Losses During FY 2012-13**

Sl. No.	Category	FY 2012-13 (Actual)
1	Power Purchase from CGS including free power	594.01
2	Less: Inter state transmission loss	3.48%
3	Less: Inter state transmission loss (MU)	20.67
4	Add: Power from AP Hydro Generation	49.95
5	Add: Own Generation	1.59
6	Less: Sales out side state	(-) 45.53
7	Total Power Available	579.35
8	Less intra states transmission loss @ 4%	23.17
9	Net power available for distribution	556.18
10	Sales	237.60
11	Distribution Loss (MU)	318.58
12	Distribution Loss (%)	57.28%

The Commission in its ARR & Tariff order dated 30-05-2013 for FY 2013-14 has approved T&D loss trajectory from 2013-14 to 2015-16, according to which the T&D losses for FY 2014-15 are approved at 50%. So deducting 4% towards transmission losses the distribution losses of DoP, AP for FY 2014-15 be 46% only.

**Accordingly the Commission Approves the Distribution Losses at 46% for FY 2014-15.**

The technical and commercial losses are not segregated. DoP, AP should analyze the reasons for high distribution losses and effective measures be taken to reduce the losses by proper accounting of energy sales, conducting voltage-wise energy audit by providing meters on all feeders. DOP, AP should also take action to arrest pilferage of energy, replacement of defective meters and installation of meters to all

un-metered connections. With the above directions the Commission sets the trajectory for loss reduction for FY 2015-16 as follows:

2015-16 - 43%

## 5.6 Energy requirement & Energy Balance for FY 2014-15

APDOP has projected energy requirement vide Table 3.3 of the petition for the FY 2014-15 as depicted below:

**Table 5.5: Energy Balance Projected for FY 2014-15**

Particulars	Projected MU for FY 2014-15
Energy sales within state	261.95
Sales to other distribution licensees	50.20
Total energy sales	312.15
T&D Losses in %age	56.00
T&D losses in MU	333.40
Total energy requirement	645.55
Energy availability	645.55
Hydel Generation (APHDP)	49.95
Own Generation (Diesel)	1.59
Free Power	147.24
Power Purchase from CGS and UI	446.77
Energy Surplus (Gap)	-

### Commission's Analysis

While analyzing the energy balance projected by the DOP, AP as shown in Table 5.6, it is noted that there is calculation error in the percentage of T&D losses calculation which if taken 56% of 645.55 MU should have been 361.51 MU instead of 333.40 MU. As such the total energy requirement should have been projected as 709.43 MU instead of 645.55 MU. The corrected Energy Balance which should have been projected by the DOP, AP is given below:

**Corrected Energy Balance Projected by DoP, AP for FY 2014-15**

Particulars	Projected MU for FY 2013-14
Energy sales within state	261.95
Sales to other distribution licensees	50.20
Total energy sales	312.15
T&D Losses in ((%)	56.00
T&D losses in MU	397.28
Total energy requirement	709.43

The Commission has considered the projected power purchase for the FY 2014-15 from central Generating stations wheeled through PGCIL Network and assessed total power availability for sale in the licensed area including free power as projected and

approves the energy to be purchased in open market through UI Mechanism, as per the energy balance given in the Table below:

**Table 5.6: Approved Energy Balance for the FY 2014-15**

Sl. No	Energy Balance	Projected by APDOP (MU)	Approved by Commission (MU)
<b>I</b>	<b>Energy requirement</b>		
	Energy Sales within state	261.95	262.00
	Sales to other distribution licensees	50.20	-
	Total energy sales	312.15	262.00
	Overall T&D losses %	56%	46%
	Overall T&D losses (MU)	333.40	223.20
	Total Energy requirement	645.55	485.20
<b>II</b>	<b>Energy availability</b>		
1	Power Purchase from CGS	354.86	286.42
2	Hydel Generation (APHDP)	49.95	49.95
3	Diesel Generation (Own)	1.59	1.59
4	Free power from Ranganadi	147.24	147.24
5	Power purchase through UI	91.91	0.00
6	<b>Total Energy availability</b>	<b>645.55</b>	<b>485.20</b>

**Commission approves energy requirement at 485.20 MU for FY 2014-15.**

## 5.7 Power Purchase cost for the FY 2014-15

APDOP has projected power purchase cost at Rs. 170.50 crore for 446.77 MU to be purchased from CGS including UI/Purchase of 91.91 MU. APDOP has to meet PGCIL charges at actuals, which is estimated at Rs. 48.80 crore for 594.01 MU to be wheeled including 91.91 MU proposed to be purchased under UI/Trading. Summing up of the purchase cost APDOP has claimed Rs. 219.30 crore for ARR for FY 2014-15.

**Table 5.7: Summary of Power Purchase cost projected for FY 2014-15**

Sl. No.	Source	Purchase (MU) Projected	Rate (Rs./kWh)	Total Cost in Rs. crores Projected
	NHPC			
1	Loktak	27.04	4.03	10.90
	NEEPCO			
2	Kahndong	6.83	2.83	1.93
3	Doyang	13.56	3.01	4.08
4	Kopili-I	33.99	1.24	4.21
5	Kopili-II	5.52	2.00	1.10
6	Ranganadi	79.29	5.49	43.53
7	AGTPP (Tripura)	37.79	3.22	12.17
8	AGBPP	88.58	3.69	32.69
	NTPC			
9	Farakka	36.15	4.22	15.26
10	Kahalgaon	11.93	3.78	4.51
11	Talcher	14.17	3.12	4.42
12	U.I	91.91	3.88	35.70

Sl. No.	Source	Purchase (MU) Projected	Rate (Rs./kWh)	Total Cost in Rs. crores Projected
13	<b>Sub-Total</b>	<b>446.77</b>		<b>170.50</b>
14	<b>PGCIL charges</b>	-	-	<b>48.80</b>
15	<b>Total</b>	-	-	<b>219.30</b>

### **Commission's Analysis :**

APDOP has estimated power purchase of 446.77 MU (including UI/Purchase & PGCIL charges) at a cost of Rs. 219.30 crore for the FY 2014-15 considering the T&D losses at 46%, the Commission has computed power purchase cost as depicted in the table 5.8 below.

### **Analysis of PGCIL charges:**

1. Total energy projected to be wheeled through PGCIL network:
  - i. From CGS = 354.86 MU
  - ii. Through UI= 91.91 MU
  - iii. Free Power= 147.24 MU
  - iv. Total = 594.01 MU
2. Total projected charges to be paid to PGCIL = Rs. 48.80 Crore
3. Per Unit Charges = Rs. 48.80 Cr./ 594.01 MU = Rs.0.82 per unit.
4. For 2014-15, the energy to be wheeled through PGCIL network as approved by the Commission is:
  - i. From CGS = 286.42 MU
  - ii. Through UI = Nil
  - iii. Free Power = 147.24
  - iv. Total = 433.66 MU
5. Hence, PGCIL charges to be paid for wheeling of 433.66 MU of energy @ Rs. 0.82 per unit = 433.66 MU \* Rs. 0.82 /unit = Rs. 35.56 Crore.

**Table 5.8: Power Purchase cost approved for FY 2014-15**

Sl. No.	Source	Rate (Rs./KWH)	Power Purchase (MU)	Cost (crore)	Power Purchase Approved (MU)	Approved Cost (crore)
			<b>Projected</b>			
	<b>NHPC</b>					
1	Loktak	4.03	27.04	10.90	27.04	10.90
	NEEPCO					
2	Kahndong	2.83	6.83	1.93	6.83	1.93
3	Doyang	3.01	13.56	4.08	13.56	4.08
4	Kopili-I	1.24	33.99	4.21	33.99	4.21
5	Kopili-II	2.00	5.52	1.10	5.52	1.10
6	Ranganadi	5.49	79.29	43.53	10.86	5.96
7	AGTPP (Tripura)	3.22	37.79	12.17	37.79	12.17
8	AGBPP	3.69	88.58	32.69	88.58	32.69
	<b>NTPC</b>					
9	Farakka	4.22	36.15	15.26	36.15	15.26
10	Kahalgaon	3.78	11.93	4.51	11.93	4.51
11	Talcher	3.12	14.17	4.42	14.17	4.42
12	UI/Trading (-) Purchase Cost	3.88	91.91	35.70	0.00	0.00
13	PGCIL charges (CGS +UI+ Free Power)	<b>0.82</b>	<b>446.77</b>	<b>48.80</b>	<b>286.42</b>	<b>35.56</b>
14	Provision of Power Purchase from DHPD	2.09	49.95	Nil	49.95	10.44
15	Total Power purchase cost including PGCIL charges		<b>496.72</b>	<b>219.30</b>	<b>286.42+49.95 = 336.37</b>	<b>143.23</b>

Average cost of purchase of power per unit is Rs. 4.26/KWh (Rs. 143.23 Cr/ 336.37 MU)

**The Power Purchase of 336.37 MU + Free Power of 147.24 MU + Own Diesel Gen. of 1.59 MU = 485.20 MU which is approved MU requirement as per Table 5.6. As such the Commission approves Power purchase of 336.37 MU at total cost of Rs. 143.23 crore for the FY 2014-15.**

## 5.8 Revenue Requirement

The DOP, AP has projected a total revenue requirement of Rs. 790.32 crore for FY 2014-15 as given in table below.

**Table 5.9: Expenses projected by DOP, AP for FY 2014-15.**

Sl. No.	Item of expense	(Rs. crores)
		<b>FY 2014-15 (Projected)</b>
1	Cost of Fuel	5.00
2	Cost of Power Purchase	219.30
3	Employee Costs	170.23
4	O&M expenses	26.70
5	Administration and General Expenses	2.00
6	Depreciation	111.61
7	Interest charges (including interest on working capital)	107.61
8	Return on NFA/Equity	148.34



9	Provisions for Bad Debt	-
10	Total Revenue requirement	790.79
11	Less: non-tariff income	0.47
12	<b>Net Revenue Requirement (10-11)</b>	<b>790.32</b>

### Commission's analysis

The expenses projected by DOP, AP under each head and Commission's analysis are discussed below.

## 5.9 Fuel Cost

DOP, AP has claimed Rs. 5.00 crore towards Fuel Cost for an estimated 1.59 MU (approx) generation during the FY 2014-15 in the diesel generating plant in emergencies.

### Commission's Analysis

DOP, AP has shown Fuel Cost for the FY 2012-13 at Rs. 4.75 crore generation of 1.59 MU. Since the DoP, AP has projected the same quantity of generation during FY 2014-15. The expenditure is considered at Rs. 5.00 crore as projected considering the increase in price of fuel.

**The Commission approves fuel cost at Rs. 5.00 crore for FY 2014-15 subject to final approval during True up process on submission of plant performance data.**

## 5.10 O&M Expenses

DOP, AP has filed O&M expenses consisting of the employee cost, Repairs and Maintenance and Administrative Expenses at Rs. 171.81 crore, Rs.187.09 and Rs. 198.93 crore for the FY 2012-13, FY 2013-14 and FY 2014-15 respectively.

**Table 5.10: Operation & Maintenance Expenses projected for FY 2014-15**

Sl. No	Particulars	FY 2012-13 (Actuals)	FY 2013-14 (Estimated)	FY 2014-15 (Projected)
1	Employee Cost	143.40	159.65	170.23
2	Repairs and Maintenance	26.39	25.70	26.70
3	Administration and General Expenses	1.74	1.70	2.00
	<b>Total O&amp;M expenses</b>	<b>171.83</b>	<b>187.09</b>	<b>198.93</b>

Item wise costs are discussed here under

### 5.10.1 Employee Cost

DoP, AP has projected Rs. 170.23 crore towards employee cost for FY 2014-15. DoP, AP has not considered pension and terminal benefits of the employees. The details are furnished in table below:

**Table 5.11: Employee Costs Projected by DoP, AP for FY 2014-15**

Sl. No	Particulars	FY 2012-13 (Actuals)	FY 2013-14 (Estimated)	FY 2014-15 (Projected)
1	Salaries & Allowances	98.77	112.31	123.18
2	Wages	39.21	41.87	41.35
3	OTA	0.02	0.02	0.05
4	Medical Treatment	0.50	0.53	0.50
5	Other Allowances (O.E + Pol + Minor Work)	4.80	4.80	5.10
6	LTC	0.10	0.07	0.05
	<b>Total</b>	<b>143.40</b>	<b>159.60</b>	<b>170.23</b>

### Commission Analysis

As verified from the above table the DoP, AP has estimated employee cost at 11% over the actual expenditure during FY 2012-13 for FY 2013-14 and projected at 6.7% for FY 2014-15 over the estimated cost of FY 2013-14. The Commission considers the projected expenditure of Rs. 170.23 Cr. reasonable for the FY 2014-15

**The Commission approves Rs. 170.23 crore towards employee cost for FY 2014-15 as projected.**

### 5.10.2 Administrative and General Expenses

DoP, AP has projected Rs. 2.00 Crore towards administrative and general expenses for FY 2014-15 as detailed in table below:

**Table 5.12: Administrative and General Expenses projected by DOP, AP for FY 2014-15**

(Rs. Cr)				
Sl. No	Particulars	FY 2012-13 (Actuals)	FY 2013-14 (Estimated)	FY 2014-15 (Projected)
1	Rent, rates & taxes			
2	Telephone, postage & Telegram	0.24	0.24	0.25
3	Consultancy Fees	0.08	0.08	0.10
4	Technical Fees			
5	Other Professional Charges			
6	Conveyance & Travel Expenses	0.46	0.48	0.52
7	Electricity & Water Charges	0.40	0.40	0.45
6	Others	0.56	0.59	0.65
	<b>Total Administration &amp; General Expenses</b>	<b>1.74</b>	<b>1.79</b>	<b>2.00</b>

The Administrative and General Expenses include travel and conveyance charges, rent, rates and taxes, professional and technical fee etc.

### Commission Analysis

As verified from the above table the DoP, AP has estimated the expenses at an escalation of 2.9% for FY 2013-14 over the actual expenses during FY 2012-13 and projected for FY 2014-15 at 12% over the estimated expenses during FY 2013-14. In an average the escalation works out to 6% PA over the actual expenditure during FY 2014-15 which is considered reasonable.

**The Commission approves Rs. 2.00 crore towards Administrative and General expenses for FY 2014-15 as projected by the DoP, AP.**

### 5.10.3 Repairs and Maintenance Expenses

DoP, AP has projected Rs. 26.70 crore towards R&M expenses for FY 2014-15 as detailed in table below:

**Table 5.13: R & M Expenses Projected by DoP, AP for FY 2014-15**

(Rs. Crore)				
Sl. No	Particulars	FY 2012-13 (Actuals)	FY 2013-14 (Estimated)	FY 2014-15 (Projected)
1	Plant and Machinery			
2	Building	1.00	0.00	1.00
3	Hydraulic works & Civil Works			
4	Line cable & Network	22.00	22.00	22.00
5	Vehicles	3.69	3.70	3.70
6	Furniture & Fixtures			
7	Operating Expenses			
	<b>Total Repairs &amp; Maintenance Expenses</b>	<b>26.69</b>	<b>25.70</b>	<b>26.70</b>

### Commission Analysis

As verified from the above table the actual expenditure incurred during FY 2012-13 is Rs. 26.69 crore. As such the projection of Rs. 26.70 crore for FY 2014-15 is reasonable.

**The Commission approves R&M expenses at Rs. 26.70 crore for FY 2014-15 as projected by DoP, AP**

### 5.11 Capital Investment

The DoP, AP has projected capital investment of Rs. 185 crore during FY 2014-15. The petitioner has stated that the objective of incurring 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 of DoP, AP. The Capital expenditure plan envisaged will also assist in reducing system losses. Actual expenditure incurred during FY 2012-13 and estimated during FY 2013-14 are also summarized in table below.

**Table 5.14: Summary of Capital Expenditure and Capitalization During FY 2014-15**

(Rs. Crores)				
Sl. No	Particulars	FY 2012-13 (Actuals)	FY 2013-14 (Estimated)	FY 2014-15 (Projected)
1	Opening Balance	129.51	299.51	484.51
2	Add: New Investments	170.00	185.00	185.00
3	Total	299.51	484.51	669.51
4	Less Investment Capitalized	0.00	0.00	0.00
5	Closing Balance	299.51	484.51	669.51

### Commission Analysis

As seen from the above table the DoP, AP incurred capital expenditure of Rs. 170 crore during FY 2012-13 and estimated Rs. 185 crore during FY 2013-14 and FY 2014-15. But it is surprising to note that no amount is proposed for capitalization nor any amount capitalized during FY 2012-13. Moreover no break up details of the plan and programmes to be carried during 2014-15 out of the proposed amount of Rs.185 Crore has been provided. In absence of the above the capital investment of Rs. 185 crore as proposed by the DOP, AP cannot be considered.

Unless the assets are put to use the required results cannot be achieved. In addition to above, in absence of the transfer of fixed gross assets to the DOP by the Govt., Commission does not consider the capital cost at the beginning and capitalization during 2014-15.

### 5.12 Gross Fixed Assets

The DoP, AP has stated that in the absence of fixed assets register as required by the regulations, the Gross Fixed Assets (GFA) have been built-up based on available information as on 31-03-2011. The petitioner further stated that the details of assets capitalized during FY 2011-12, FY 2012-13 and estimated capitalization during FY 2013-14 are being estimated and shall be submitted in future filings. The GFA movement is furnished in table below:

**Table 5.15: Gross Fixed Assets Movement**

Sl. No	Financial Year	Opening Balance	Addition during the year (Rs. Crores)	Closing Balance (Rs. Crores)
1	FY 2012-13	2119.16	0.00	2119.16
2	FY 2013-14	2119.16	0.00	2119.16
3	FY 2014-15	2119.16	0.00	2119.16

**Commission Analysis**

In the absence of fixed assets registers the value of Gross Fixed Assets built-up as on 31-03-2011 cannot be considered to allow depreciation, return on equity or reasonable return.

**5.13 Depreciation**

DOP, AP has claimed Rs. 111.61 crore towards depreciation for FY 2014-15.

The DoP, AP has worked out depreciation on the opening value of GFA at an average rate of depreciation of 5.27% for FY 2014-15 as detailed in table below

**Table 5.16: Depreciation for FY 2014-15**

(Rs. crore)		
Sl. No	Particulars	FY 2014-15 (Projected)
1	Gross Block in Beginning of the year	2119.16
2	Additions during the year	0.00
3	Cumulative Depreciation at the Beginning of the Year	446.44
4	Average Rate of Depreciation	5.27%
5	Depreciation for the year	111.61
6	Cumulative Depreciation at the End of the Year	558.05
7	Net Block in the Beginning of the year	1672.72
8	Net Block in the End of the Year	1561.11

The DoP, AP further stated that in the absence of asset register, the asset wise details are not available and requested the Commission to approve the depreciation as worked out above.

**Commission Analysis**

DOP, AP has not shown any addition of assets during the FY 2012-13 to FY 2014-15 as per the table 3.12 of the petition.

DOP, AP has not furnished details of Asset wise values and the average rate of depreciation stated in the petition has no basis for calculation of depreciation for FY 2014-15. Further, the assets acquired by the DOP deemed to be funded by the

Government of India and Government of Arunachal Pradesh. As per the Regulation 87 of APSERC Regulation 2011, depreciation shall be admissible on the opening balance as per the Transfer Scheme notification excluding the value of contribution and capital subsidy/grants provided by the Government.

**In the absence of the details of additions and contributions/grants/subsidies from the State / Central Governments, the Commission does not consider any depreciation in the ARR for the FY 2014-15.**

#### 5.14 Interest and Finance Charges

DoP, AP has projected interest and finance charges at Rs. 99.55 crore for FY 2014-15. DoP, AP has treated 50% GFA on 01-04-2011 as notional debt and repayment has been spread over to next 10 years. The rate of interest on loans has been considered at 14.45% being the SBI, PLR as on 1<sup>st</sup> April 2013. Interest on loan computed on the above methodology has been indicated in table below:

**Table 5.17: Interest & Finance Charges for FY 2014-15**

(Rs. Cr)				
Sl. No	Particulars	FY 2012-13 (Actuals)	FY 2013-14 (Estimated)	FY 2014-15 (Projected)
1	Opening Balance	953.68	847.78	741.88
2	`Loan Additions	0.00	0.00	0.00
3	Repayment	105.90	105.90	105.90
4	Closing Loan	847.78	741.88	635.98
5	Average Loan	900.73	794.83	688.93
6	Interest on Loan	132.86	114.85	99.55
7	Total Interest & Finance Charges	132.86	114.85	99.55

#### Commission Analysis

The DOP, AP is a State Government Department and the assets and liabilities are not yet transferred to DOP, AP. As such the claim of DOP, AP as to treat the debt equity ratio 50:50 cannot be made applicable. Further funding of capital assets so far acquired for DOP, AP are with the support of grants/ subsidies from GOI/ Government of Arunachal Pradesh and **in the absence of details of actual loans borrowed, interest on normative loan shall not be admissible as per the regulation 83 of APSERC (Terms and Conditions for determination of Tariff) Regulations, 2011.**

#### 5.15 Interest on working Capital

DoP, AP has projected interest on working capital at Rs. 8.06 crore for FY 2014-15 as detailed in table below:

**Table 5.18: Interest on Working Capital projected by DoP for FY 2014-15**

(Rs. Cr)				
Sl. No	Particulars	FY 2012-13 (Actuals)	FY 2013-14 (Estimated)	FY 2014-15 (Projected)
1	Fuel Cost	0.40	0.41	0.42
2	Power Purchase Cost	14.75	17.94	18.84
3	One month's employee cost	11.95	13.30	14.19
4	One month's A&G Exp.	0.15	0.15	0.17
5	One month's R&M Cost	2.22	2.14	2.23
6	Two month's receivables	18.10	18.99	19.94
7	<b>Total</b>	<b>47.57</b>	<b>52.93</b>	<b>55.79</b>
8	Interest on working capital	7.02	7.65	8.06

**Commission Analysis**

As per regulation 85 of APERC (Terms and Conditions for determination of tariff)  
Regulation 2011 (1) working capital shall consist of

- O&M Expenses for one month
- Budget for maintenance of the rate of 1% of the historical cost escalated at the rate of 6% PA from the date of commercial operation.
- Receivables equivalent to two months fixed and variable charges of sale of electricity.
- Rate of interest on working charges shall be equal to short term PLR of SBI as on 1<sup>st</sup> April of the relevant financial year.

Interest on Working Capital shall be calculated on normative basis not withstanding that the licensee has not taken working capital loan from any outside agency.

Accordingly interest on working capital has been worked out on the approved costs and revenue as detailed in table below.

**Table 5.19: Interest on working capital approved by the Commission for FY 2014-15**

(Rs. crore)			
Sl. No.	Particulars	Total Cost	Working capital requirement
1	Employee Cost One Month	170.23	14.19
2	R&M expenses One Month	26.70	2.23
3	A&G expenses One Month	2.00	0.17
4	Maintenance Spares @ 1% on GFA of Rs. 2119.16		21.20
5	Receivables Two months	107.22	17.87
6	Total Working Capital		55.66
7	Rate of Interest being SBI PLR as on 01.04.2013.		14.45%

8	Interest on Working Capital		8.04
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**The Commission approves interest on working capital at Rs. 8.04 crore for FY 2014-15 as against Rs. 8.06 crore projected by DOP, AP.**

#### **5.16 Return on equity**

DOP, AP has claimed Rs. 148.34 crore as Return on Equity at 14% for the FY 2014-15.

##### **Commission's Analysis**

As per regulations 82 of APSERC Regulations 2011, Return on Equity shall be computed on the Equity base determined in accordance with regulation 81(2) & 82 at 14% per annum.

As already mentioned vide para 5.10 and 5.11, Equity Infusion was not made into the Books of Accounts of DOP, AP. The Government of Arunachal Pradesh has not issued any notification transferring Assets and Liabilities in the name of DOP, AP.

**Commission does not consider any Return on Equity for the FY 2014-15.**

#### **5.17 Provision for Bad and Doubtful Debts.**

DOP, AP has not claimed any provision for Bad and Doubtful Debts for the FY 2014-15.

#### **5.18 Non-Tariff Income**

DOP, AP has estimated Rs. 0.47 crore towards Non-Tariff Income for the FY 2014-15.

##### **Commissions Analysis**

As per the schedule of Miscellaneous charges for LT Connections with single phase supply Rs. 16/- per month is payable by the consumers towards meter rent.

Similarly HT Consumers for 11KV system at Rs. 670/- per month shall be payable. Considering 1,95,661 connections LT 1 phase at Rs. 16/- would amount to Rs. 3.76 crore and 14951 connections under HT category for 11KV system at Rs. 670/- would amount to Rs. 3.98 crore per Annum. In all Rs. 7.74 crore the DOP, AP will receive on account of meter rent only.



Hence the Commission considers non-tariff Income at Rs. 7.74 crore for the FY 2014-15. DOP, AP should maintain proper accounts for Regulatory requirement and submit to the Commission for scrutiny.

#### 5.19 ARR approved for FY 2014-15

Summation of the above analysis the Annual Revenue Requirement for FY 2014-15 is drawn as detailed in the table below

**Table 5.20: Aggregate Revenue Requirement for FY 2014-15 approved by the Commission**

(Rs. crore)			
Sl. No.	ARR Element	Claimed by DOP, AP	Approved by Commission
1	Fuel cost	5.00	5.00
2	Power Purchase cost	219.30	143.23
3	<b>O&amp;M Expenses</b>		
	a) Employee cost	170.23	170.23
	b) R&M Expenses	26.70	26.70
	c) Adm & General Expenses	2.00	2.00
4	Depreciation	111.61	-
5	Interest & Finance charges	99.55	-
6	Interest on working capital	8.06	8.04
7	Return on Equity	148.34	-
8	<b>Total ARR</b>	<b>790.79</b>	<b>355.20</b>
9	Less Non-Tariff Income	0.47	7.74
10	<b>Net ARR (8-9)</b>	<b>790.32</b>	<b>347.46</b>

#### 5.20 Estimated Revenue at Existing tariffs for LT and HT Category

The Commission has estimated revenue from sale of power within the state at existing tariff which worked out to Rs. 107.22 crore as detailed in table below.

**Table 5.21 Estimated Revenue at existing tariffs for LT and HT**

Sl. No.	Category	No. of consumers	Sale in each Slab (MU)	Existing Tariff Rate (paise per kWh)	Amount (Cr)	Average Tariff for the year (paise per Kwhr)
<b>LT</b>						
1	Domestic	147253	76.27	4.00	30.51	4.00
2	KJP & BPL Connection	21353	5.73	2.65	1.52	2.65
3	Commercial	18678	24.00	5.00	12.00	5.00
4	Industry (LT)	308	3.82	4.20	1.60	4.20
5	Bulk	0	0			
6	Public Light	1304	6.00	5.10	3.10	5.10
7	Public Water Works	86	4.00	5.10	2.04	5.10
8	Agriculture	0	0			
9	General Purpose	6679	25.00	5.00	12.50	5.00
	<b>Total (LT)</b>	<b>195661</b>	<b>144.82</b>		<b>63.27</b>	<b>4.37</b>
<b>HT</b>						
1	Industry (HT)	7	102.18	3.75	38.32	3.75

Sl. No.	Category	No. of consumers	Sale in each Slab (MU)	Existing Tariff Rate (paise per kWh)	Amount (Cr)	Average Tariff for the year (paise per Kwhr)
2	Bulk	4944	15.00	3.75	5.63	3.75
3	<b>Total (HT)</b>	<b>4951</b>	<b>117.18</b>		<b>43.95</b>	<b>3.75</b>
	<b>Total (LT+HT)</b>	<b>200612</b>	<b>262.00</b>		<b>107.22</b>	<b>4.09</b>

**Note:**

1. The Category wise no. of consumers & sales considered as per break up furnished in Format D1.
2. Tariff rates for General purpose Category considered as applicable to commercial HT category in the absence of the categorization.
3. Bulk supply rates considered as applicable to 11KV normal voltage HT as per the tariff schedule in the absence of voltage wise break up data.
4. HT Industrial rates considered as at 11KV nominal voltage in the absence of voltage wise break up data.

**5.21 Revenue Gap for FY 2014-15****Table 5.22: Revenue Gap for FY 2014-15**

(Rs. crore)

Sl. No.	Calculation of Revenue Gap	Projected by APDOP	Approved by Commission
1	Net ARR for FY 2014-15	790.32	347.46
2	Less: Revenue from existing Tariffs	107.14	107.22
3	Less: Revenue from sale of power to other Distribution Licensee	12.50	Nil
4	Net revenue Gap	670.66	240.24
5	Addl. Revenue anticipated from increase in tariff rates	0.00	0.00
6	Balance gap to be addressed	670.66	240.24
7	Energy Sales (MU)	312.12	262
8	Average Cost of supply (Rs./kWh)	25.32	13.26

**5.22 Regulatory Asset**

APDOP has requested vide para 4.1 of the petition has not proposed any tariff hike during the FY 2014-15 citing the reason that increase in tariff would result on huge burden on the Consumers.

**Commissions View:**

As per the National Tariff Policy, where the losses incurred in the previous years that are in the nature of deferred expenditure, and that can be recovered from consumers in future, shall be allowed as Regulatory Asset by the Regulatory Commission.

The APDOP has filed the tariff petition for the second time after the APSERC came into existence, and the gap projected by the Department of Power cannot be recovered in the next two to three years through retail tariffs from the consumers. remaining unadjusted gap. Even if Regulatory Asset is created, it cannot be liquidated in the next three or four years. Therefore, the Commission does not

consider any Regulatory Asset for the remaining unadjusted gap. The APDOP shall improve the performance by reducing AT&C losses and exercising controls over the O&M Expenditure to make good of unadjusted revenue gap. As such, all efforts be made to ensure the gradual reduction in net gap between the ARR and revenue and the budgetary support from the State Govt.

## 6. Directives

### 6.1 General

It is observed from the Petition filed by APDOP for FY 2014-15, that there are some issues, which need immediate attention of APDOP to improve its efficiency in power delivery and reduce costs. It is in this context, the Commission considered it necessary to reiterate them once again hereunder and to issue certain new directives to APDOP. APDOP shall take prompt action on the following directives and submit implementation road map and the progress achieved to the Commission from time to time.

### 6.2 Directives for FY 2014-15

#### 6.2.1 Annual Accounts

APDOP is directed to prepare monthly accounts, Annual Profit and Loss Account and Balance Sheet and get audited by C&AG. This directive was given in Commission's Tariff Order for FY 2013-14 which has not been complied by the APDOP till now. In wake of notification of the Multi Year Tariff Regulation-2013 by the Commission, preparation of Annual Accounts at the Head of Deptt.'s level is mandatory.

APDOP shall maintain the books of accounts and Database as prescribed by Government Of India, Ministry Of Energy Department of Power in the Commercial Accounting system for State Electricity utilities. The Electricity (Supply) (Annual-Accounts) Rules 1985. (Section 185 of EA 2003).

#### 6.2.2 Management Information System

APDOP shall maintain data for voltage-wise consumers, connected load and sales in the format given below. APDOP shall accordingly build up the database required for regulatory process and submit the same every year in the ARR & Tariff Petition which it has not been doing for the last two year's petitions though committing every year.

#### Consumers and connected load - category wise energy sales

Sl. No	Category of Consumers	No. of consumers at the end of the year (Nos)	Connected load (KW)	Sales (MU)
	<b>LT category</b>			
1	Domestic (DLT) Single phase Three phase			

2	Commercial (CLT) Single phase Three phase			
3	Industrial (ILT) Single phase Three phase			
4	Agriculture Single phase Three phase			
5	Public Lighting (PL) Single phase Three phase			
6	Water supply (WSLT) Single phase Three phase			
7	General Purpose Single phase Three Phase			
8	Kutir Jyoti			
9	Temporary Single phase Three phase			
	<b>HT Category</b>			
10	Water supply (WS HT)			
11	Industrial (IHT) 11 KV 33KV 132 KV			
12	General purpose including Domestic (DHT)			
13	Bulk supply (HT) 11 KV 33 KV 132 KV			
14	Commercial (CHT)			
15	Agriculture (HT)			

### 6.2.3 Fixed Assets Register

APDOP informed in its letter dated 20.03.2013 that the fixed assets register is not available. APDOP shall build up the fixed asset registers separately for Diesel Generation, Transmission and Distribution. Existing assets as on 31.3.2013 and new assets being added with new investments are to be entered in this register with quantities and costs. Format of the registered is given below.

#### **Fixed Asset Register (Separately to be maintained for Diesel Generation, Transmission & Distribution)**

Sl. No	Name of the asset	Unit	Quantity	Date of Commissioning	Cost on Commissioning	Remarks

### 6.2.4 Bad and Doubtful Debts

The records of bad and doubtful debts should be invariably maintained to seek approval of the Commission to withdraw the un-realizable debts for supply of energy.

### 6.2.5 T&D Losses & Conducting Energy Audit

APDOP has projected T&D loss at 54.68% for the energy requirement for FY 2014-15. Commission considered T&D loss at 53% for FY 2013-14 and 50% for FY 2014-15 as per the trajectory fixed by the Commission in its Tariff Order of FY 2013-14. APDOP should conduct energy audit regularly and assess losses accurately in the distribution system. For carrying out energy audit, meters are required to be provided for all the feeders at 220 KV, 132 KV, 33KV & 11 kV levels and also at all the distribution transformers on LT side. Energy audit helps to identify high loss areas so as to take remedial measures. APDOP should prepare a 'Road Map' on priority for reduction of AT&C losses indicating the measures proposed to be implemented to achieve the reduction for next three years including the cost involvement and the sources identified for funding. Energy audit may be conducted as follows.

### 6.2.6 Energy Audit at Different Voltages

#### **(1) 220 KV system**

- i) Energy received at incoming points of different 220 KV lines from supply sources.
- ii) Energy received at 220 KV sub-stations within the state on 220 KV lines.
- iii) Loss on 220KV system (MU) (i-ii)
- iv) % loss  $((i-ii)/i) \times 100$

**(2) 132 KV system**

- i) Energy received at incoming points through different 132 KV feeders in the State.
- ii) Energy received at various 132/33 KV sub-stations
- iii) Loss on 132 KV system (i-ii)
- iv) % losses on 132 KV system  $((i-ii)/i) \times 100$

**(3) 33 KV system**

- (i) Energy sent out on 33 KV feeders from 220/33 KV and 132/33 KV sub-stations.
- (ii) Energy received at all 33/11 KV sub-stations at 33 KV
- (iii) Loss of units (i-ii)
- (iv) % of loss  $((i-ii)/i) \times 100$

**(4) 11 KV system**

- i) Energy sent out on 11 KV feeders from 132/11 Kv sub-stations, 33/11 KV sub-stations.
- ii) Energy recorded at all Distribution Transformers
- iii) Loss on 11 KV system (i-ii)
- iv) % loss  $((i-ii)/i) \times 100$

**(5) LT system**

- i) Energy sent out on all LT feeders
- ii) Energy sold to all LT consumers
- iii) Loss on LT system (i-ii)
- iv) % loss on LT system  $((i-ii)/i) \times 100$

**(6) Total T&D system loss for the State of Arunachal Pradesh**

1. Energy Purchased (in MU)

- i)
  - a) From sources outside the state
  - b) Less Transmission Loss on PGCIL network.



- c) Net energy available at the periphery of the state.
- ii)
  - a) Energy generated and supplied by DHPD
  - b) Diesel Generation
- iii) UI power utilization
- iv) Total energy purchased and available = i(c) + (ii) + (iii)
- 2. Energy sales category wise, including sales under UI
- 3. T&D loss (1-2)
- 4. % T&D loss  $((1-2)/1) \times 100$

### 6.2.7 100% Metering

No connection shall be given to any category of consumer without a correct automatic meter by APDOP. Defective meters, if any, in the consumer premises should be identified and replaced on top priority with correct automatic meter.

### 6.2.8 Replacement of electromagnetic meters with static meters

Due to ageing, the existing electromagnetic meters/static might have become sluggish/defective and thus recording less consumption. All such meters, are to be replaced with automatic meters to record the consumption correctly. A report on the status of metering, type of meters provided in HT, Bulk and others high value LT installations, along with a programme for replacement of such meters with automatic Meters shall be submitted to the Commission.

### 6.2.9 Repairs and Maintenance

Repairs and Maintenance is controllable item. APDOP should ensure the reduction of expenses and achieve sustainable levels compared with the value of the network in operation.

### 6.2.10 Filing of ARR and Tariff Petition for 2015-16

APDOP has to buildup required data as directed in directives 6.2.1, 6.2.2, 6.2.3, 6.2.6 and file the ARR and Tariff Petition regularly in complete shape. The ARR and Tariff petition for FY 2015-16 shall be filed by November, 2014 positively.

### 6.2.11 Payment of Annual License Fees

In accordance to the Clause 5 (ii) of the Arunachal Pradesh State Electricity Regulatory Commission Fees Regulations-2011, all Distribution licensee and Transmission licensee including the Deemed Distribution & Transmission licensee

are required to pay Annual License Fee at a rate as mentioned in Schedule of Fees, ( SI No.II ) of the above stated Regulation.

It is noted by the Commission that the APDOP has not paid the Annual License Fee since inception of the Commission. The APDOP is directed to pay the Annual License Fee for the year 2011-12, 2012-13, 2013-14 & 2014-15 as per the fees prescribed in the APSERC's Fee Regulation-2011 for the following entities separately before November'2014 :

- i). Transmission License (Deemed)
- ii). Distribution License (Deemed)

#### **6.2.12 Payment of Power Purchase Cost to Deptt. of Hydro Power Development**

The APDOP was directed in the Commission's Tariff Order for 2013-14 to make payment to the Deptt. of Hydro Power Development for the power(in KWh) received by it w.e.f FY 2013-14 onwards from them at the rate(Rs. 2.09 /Unit) determined by the Commission. However, the Petition filed by the APDOP for the FY 2014-15 reveals that the Deptt. did not abide by the Commission's directive in this regard till now. The APDOP is directed to pay the cost of energy received from APDHPD w.e.f FY 2013-14 immediately and report compliance to the Commission.

APDOP is once again directed to make all efforts to utilize the generation of DHPD to the maximum possible extent so as to gradually reduce the dependence on external power purchases. The APDOP should in consultation with DHPD should make a road map in this regard and intimate to the Commission.

#### **6.2.13 Reforms and Restructuring of Department of Power in Arunachal Pradesh**

Electricity functions covering Transmission and Distribution are being performed by the Department of Power as a Government functionary as of now. As per the provisions of the Electricity Act 2003, the functions are to be separated and entrusted to reorganized entities who have to function as independent bodies.

Department of Power is once again directed to take urgent steps for complete restructuring of the power sector in Arunachal Pradesh.

#### **6.2.14 Collection of security deposit**

Security Deposit has to be paid by all the consumers of electricity covering the period of billing cycle.

Estimated security deposit for different categories of consumers shall be calculated as per the methodology indicated by the State Commission in the Arunachal Pradesh Electricity Supply Code-2013.

(a) Payment of additional deposit, (b) adjustment of excess or deficit deposit, (c) payment of interest on security deposit has to be done as per the A.P. Electricity Supply Code-2013 notified by the State Commission. The APDOP is directed to provide the above data at (a), (b) and (c) for the FY 2013-14 to the Commission including the no of consumers involved in this exercise.

#### **6.2.15 Introduction of Slab based tariff:**

The APDOP did not conduct the techno-commercial study for assessing the feasibility of introducing Unit Consumed Slab Based Tariff wef FY 2014-15 as directed by the Commission as it did not make any proposal to this effect in their Tariff Petition for the FY 2014-15. However the APDOP is again directed to conduct this exercise at the earliest and appraise the Commission.

This will have an added advantage to encourage the habit of energy conservation amongst the consumers.

6.2.16 As intimated by the APDOP vide their letter no. CE(P)/WEZ/SLDC/Tariff/Part-I/2013-14/148 Dtd. 02/3/2013, they will either procure the quantity of solar power on account of FY 2012-13 in FY 2013-14 or will purchase equivalent solar REC. However, the compliance of the same has not been submitted to the Commission as yet in spite of reminders from the Commission. The APEDA has informed the Commission vide their letter no. APEDA/W©-96/SERC/2011-12/1385-86, Dtd.24-2-2014 that they have generated 10,423 units and 4,74,712 units of solar energy during 2012-13 and 2013-14 respectively which has been transferred to the APDOP. The Commission has not received confirmation from the APDOP as sought vide its letter no. APSERC/RA-4/2013-14/661-62, Dtd. 25-2-2014. The APDOP is also directed to submit the report of status of complying with the Renewable Power Purchase Obligation of Solar Power for the FY 2012-13 & 2013-14 and the road map for 2014-15 to the Commission immediately.

6.2.17 Subsequent to the launching of Smart Grid Vision and Road Map for India by Govt. of India in August'2013, the APDOP directed to intimate whether the APDOP has formulated any Smart Grid road map for the State of Arunachal Pradesh and the steps being taken in this regard if the road map has not been prepared as yet.

- 6.2.18 APDOP is directed to constitute Consumers' Grievances Redressal Forum immediately without any further delay in accordance to the Commission's "Redressal of Grievances & Ombudsman Regulation-2011".
- 6.2.19 APDOP is directed to create a "Regulatory Cell" in the Deptt. headed by an officer of the level of SE, out of the existing strength, to oversee the regulatory requirements and compliance of the directives of the Commission by the Deptt. and to co-ordinate with the Commission enabling the Deptt. to be more responsive to the Regulatory requirements.
- 6.2.20 The APDOP is directed to compile and create all necessary data base and adopt required procedures of compiling Annual Accounts to ensure filing of tariff petition for the FY 2015-16 as per the Multi Year Tariff Regulations-2013.
- 6.2.21 The APDOP is directed to explore the possibility of drawing short term and medium term power purchase agreements by open tendering i/c purchase of power through power exchanges to arrange sufficient power in advance for the consumers of the state during lean hydro season to mitigate the grievances of the public regarding huge power cuts. This will also help to save money incurred by the govt. on power purchase because the power might be available at a cheaper cost than that the DOP is purchasing the power at present out of its allotted capacity/quota of certain Central Generating Stations.

## 7. Tariff Principles and Design

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### 7.1 Background

7.1.1 The Commission in determining the Annual Revenue Requirement (ARR) of Arunachal Pradesh Department of Power, (APDOP) for the year 2014-15 and the retail tariff has been guided by the provisions of the Electricity Act, 2003, the National Tariff Policy (NTP), Regulations on Terms and Conditions of Tariff issued by the Central Electricity Regulatory Commission (CERC) and Regulations on Terms and Conditions for determination of Tariff notified by the APERC. Section 61 of the Act lays down the broad principles, which shall guide determination of retail tariff. As per these principles the tariff should progressively reflect cost of supply and also reduce cross subsidies within the period to be specified by the Commission. The Act also lays special emphasis on safeguarding consumer interests and also requires that the costs should be recovered in a reasonable manner. The Act mandates that tariff determination should be guided by the factors, which encourage competition, efficiency, economical use of resources, good performance and optimum investment.

The National Tariff Policy (NTP) notified by Government of India in January 2006 provides comprehensive guidelines for determination of tariff as also working out the revenue requirement of power utilities. The Commission has endeavored to follow these guidelines as far as possible.

7.1.2 The Electricity Act, 2003 requires consideration of Multi-Year-Tariff principles and Tariff Policy mandates that the Multi-Year-Tariff (MYT) framework be adopted for determination of tariff from 1<sup>st</sup> April 2006. Though APERC's Multi Year Tariff Regulation-2013 has been made effective w.e.f 23<sup>rd</sup> October'2013, the DOP has filed the petition in accordance to Tariff Regulations of 2011 citing the reason of lack of requisite and reliable data required for MYT Regime. The present MIS and regulatory reporting system of the APDOP is not adequate for any such exercise at this stage. There has been no initiatives taken up to assess voltage wise losses in the absence of metering of feeders, distribution transformers and consumers. Technical and commercial losses are yet to be segregated and quantified voltage wise. Moreover, the DOP has to start preparing/compiling its Annual Accounts, profit-loss accounts, balance sheet at the level of the Head of the Deptt. in the manner directed by the Commission in its directives in Chapter-6. Under these conditions it would not be practicable to implement the MYT framework this year. In view of

the above and considering the plea of the APDOP, the Commission has granted exemption for this year for filing the petition for the FY 2014-15 in accordance to the Tariff Regulations of 2011.

- 7.1.3 The Tariff Policy mandates that Tariff should be within plus/minus 20% of the average cost of supply by 2010-11 and requires Commissions to lay down a road map for reduction of cross subsidy. But it is not possible for the Commission to lay down the road map for reduction of cross subsidy, mainly because of lack of data regarding cost of supply at various voltage levels. The APDOP has not furnished the voltage-wise network cost. The Commission has gone on the basis of average cost of supply in the absence of relevant data for working out consumer category wise cost of supply.

## **7.2 Tariff Proposed by APDOP and Approved by the Commission**

### **7.2.1 Tariff categories**

In the Petition for 2014-15, APDOP has not proposed any changes in the existing categories of consumers and tariff structure. The Commission considers, retaining the exiting categories as stated below:

1. Domestic
  - a) *Kutir Jyoti*
  - b) *Domestic LT*
  - c) *Domestic HT*
2. Commercial
  - a) *Commercial LT*
  - b) *Commercial HT*
3. a) Public Lighting & Water works LT  
b) Public Lighting & Water Works HT
4. Agriculture
  - a) *Agricultural LT*
  - b) *Agricultural HT*
5. Industrial
  - a) *Industrial LT*
  - b) *Industrial HT*
6. Mixed Bulk Consumers HT
7. Temporary Consumers LT

### **7.2.2 Existing and Proposed Tariff**

APDOP in its tariff petition has not proposed any revision of the existing retail tariffs to various categories of consumers to meet the gap for the FY 2014-15. It is submitted by APDOP that it being a state govt. Deptt. gets budgetary support from the Govt. of Arunachal Pradesh and hence the revenue gap for the FY 2014-15 shall be funded by the State Govt.

**7.2.3 Tariff Approved by the Commission** The Commission, after detailed analysis and prudent scrutiny of the aggregate revenue requirement filed by the APDOP, has arrived at a more realistic revenue requirement.

The Commission considering the Petition filed with lots of data gaps, observed that the cost of power purchase and employee expenses have increased over the actual expenditure of earlier years. Even though having approved the Annual Revenue Requirement (ARR) vide para 5.19 & 5.21 of chapter-5, the Commission does not consider revision of retail tariffs for any of the categories of the consumers in view of the submission of the APDOP and in view of the fact that the revenue gap for the FY 2014-15 shall be funded by the Govt. of Arunachal Pradesh.

Tariff proposed by the APDOP and approved by the Commission are shown in Table 7.1 below.

The Tariff schedule indicating category wise Tariffs, miscellaneous charges and general terms and conditions of supply are attached in schedule I, II and III.

**Table 7.1: Tariffs by the Commission for FY 2014-15**

Sl. No.	Category	Existing Tariff (Rs./ KWh)	Proposed Tariff (Rs. KWH)	Approved Tariff for FY 2014-15 (Rs. KWh)
1	<b>Non Commercial Consumers (Domestic)</b>			
	<b>LT</b>			
	a) AC 50Hz,1-Phase, 230 Volt nominal Voltage	4.00	4.00	4.00
	b) AC 50Hz,3-Phase, 400 Volt nominal Voltage	4.00	4.00	4.00
	<b>HT</b>			
	c) AC 50Hz,3-Phase, 11KV nominal Voltage	3.40	3.40	3.40
	d) AC 50Hz,3-Phase, 33KV nominal Voltage	3.25	3.25	3.25
	<b>KJP &amp; BPL connection</b>			
	e) AC 50Hz,1-Phase, 230 Volt KJP & BPL connection	2.65	2.65	2.65
2	<b>Commercial Consumers (Non-Industrial)</b>			
	<b>LT</b>			
	a) AC 50Hz,1-Phase, 230 Volt nominal Voltage	5.00	5.00	5.00
	b) AC 50Hz,3-Phase, 400 Volt nominal Voltage	5.00	5.00	5.00
	<b>HT</b>			
	c) AC 50Hz,3-Phase, 11KV nominal Voltage	4.20	4.20	4.20
	d) AC 50Hz,3-Phase, 33KV nominal Voltage	4.00	4.00	4.00
3	<b>Public Lighting and Water Supply Consumers</b>			
	<b>LT</b>			
	a) AC 50Hz,1-Phase, 230 Volt nominal Voltage	5.10	5.10	5.10

Sl. No.	Category	Existing Tariff (Rs./ KWh)	Proposed Tariff (Rs. KWH)	Approved Tariff for FY 2014-15 (Rs. KWh)
	b) AC 50Hz,3-Phase, 400 Volt nominal Voltage	5.10	5.10	5.10
	<b>HT</b>			
	c) AC 50Hz,3-Phase, 11KV nominal Voltage	4.20	4.20	4.20
	d) AC 50Hz,3-Phase, 33KV nominal Voltage	4.00	4.00	4.00
<b>4</b>	<b>Agricultural Consumers</b>			
	<b>LT</b>			
	a) AC 50Hz,1-Phase, 230 Volt nominal Voltage	3.10	3.10	3.10
	b) AC 50Hz,3-Phase, 400 Volt nominal Voltage	3.10	3.10	3.10
	<b>HT</b>			
	c) AC 50Hz,3-Phase, 11KV nominal Voltage	2.75	2.75	2.75
	d) AC 50Hz,3-Phase, 33KV nominal Voltage	2.65	2.65	2.65
<b>5.</b>	<b>Industrial Consumers</b>			
	<b>LT</b>			
	a) AC 50Hz,1-Phase, 230 Volt nominal Voltage	4.20	4.20	4.20
	b) AC 50Hz,3-Phase, 400 Volt nominal Voltage	4.20	4.20	4.20
	<b>HT</b>			
	c) AC 50Hz,3-Phase, 11KV nominal Voltage	3.75	3.75	3.75
	d) AC 50Hz,3-Phase, 33KV nominal Voltage	3.40	3.40	3.40
<b>6</b>	e) AC 50Hz,3-Phase, 132 KV nominal Voltage and above	3.25	3.25	3.25
	<b>Bulk Mixed Consumers</b>			
	a) AC 50Hz,3-Phase, 11KV nominal Voltage	3.75	3.75	3.75
	b) AC 50Hz,3-Phase, 33KV nominal Voltage	3.40	3.40	3.40
<b>7</b>	c) AC 50Hz,3-Phase, 132 KV nominal Voltage and above			
	<b>Temporary Consumers</b>			
	a) Metered Supply Rs./KWH	6.35	6.35	6.35

The average cost of supply has been worked out at Rs. 13.26 per kWh against Rs. 25.32 per kWh projected by the DOP, AP. The charges for common items and miscellaneous charges as in force are retained for the FY 2014-15.

This order shall come into force with effect from 01-04-2014 and shall remain effective till revised/amended by the Commission. The order shall be given wide publicity by the petitioner for information of the general public.



*[Signature]*  
3/6/2016

CHAIRPERSON



Place: Naharlagun

Date: 03-06-2014

## **SCHEDULE – I TARIFFS, 2014**

### **CATEGORY – I**

#### **NON-COMMERCIAL CONSUMERS (DOMESTIC)**

**A) Definition:** The consumers under this category are defined as consumers using the electrical energy for domestic and non profit purpose such as lights, fans., heating devices, Televisions, VCR/VCP, Radio, Refrigerator, Air – conditioners, lift motors and all others appliances only for bonafied residential & non-residential but non-commercial use. This will also cover consumption of energy supplied for Government owned Residential and Non-Residential buildings Educational and Research Institutions. Charitable Institutions, Government owned Hospitals and Dispensaries, farm houses, Religious premises like Churches, Temples, Mosques, community halls and any other Institutions, Religious printing press (not engaged in commercial activity or private again, excluding those which are specially covered under other categories of this Tariff) or classifications as may be amended by the Commission from time to time.

<b>System of supply &amp; Metering Point</b>	<b>Tariff (Rs. / Kwh)</b>	<b>Minimum Charges (in Rs./month)</b>
<b>LT</b>		
AC 50Hz, 1 - Phase, 230 Volt nominal Voltage	4.00	32 per KW
AC 50Hz, 3 - Phase, 400 Volt nominal Voltage	4.00	53 per KW
AC 50Hz, 1 - Phase, 230 Volt KJP & BPL connections	2.65	53 per connection
<b>HT</b>		
AC 50Hz, 3 - Phase, 11 KV nominal Voltage	3.40	168 per KW
AC 50Hz, 3 - Phase, 33 KV nominal Voltage	3.25	134 per KW

Note: Yard lighting, gate lighting, pumps and motors used in the same premises shall be integral part of this category.

## CATEGORY – 2

### COMMERCIAL CONSUMERS (NON – INDUSTRIAL)

**Definition:** The consumers under this category are defined as non –industrial commercial consumers such as installations of commercial places, Government undertaking, public sector undertaking, Commercial houses, markets, and optical houses. Restaurant, Bars, tailoring shops, Refreshment and tea stalls, show-cases of advertisement, Hoarding theatres, cinemas, Hotels, Lodging and Boarding, Private nursing Homes and Hospitals, religious Hospitals, private run schools and Hostels and Boarding facilities and other educational institute demanding fees, photographic studios, Battery charging units, repair workshops and Newspapers press 9 newspaper printing press only) Petrol Pumps, etc or classifications as may be amended by the Commission from time to time.

System of supply & Metering Point	Tariff (Rs. / Kwh)	Minimum Charges (in Rs./month)
<b>LT</b>		
AC 50Hz, 1 - Phase, 230 Volt nominal Voltage	5.00	32 per KW
AC 50Hz, 3 - Phase, 400 Volt nominal Voltage	5.00	53 per KW
<b>HT</b>		
AC 50Hz, 3 - Phase, 11 KV nominal Voltage	4.20	168 per KW
AC 50Hz, 3 - Phase, 33 KV nominal Voltage	4.00	134 per KW

## CATEGORY – 3

### PUBLIC LIGHTING AND WATER SUPPLY CONSUMERS

**Definition:** This category of the consumers shall be applicable to public Street lighting Systems in Municipality Towns, sub-Towns / Villages, etc. including Signal system, Ropeways on Roads and park lighting in areas of Municipality Town. Sub – town / villages. Pumps & equipments for public water supply systems and Treatment

plants and associated applications shall also be covered in this category or classifications as may be amended by the Commission from time to time.

System of supply & Metering Point	Tariff (Rs. / Kwh)	Minimum Charges (in Rs./month)
<b>LT</b>		
AC 50Hz, 1 - Phase, 230 Volt nominal Voltage	5.10	32 per KW
AC 50Hz, 3 - Phase, 400 Volt nominal Voltage	5.10	53 per KW
<b>HT</b>		
AC 50Hz, 3 - Phase, 11 KV nominal Voltage	4.20	168 per KW
AC 50Hz, 3 - Phase, 33 KV nominal Voltage	4.00	134 per KW

## CATEGORY – 4

### AGRICULTURAL CONSUMERS

**Definition:** The consumers in agricultural fields /firms for the purpose of (a) Pumps (b) field lighting & other applications for farmers in their irrigation and cultivation & not connected to any attached commercial or industrial installations in the agricultural field of farm or classifications as may be amended by the Commission from time to time.

System of supply & Metering Point	Tariff (Rs. / Kwh)	Minimum Charges (in Rs./month)
<b>LT</b>		
AC 50Hz, 1 - Phase, 230 Volt nominal Voltage	3.10	32 per KW
AC 50Hz, 3 - Phase, 400 Volt nominal Voltage	3.10	53 per KW
<b>HT</b>		
AC 50Hz, 3 - Phase, 11 KV nominal Voltage	2.75	168 per KW
AC 50Hz, 3 - Phase, 33 KV nominal Voltage	2.65	134 per KW

## CATEGORY – 5

### INDUSTRIAL CONSUMERS

**Definition:** The Industrial consumers shall cover all Government registered Industrial power consumers which are not covered by category No.2 (supply for Commercial

Purposes), such as steel fabrication, motor body builders, power handloom industry, poultry farming, pisciculture, prawn culture, floriculture in green house, mushroom production, cold storage unit of pisciculture, agriculture, horticulture and any other type of industry where raw material is covered into finished products with the help of electrical motive power, colour photo labs. Government owned printing press and other printing press (Primarily engaged in printing for commercial gain), and government owned, public sector industries, etc or classifications as may be amended by the Commission from time to time.

**Note:** All Non-Industrial & Commercial consumers within the same complex under a single service connections shall also be treated as industrial consumers if the total distribution is integrated in the industrial complex and load on non-industrial side is below 10% of the total sanctioned load.

System of supply & Metering Point	Tariff (Rs. / Kwh)	Minimum Charges (in Rs./month)
<b>LT</b>		
AC 50Hz, 1 - Phase, 230 Volt nominal Voltage	4.20	32 per KW
AC 50Hz, 3 - Phase, 400 Volt nominal Voltage	4.20	32 per KW
<b>HT</b>		
AC 50Hz, 3 - Phase, 11 KV nominal Voltage	3.75	168 per KW
AC 50Hz, 3 - Phase, 33 KV nominal Voltage	3.40	134 per KW
AC 50Hz, 3 - Phase, 132 KV nominal Voltage & above	3.25	101 per KW

## CATEGORY – 6

### BULK MIXED CONSUMERS

**Applicability:** The Bulk mixed consumers are those consumers drawing bulk powers at HT voltage having a mixed load of all categories of consumers such as a village, a town, a city, a colony, or a State or Region etc. drawing power at one metering point. It will also include a University Campus, All India ratio complex College complex. Defense Installations, Railway complex, Government Complexes, etc. who arranges their own distribution of power with approval of competent authority. This will not include Industrial complex which may consist mixed load category 1,2,3,& 5 or classifications as may be amended by the Commission from time to time.

System of supply & Metering Point	Tariff	Minimum Charges
-----------------------------------	--------	-----------------

	(Rs. / Kwh)	(in Rs./month)
<b>HT</b>		
AC 50Hz, 3 - Phase, 11 KV nominal Voltage	3.75	168 per KW
AC 50Hz, 3 - Phase, 33 KV nominal Voltage	3.40	134 per KW
AC 50Hz, 3 - Phase, 132 KV nominal Voltage & above	3.25	101 per KW

## **CATEGORY – 7**

### **TEMPORARY CONSUMERS**

**Definition:** A Temporary consumers are those who would consume electricity for a limited period of time, which could be determined at its initial application itself such as:

- a) For marriage, puja, religious / public function / gathering, festivals and ceremonies which are of temporary nature up to a period not exceeding 90 days in case of metered supply.
- b) For commercial and Industrial purposes like cinemas, theatres, circus, carnivals, exhibitions, concerts etc, which are of temporary nature for private gain for a period not exceeding 30 days in case of metered supply or classifications as may be amended by the Commission from time to time.

#### **Supply system:**

- a) Single phase, 50Hz, 230 Volts.
- b) Three Phases, 50 Hz, 400 Volts.

**Note:** Temporary connection shall be given at HT supply only on specific agreements of supply.

#### **Tariff:**

##### **Metered supply Rs. 6.35 per Kwh:**

In case of metered supply consumer shall be given temporary connection., with energy meter by the department after receiving full advance from consumer the cost of energy estimated as per connected load for the whole period and service connection charges. On closure of the programme accounts shall be settled as per actual meter reading.

#### **Note:**

- a) Temporary services connection shall require prior approval from the next higher load sanctioning authority.
- b) The energy cost as per tariff above along with connection and disconnection charge will be realized in advance from the applicant before making the supply available to him.
- c) Applicant at his own expenses shall arrange the complete wiring for which temporary supply of power is required. It will also be the responsibility of the applicant to ensure that the wiring conforms to the technical & safety requirement as specified by authorities.
- d) Energy bill, based in actual consumption shall be served to the consumer at reasonable interval. The amount of each bill shall be adjusted from the amount of advance & security deposit on closure of the temporary services.

## Schedule – II

### Miscellaneous Charges

1. **Meter Rent:** The Energy meter and its allied instruments required for registering of energy consumed as deemed to be under the ownership of the supplier, shall attract following monthly rental charges against regular maintenance, repair and replacement.

a. LT Metering:	Rs. Per Month
i. Energy meter for AC Single phase LT supply:	16.00
ii. Energy meter for AC Three supply 400 V between phases (without CT):	26.00
iii. Energy meter for AC Three Phase supply 400 V between phases (with CT)	68.00

b. HT Metering:	Rs. Per Month
i. 11 KV system Complete Energy meter with CT/PT & other monitoring and indication requirement for AC Three phase HT supply:	670.00
ii. 33 KV system	3350.00
iii. 132 KV & above	13401.00

#### c. Other Charges for Meter:

- i. Rs. 168.00 per shifting if resulted from reconstruction / modification of building and on the request of the consumer.
- ii. Free of cost if the shifting is in the interest of the department.

**2. Replacement of the energy meter and its associated fittings and equipment:**

- i. The supplier shall replace the meters & the allied fitting & the equipments free of cost in case of scheduled replacement under normal wear & tear of ageing or technology change.
- ii. The Consumer shall bear all the necessary cost in case of temporary shifting of the meters & its associated fittings and the equipments.
- iii. The Consumers shall have to bear the cost if replacement due to negligence of the consumer or losses attributable to the negligence of the consumer.

**3. Charges for testing of Meters at the request of consumers:**

- |   |            |
|---|------------|
| a. For AC Single Phase LT Energy Meter                      | Rs. 134.00 |
| b. For energy meter without CT for AC three phase LT supply | Rs. 202.00 |
| c. For energy meter with CT for AC three phase LT supply    | Rs. 336.00 |
| d. For energy meter AC three phase HT supply                | Rs. 670.00 |

In case the meter fitted to the consumer premises is found to be defective from the very date of fitting, testing and replacement of meter will be done free of cost.

**4. Testing of Consumer's Installation:**

**Testing & Inspection charges of consumer's installation:-**

Should any consumer require the services of the supplier for testing and inspection & certification of the supplier's electrical installation on technical grounds following charges shall be paid in advance along with the application.

- a. 1 phase service wiring installations Rs. 202/- per installation.
- b. 3 phase service wiring installations Rs. 320/- per installation.
- c. HT Line installation 11 KV system Rs. 670/- per installation.
  - i. 33 KV & above system Rs. 1336/- per installation.

**5. Disconnection and reconnection:**

Charges towards each disconnection and reconnection as the case may be wither for punitive measures or on the request of the consumer, shall be as follows.

- a. All categories of connection Rs. 134/- per connection

b. Disconnection only

Rs. 134/- per connection

**6. Charges for new service connection or Replacement of connection wire, cut out, fuse etc. or any other works / jobs etc.**

The cost of new service connection i/c the meter and other materials & services rendered or cost of replacement of connection n wire, cut-out, fuses etc. will be borne by the consumer and shall be payable by the consumer in advance as per purchase rate of department plus 15% departmental charges. If the consumer intends to supply the materials, then the 15% departmental charge only shall be paid in advance to the department.

**7. Re-rating of Installation & revised load sanction:**

Fees for rerating of the consumer's installation at the request of the consumer & for revised load sanction.

- i. Rs. 134/- per case for LT supply voltage systems.
- ii. Rs. 670/- per case for HT supply voltage systems.

**8. Meter Security: (interest bearing refundable)**

All consumers except under special provisions made under Govt. policy, such as under KJP or BPL household electrification, interest bearing meter security shall have to be paid against the energy meter provided. The interest rate shall be as defined in Para 4.119 of the Arunachal Pradesh Electricity Supply Code-2013.

- i. For AC single phase LT supply of connected load: Rs. 1336/-
- ii. For AC three phase LT supply of connected  
(without CT) load: Rs. 2681/-
- iii. For AC three phase LT supply CT operated Rs. 4691/-
- iv. For AC three phase HT supply, CT & PT operated Rs. 33448/-

**1. Security Deposit: (interest bearing refundable / adjustable)**

To safe guard against default by non-payment of bills against energy consumed interest bearing security deposit shall be deposited by the consumer in advance before the service is provided in accordance to the provisions of A.P.Electricity

Supply Code-2013 (KJP & BPL household connection shall not pay Security deposit as per present policy of the Govt.) The interest rate shall be as defined in Para 4.119 of the Arunachal Pradesh Electricity Supply Code-2013. A sample calculation



showing Security Deposit payable per KW of connected load for new connections is given below :-

**RATES OF SECURITY DEPOSIT**  
**(As per A.P. Electricity Supply Code-2013)**

**Formula for calculating security Deposit for new connection = Load x Load**

**Factor of the category in which consumer falls as per Electricity supply code x (Billing cycle + 30 days) x 24 hours x Current Tariff**

Sl.No.	Category of Consumers	As per A.P. Electricity Supply Code' 2013
1.	<b><u>Domestic Category:</u></b> LT 230 Volts LT 440 Volts HT 11KV HT 33 KV KJP	 Rs. 1728.00 Rs. 1728.00 Rs. 1469.00 Rs. 1404.00 Nil as per Govt. Policy
2.	<b><u>Commercial Category:</u></b> LT 230 Volts LT 440 Volts HT 11KV HT 33 KV	 Rs. 3600.00 Rs. 3600.00 Rs. 3024.00 Rs. 2880.00
3.	<b><u>Public Lighting:</u></b> LT 230 Volts LT 440 Volts 11KV 33 KV	 Rs. 2938.00 Rs. 2938.00 Rs. 2419.00 Rs. 2304.00
4.	<b><u>Agricultural Consumers:</u></b> LT 230 Volts LT 440 Volts	 Rs. 1473.00 Rs. 1473.00

	11KV HT	Rs. 1307.00
	33 KV HT	Rs. 1259.00
5	<b><u>Industrial Consumers:</u></b> LT 230 Volts LT 440 Volts HT 11 KV – Single shift HT 11 KV – Double shift HT 11 KV – Continuous	Rs. 3024.00 Rs. 3024.00 Rs. 2700.00 Rs. 4050.00 Rs. 5400.00
6.	<b><u>Industrial Consumers:</u></b> HT 33KV – Single shift HT 33KV – Double shift HT 33KV – Continuous	Rs. 2448.00 Rs. 3672.00 Rs. 4896.00
7.	<b><u>Industrial Consumers:</u></b> <b><u>132 KV &amp; Above</u></b> Single shift Double shift Continuous	Rs. 2340.00 Rs. 3510.00 Rs. 4680.00
8.	<b><u>Bulk Mixed Consumers:</u></b> HT 11 KV (LF-50%) HT 33 KV (LF-50%) EHT 132 KV & above (LF-50%)	RS. 2700.00 Rs. 2448.00 Rs. 2340.00
9.	<b><u>Public Water Supply</u></b> LT (220 V & 400 V ) HT 11 KV HT 33 KV	Rs. 2424.00 Rs. 1996.00 Rs. 1901.00

## 2. **Charges for Testing of Transformer Oil:**

The departmental charge for testing oil of private owned transformers for each sample of oil shall be charged Rs. 134.00 per sample test.

## Schedule – III

### GENERAL CONDITIONS OF SUPPLY

1. **Payment:** The bill shall be paid in full inclusive of all arrears if the consumer within the last day for payment indicated on the body of the bill. However the consumer making payment in full within due date indicated on the body of the bill will be entitled to avail rebate.

**Application for Connection:** The Consumer shall apply for service connection to the nearest Assistant Engineer (Electrical) intimating details of demand, location etc.

2. **Penalty:** If payments is not received within last date for payment the bill will be treated as invalid and the amount outstanding will be carried over to the next month's bill as arrear. Interest @2% will be charged as penalty on outstanding amount each 30 days successive period or part thereof until the amount is paid in full.

**Sanctioning Authority:** Service connection shall be given only after load sanction by the competent authority as per delegation of power accorded as under.

Categories of consumers

a.

- |   |                 |
|---|-----------------|
| i. AE (E) up to 5 KW of connected load          | 1,2,3,4,5 & 7   |
| ii. EE up to 50 KW of connected load            | 1,2,3,4,5 & 7   |
| iii. SE up to 500 KW of connected load          | 1,2,3,4,5,6 & 7 |
| iv. CE Full power of connected load above 500KW | 1,2,3,4,5,6&7   |

- b. Security deposit and cost of service connection shall have to be deposited in advance on receipt of technically sanctioned estimate.

3. **Rebate:** Rebate of 2.0% on the bill amount shall be available to the billed amount on current bills if the dues are cleared within due dates.
4. **Single Point Delivery:** The above tariff is based on the supply being given through a single point of delivery and metering at one voltage. Supply at other points at other voltage shall be separately metered and billed for and shall be considered as separate connection.
5. **Mixed Load:** Mixed domestic and commercial establishment shall be treated as commercial establishments if the load on commercial side is more than 10% of the total connected load and specific load sanction shall be made by competent authority of the supplier.

6. **Metering Point:** The metering point shall be the point of delivery of energy at the declared nominal voltage.
7. **Billing Cycle:** Normally the billing cycle shall on monthly basis.
8. **Minimum charge:** A consumer shall have to pay the minimum charge calculated on the sanctioned connected load if the energy charge amount payable is below the minimum charge in a month. The minimum charge shall not be payable when the energy bill is above the calculated minimum charge. The consumer shall continue to pay minimum charge as long as the assets are in place and not being dismantled after disconnection owing to default or after permanent disconnection.
9. **Ownership meter:** The energy meter and its allied instrument used for registration of energy data only shall deem to be the property of the supplier and the consumer shall have no right over it for ownership after the commencement of supply.

All consumers getting their supply at HT but metered on LT side of the transformer shall be charged an additional 3% over the metered consumption

10. **Maintenance & Replacement of Energy meter:** the supplier shall maintain & replace the energy meter associated measuring instruments free of cost during the validity of the supply.
11. **Default:** A Consumer shall be automatically called a defaulter if he fails to clear all the outstanding & current bills accumulated for a period of 2 months. On being a defaulter, the consumer shall be liable for disconnection after adjustment of security deposit against the energy bill account. After adjustment of security deposit, if the consumer desires for reconnection the consumer shall have to clear all outstanding dues and pay fresh security deposit.
12. **Watch and Ward of Meters:** The consumers shall be responsible for the cost of repairs / replacement of CT/PTs and other connecting and transformation devices of the service connections. The energy meter and reading or scanning devices i/c the meter box shall be as per clause 9 and 10 of this tariff notification.
13. All the bills raised within billing cycle of April month shall have the stepped-up tariff irrespective of whether a portion of the billing cycle falls within the previous month of March or not.

14. All the existing connections / agreements in force before the commencement of this tariff structure shall deem to be effected under this tariff schedule & related terms and conditions shall have precedence over the existing agreements.