**NAGALAND ELECTRICITY REGULATORY COMMISSION**



**ORDER ON**

**AGGREGATE REVENUE REQUIREMENT**

**FOR THE FY 2017-18 TO FY 2019-20 &**

**TARIFF FOR THE FY 2017-18**

FOR

**DEPARTMENT OF POWER**

**GOVERNMENT OF NAGALAND**

**Dated: 28th March, 2017.**

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**LIST OF CONTENTS**

[1. Introduction 5](#_Toc479072463)

[1.1 Nagaland Electricity Regulatory Commission 5](#_Toc479072464)

[1.2 ARR and Tariff Petition 7](#_Toc479072465)

[1.3 Admission of the Petition and Public Hearing Process 8](#_Toc479072466)

[1.4 Notice for Public Hearing 8](#_Toc479072467)

[1.5 Public Hearing 9](#_Toc479072468)

[1.6 Meeting of State Advisory Committee 9](#_Toc479072469)

[2. SUMMARY OF ARR AND TARIFF PETITION 10](#_Toc479072470)

[2.1 Aggregate Revenue Requirement (ARR) 10](#_Toc479072471)

[2.2 Tariff 10](#_Toc479072472)

[2.3 Prayers of DPN 12](#_Toc479072473)

[3. POWER SECTOR IN NAGALAND – AN OVERVIEW 13](#_Toc479072474)

[3.1 Geographical Reality 13](#_Toc479072475)

[3.2 Power Supply 13](#_Toc479072476)

[3.2.1. Own Generation 13](#_Toc479072477)

[3.2.2. Power Purchase 13](#_Toc479072478)

[3.3 Transmission and Distribution Network in the State 15](#_Toc479072479)

[3.4 Transmission and Distribution (T&D) Losses 19](#_Toc479072480)

[3.5 Consumer Profile and Energy sales 19](#_Toc479072481)

[3.6 Demand 19](#_Toc479072482)

[3.7 Energy Audit 20](#_Toc479072483)

[3.8 Energy Metering 20](#_Toc479072484)

[4. Public Hearing 21](#_Toc479072485)

[4.1 Public Response to the Petition 21](#_Toc479072486)

[4.2 Public Hearing 21](#_Toc479072487)

[4.3 Proceedings of Public Hearing 21](#_Toc479072488)

[5. ANALYSIS OF AGGREGATE REVENUE REQUIREMENT FOR THE CONTROL PERIOD OF FY 2017-18 TO FY 2019-20 24](#_Toc479072489)

[5.1 Energy Sales 24](#_Toc479072490)

[5.2 Consumer Categories 24](#_Toc479072491)

[5.3 Growth of Consumers and Connected Load 25](#_Toc479072492)

[5.4 Category-wise Energy Sales 26](#_Toc479072493)

[5.4.1 Analysis of Energy Sales Projections by DPN and the Commission’s decision 26](#_Toc479072494)

[5.5 Category-Wise Energy Sales 34](#_Toc479072495)

[5.6 Transmission and Distribution Losses (T&D Losses) 35](#_Toc479072496)

[5.7 Energy Requirement 37](#_Toc479072497)

[5.8 Energy Availability 38](#_Toc479072498)

[5.8.1 Own Generation 38](#_Toc479072499)

[5.8.2 Power Purchase 38](#_Toc479072500)

[5.8.3 Assumption of Power Purchase Projection 40](#_Toc479072501)

[5.8.4 Energy Drawals fro CGS and Other Sources 41](#_Toc479072502)

[5.9 Energy Balance 43](#_Toc479072503)

[5.10 Aggregate Revenue Requirement 44](#_Toc479072504)

[5.11 Projected expenses by DPN and decisions of the Commission 45](#_Toc479072505)

[5.12 Cost of Generation 45](#_Toc479072506)

[5.13 Power Purchase Cost 46](#_Toc479072507)

[5.14 Transmission and Other Chrages 52](#_Toc479072508)

[5.15 Operation and Maintenance Expenses 53](#_Toc479072509)

[5.15.1 Employee Cost 53](#_Toc479072510)

[5.15.2 Administrative and General Expenses 55](#_Toc479072511)

[5.15.3 Repairs and Maintenance Expenses 58](#_Toc479072512)

[5.15.4 Summary of O&M Expenditure approved by the Commission 61](#_Toc479072513)

[5.16 Capital Expenditure & Capitalisation 61](#_Toc479072514)

[5.17 Gross Fixed Assets (GFA) and Depreciation 63](#_Toc479072515)

[5.18 Interest and Finance Charges 64](#_Toc479072516)

[5.19 Interest on Working Capital 65](#_Toc479072517)

[5.20 Bad Debts 67](#_Toc479072518)

[5.21 Return on Equity 67](#_Toc479072519)

[5.22 Non-Tariff Income 68](#_Toc479072520)

[5.23 Revenue from Existing Tariff 68](#_Toc479072521)

[5.24 Aggregate Revenue Requirement (ARR) 70](#_Toc479072522)

[5.25 Revenue Gap 73](#_Toc479072523)

[5.26 Recovery of Revenue Gap for the FY 2017-18 74](#_Toc479072524)

[5.27 Government Subsidy 75](#_Toc479072525)

[6. TARIFF PRINCIPLES AND DESIGN 76](#_Toc479072526)

[6.1 Background 76](#_Toc479072527)

[6.2 Tariff Proposed by the DPN and approved by the Commission 78](#_Toc479072528)

[6.2.1 Tariff Categories 78](#_Toc479072529)

[6.2.2 Existing & Proposed Tariff 79](#_Toc479072530)

[6.2.3 Tariff approved by the Commission 81](#_Toc479072531)

[6.2.4 Common Items 82](#_Toc479072532)

[6.2.5 Miscellaneous Charges 82](#_Toc479072533)

[7. DIRECTIVES 83](#_Toc479072534)

[8. WHEELING CHARGES 103](#_Toc479072535)

[8.1 Wheeling Charges 103](#_Toc479072536)

[8.2 Segregation of Cost 103](#_Toc479072537)

[8.3 Wheeling Tariff 105](#_Toc479072538)

[9. FUEL AND POWER PURCHASE COST ADJUSTMENT 106](#_Toc479072539)

**LIST OF TABLES**

[Table 2.1: Aggregate Revenue Requirement projected by DPN 10](#_Toc479072540)

[Table 2.2: Existing Tariffs v/s Proposed Tariffs for the FY 2017-18 11](#_Toc479072541)

[Table 3.1: Power allocation from Central Generating Stations (CGS) 14](#_Toc479072542)

[Table 3.2: Energy drawls from Central Generating Stations & Other Sources 15](#_Toc479072543)

[Table 3.3: Consumer Profile and Energy Sales for FY 2015-16 19](#_Toc479072544)

[Table 5.1: Category of Consumers 24](#_Toc479072545)

[Table 5.2: Number of Consumers 25](#_Toc479072546)

[Table 5.3: Projected Energy Sales 26](#_Toc479072547)

[Table 5.4: Consumer Category-wise growth in Energy Sales 26](#_Toc479072548)

[Table 5.5: Category-wise energy sales approved by the Commission 34](#_Toc479072549)

[Table 5.6: Energy Requirement Projected by DPN 37](#_Toc479072550)

[Table 5.7: Energy Requirement approved by the Commission 37](#_Toc479072551)

[Table 5.8: Projected Power Generation 38](#_Toc479072552)

[Table 5.9: Power Allocation from Central Sector and Other Generating Stations 39](#_Toc479072553)

[Table 5.10: Summary of Power Purchase projected by DPN 41](#_Toc479072554)

[Table 5.11: Power Purchase approved by the Commission 42](#_Toc479072555)

[Table 5.12: Energy Balance projected by DPN 43](#_Toc479072556)

[Table 5.13: Energy Balance approved by the Commission 44](#_Toc479072557)

[Table 5.14: Cost of Generation projected by DPN 45](#_Toc479072558)

[Table 5.15: Power Purchase Cost projected by DPN 47](#_Toc479072559)

[Table 5.16: Allocation of power from CGS 48](#_Toc479072560)

[Table 5.17: Power Purchase Cost approved by the Commission for FY 2017-18 49](#_Toc479072561)

[Table 5.18: Power Purchase Cost approved by the Commission for FY 2018-19 50](#_Toc479072562)

[Table 5.19: Power Purchase Cost approved by the Commission for FY 2019-20 51](#_Toc479072563)

[Table 5.20: Transmission and Other Charges projected by DPN 52](#_Toc479072564)

[Table 5.21: Employee Cost projected by DPN 53](#_Toc479072565)

[Table 5.22: Administrative and General Expenses projected by DPN 56](#_Toc479072566)

[Table 5.23: Repair and Maintenance Expenses projected by DPN 59](#_Toc479072567)

[Table 5.24: Summary of Operation & Maintenance Expenditure approved by Commission 61](#_Toc479072568)

[Table 5.25: Capital Investment Plan projected by DPN 62](#_Toc479072569)

[Table 5.26: Capital Works in Progress 63](#_Toc479072570)

[Table 5.27: Depreciation projected by DPN 64](#_Toc479072571)

[Table 5.28: Interest on Loan projected by DPN 65](#_Toc479072572)

[Table 5.29: Interest on Working Capital projected by DPN 65](#_Toc479072573)

[Table 5.30: Interest on Working Capital approved by the Commission 66](#_Toc479072574)

[Table 5.31: Non-Tariff Income projected by DPN 68](#_Toc479072575)

[Table 5.32: Revenue from Existing Tariff approved by the Commission for FY 2017-18 70](#_Toc479072576)

[Table 5.33: Aggregate Revenue Requirement projected by DPN 71](#_Toc479072577)

[Table 5.34: Aggregate Revenue Requirement approved by the Commission 72](#_Toc479072578)

[Table 5.35: Revenue at Existing Tariff and Gap 74](#_Toc479072579)

[Table 5.36: Revenue from revised Tariff for FY 2017-18 approved by the Commission 75](#_Toc479072580)

[Table 6.1: Existing Tariff v/s Proposed Tariff for FY 2017-18 80](#_Toc479072581)

[Table 6.2: Tariff approved by the Commission for FY 2017-18 81](#_Toc479072582)

[Table 8.1: Allocation Matrix 103](#_Toc479072583)

[Table 8.2: Segregation of Wire and Retail Supply Costs for FY 2017-18 104](#_Toc479072584)

[Table 8.3: Segregation of Wire and Retail Supply Costs for FY 2018-19 104](#_Toc479072585)

[Table 8.4: Segregation of Wire and Retail Supply Costs for FY 2019-20 105](#_Toc479072586)

[Table 8.5: Wheeling Tariff approved by the Commission 105](#_Toc479072587)

**ABBREVIATIONS**

|  |  |
| --- | --- |
| **Abbreviation**  | **Description**  |
| ABT | Availability Based Tariff |
| A&G  | Administration & General  |
| APTEL | Appellate Tribunal For Electricity  |
| ARR  | Aggregate Revenue Requirement  |
| CAGR  | Compounded Annual Growth Rate  |
| CD  | Contract Demand  |
| CERC  | Central Electricity Regulatory Commission  |
| CGS  | Central Generating Stations  |
| CoS | Cost of Supply  |
| CPSU  | Central Power Sector Undertakings  |
| Cr | Crores |
| Crs | Crores |
| CT | Current Transformer |
| CWIP | Capital Work In Progress |
| DE  | Debt Equity  |
| DPN | Department of Power, Govt. of Nagaland |
| EHT  | Extra High Tension  |
| ER  | Eastern Region  |
| FAC  | Fuel Adjustment Costs  |
| FDR  | Fixed Deposits Receipts  |
| FPPCA | Fuel Power Purchase Cost Adjustment |
| FY  | Financial Year  |
| GCV | Gross Calorific Value |
| GFA  | Gross Fixed Assets  |
| HP  | Horse Power  |
| HT  | High Tension  |
| KV  | Kilovolt  |
| KVA  | Kilo volt Amps  |
| KW  | Kilo Watt |
| kWh  | kilo Watt hour  |
| LNG  | Liquefied Natural Gas  |
| LT  | Low Tension  |
| MU  | Million Units  |
| MVA  | Million volt Amps  |
| MW  | Mega Watt  |
| MYT | Multi Year Tariff |
| NER | North Eastern Region |
| NERC | Nagaland Electricity Regulatory Commission |
| NTP | National Tariff Policy |

|  |  |
| --- | --- |
| O&M  | Operation & Maintenance  |
| PLF  | Plant Load Factor  |
| PLR  | Prime Lending Rate  |
| R&M  | Repairs and Maintenance  |
| RIMS | Regulatory Information and Management System |
| RoR | Rate of Return  |
| Rs.  | Rupees  |
| ` | Rupees |
| S/s  | Sub Station  |
| SBI  | State Bank of India  |
| SERC  | State Electricity Regulatory Commission  |
| T&D  | Transmission & Distribution  |
| UI  | Unscheduled Interchange  |
| YoY | Year on Year |

**Before the**

**Nagaland Electricity Regulatory Commission**

**for the State of Kohima, Nagaland**

**Case No.:1/FY 2017-18.**

**In the matter of**

Determination of Multi Year Aggregate Revenue Requirement (ARR) for the control period of FY2017-18 to FY 2019-20 and Tariff for the FY 2017-18 filed by the Department of Power, Government of Nagaland, herein after referred to as ‘DPN’---Petitioner.

**Present**

**Er.IMLIKUMZUK AO**

Chairman-cum-Member,

NERC,Kohima.

**ORDER**

**(The 28thMarch, 2017)**

1. The Department of Power, Government of Nagaland (herein after referred to as DPN) is a deemed licensee in terms of section 14 of the Electricity Act 2003 (herein after referred to as Act), engaged in the business of generation, transmission and distribution of electricity in the state of Nagaland.
2. As per the MYT Regulations, 2016, the DPN has filed the Petition for determination of Multi Year Aggregate Revenue Requirement (ARR) for the control period of FY 2017-18 to FY 2019-20 and Retail Tariff for the FY 2017-18 on 30.11.2016.

3. In exercise of the powers vested under section 62(1) read with section 62(3) and section 64 3(a) of the Electricity Act 2003 and Regulation 5.2 of NERC MYT Regulations, 2016 (Notified on 21.04.2016) (herein after referred to as Tariff Regulations) and other enabling provisions in this behalf, the Commission issues this order for approval of the ARR for the control period of FY 2017-18 to FY 2019-20 and determination of retail Tariff for the FY 2017-18 for supply of electricity in the state of Nagaland under NERC (MYT) Regulations, 2016.

4. Tariff Regulations specify that the distribution licensee shall file ARR and Tariff Petition in all aspects along with requisite fee as specified in Commission’s fees, fines and charges regulations on or before 30th November of the preceding year. Accordingly the DPN has filed the ARR for the control period of FY 2017-18 to FY 2019-20 and Tariff Petition for the FY 2017-18.

5. Regulation 17 of the Tariff Regulations, 2016 provides for giving adequate opportunities to all stake holders and general public for making suggestions/objections on the Tariff Petition as mandated under section 64(3) of the Electricity Act 2003. Accordingly, the Commission directed DPN to publish the ARR and Tariff Petition for the control period of FY 2017-18 to FY 2019-20 in an abridged form as public notice in newspapers having wide circulation in the state inviting suggestions/objections on the Tariff Petition.

6. Accordingly, DPN has published the Tariff Petition in the abridged form as public notice in various newspapers and the Tariff petition was also placed on the website of DPN. The last date of submission of suggestions/objections was fixed on 2nd February, 2017.

7. The Commission, to ensure transparency in the process of Tariff determination and for providing proper opportunity to all stake holders and general public for making suggestions/objections on the Tariff petition and for convenience of the consumers and general public across the state, decided to hold the public hearing at the headquarters of the state. Accordingly, the Commission held public hearing at Kohima on 25th March, 2017.

8. The proposal of DPN was also placed before the State Advisory Committee in its meeting held on 24th March, 2017 and various aspects of the Petition were discussed by the committee. The Commission took into consideration the deliberations in the State Advisory Committee on the ARR for the FY 2017-18 to FY 2019-20 and Tariff Petition of DPN for the FY2017-18 during the meeting of the committee.

9. The Commission took into consideration the facts presented by the DPN in its Petition and subsequent filings, the suggestions/objections received from stakeholders, consumer organizations, general public and State Advisory Committee and response of the DPN to those suggestions/objections.

10. The Commission taking into consideration all the facts which came up during the public hearing and meeting of the State Advisory Committee, has approved the ARR for the control period of FY 2017-18 to FY 2019-20 and revised the tariff for the FY 2017-18.

11. The Commission has reviewed the directives issued earlier in the Tariff Order for the FY 2016-17 and noted that some of the directives are compiled and some are partially attended. The Commission has dropped the directives compiled with and the remaining directives are consolidated and fresh directives are added.

12. This order is in nine chapters as detailed below:

1. Chapter 1: Introduction.

2. Chapter 2: Summary of ARR for the control period of the FY 2017-18 to FY 2019-20and Tariff petition for the FY 2017-18.

3. Chapter 3: Power Sector in Nagaland -An overview.

4. Chapter 4: Public hearing.

5. Chapter 5: Analysis of ARR for the control period of the FY 2017-18 to FY 2019-20 alongwith Tariff Petition for the FY 2017-18 and approval of the Commission.

6. Chapter 6: Tariff principles and design.

7. Chapter 7: Directives.

8. Chapter 8: Wheeling Charges for the FY 2017-18.

9. Chapter 9: Fuel and power purchase cost adjustment.

13. The DPN should ensure implementation of the Tariff Order from the effective date after issuance of a public notice in such a font size which is clearly visible in two daily newspapers having wide circulation in the state within a week, and compliance of the same shall be submitted to the Commission.

14. This order shall be effective from 1st April, 2017 and shall remain in force till 31stMarch, 2018 or till the next Tariff Order of the Commission.

 **Sd/-**

 **Er. IMLIKUMZUK AO**

**Place: Kohima, Nagaland. Chairman-cum-Member,**

**Date: 28.03.2017. NERC, Kohima.**

# Introduction

## Nagaland Electricity Regulatory Commission

In exercise of the powers conferred by the Electricity Act, 2003, the State Government of Nagaland constituted an Electricity Regulatory Commission to be known as “Nagaland Electricity Regulatory Commission” for the State of Nagaland, as notified on 21stFebruary, 2008.

The Commission is a one-member body designated to function as an autonomous authority responsible for regulation of the power sector in the State of Nagaland. The powers and the functions of the Commission are as prescribed in the Electricity Act, 2003. The head office of the Commission is presently located at Kohima, capital city of the Nagaland State.

The Nagaland Electricity Regulatory Commission for the State of Nagaland started to function with effect from 4thMarch, 2008 with the objectives and purposes for which the Commission has been established.

The Department of Power – Nagaland herein called DPN, a deemed licensee under section 14 of the Electricity Act, 2003, is carrying on the business of distribution and retail supply of electricity in the state of Nagaland.

* + 1. **In accordance with the provisions of the Act, the Nagaland Commission discharges the following functions:**
1. 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 surchargethereon, if any, for the said category of consumers;
2. 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;
3. Facilitate intra-State transmission and wheeling of electricity;
4. Issue licenseesto personsseeking to act as transmission licensees,distribution licensees and electricity traders with respect to their operations within the State;
5. 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;
6. Adjudicate upon the disputes between the licensees and generating companies; and to refer any dispute for arbitration;
7. Levy fee for the purposes of this Act;
8. Specify State Grid Code consistent with the Grid Code specified under Clause (h) of sub-section(1) of Section 79;
9. Specify or enforce standards with respect to quality, continuity and reliability of service by licensees;
10. Fix the trading margin in the intra-State trading of electricity, if considered, necessary;
11. Discharge such other functions as may be assigned to it under the Act.
	* 1. **Further, the Commission also advises the State Government on all or any of the following matters namely:**
12. Promotion of competition, efficiency and economy in activities of the electricity industry;
13. Promotion of investment in electricity industry;
14. Reorganization and restructuring of electricity industry in the State;
15. Matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.
	* 1. **The State Commission ensures transparency while exercising its powers and discharging its functions.**
		2. **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 availabilityofelectricityto consumers at reasonableand 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) Promotecompetition, efficiency in operations and improvement in quality of supply.

## ARR and Tariff Petition

DPN, being an integrated utility, is responsible for generation, transmission, and distribution of electricity in the State of Nagaland.

As per the NERC MYT Regulations, 2016 the licensee was required to submit the ARR for the control period of FY 2017-18 to FY 2019-20 and Tariff Petition for the FY 2017-18 and file the petition in the month of November of preceeding year for fixing the Tariff for the next financial year. The DPN has filed the ARR and MYT Petition for the control period of FY 2017-18 to FY 2019-20. In the petition DPN estimated an ARR of ` 680.08 Crores, ` 720.76 Crores and ` 806.99 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively and projected a gap of ` 361.38 Crores, ` 376.10 Crores and ` 435.21 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

## Admission of the Petition and Public Hearing Process

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

DPN was asked to submit the required information vide letter/e-mail. Pending receipt of additional information the ARR and Tariff Petition was admitted to avoid delay in processing of ARR.

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

The notification of the proposed ARR and the Tariff schedule for theFY2017-18 was published by the DPN in the following newspapers.



Through the public notice, the stakeholders/public were invited to file their objections and suggestions on the petition on or before 2nd February, 2017.

No objection was received by the Commission on DPN petition.

## Notice for Public Hearing

A notification was published by the Commission in the following leading newspapers for giving due intimation to all stakeholders, general public, interested parties, and consumers about the public hearing to be held at Kohima on 25th March, 2017.



## Public Hearing

Public hearing was held as scheduled on 25th March, 2017 at Conference Hall of the Engineer-in-Chief, Department of Power, Nagalandfrom 11:00 hrs. onwards.During the public hearing each participant was provided a time slot for presenting views on the petition of DPN before the Commission. The main issues raised by the objectors during the public hearing along with the response of DPN are briefly given in Chapter - 4.

## Meeting of State Advisory Committee

The State Advisory Committee met on 24th March, 2017 at Conference Hall of the Engineer-in-Chief, Department of Power, Nagaland and discussed the MYT ARR for the control period of FY 2017-18 to FY 2019-20 and Tariff proposal for the FY 2017-18 of DPN, The minutes of the Advisory Committee meeting are given in ANNEXURE – I.

# SUMMARY OF ARR AND TARIFF PETITION

## 2.1 Aggregate Revenue Requirement (ARR)

The DPN in its petition has projected the Aggregate Revenue Requirement for the first control period of FY 2017-18 to FY 2019-20 and Tariff proposal for the FY 2017-18 for meeting its expenses and the estimated revenue during the control period with the existing tariff. The projected ARR for the control period are shown in Table below.

Table 2.1: Aggregate Revenue Requirement projected by DPN

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(Source: Table 4.20 of ARR Petition)

## 2.2 Tariff

The DPN in its petition has submitted the proposed tariff for the FY 2017-18 as per the table below:

Table 2.2: Existing Tariffs v/s Proposed Tariffs for the FY 2017-18

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## 2.3 Prayers of DPN

The DPNhas prayed in its petition for the following:

* To admit and approve theMYT Petition for the control period of FY 2017-18 to FY 2019-20 alongwithTariff proposal for the FY 2017-18.
* To approve the category-wise tariff submitted by DPN to meet revenue requirement for the FY 2017-18.
* To approve the suggestions regarding thetariff philosophy.
* Condoneany inadvertent delay/omissions/errors/rounding off differences/shortcoming and DPN may please be permitted to add/change/modify/alter the petition.
* Permit DPN to file additional data/information as may be necessary.
* Pass such orders as the Commission may deem fit and proper, keeping in view the facts and circumstances of the case.

# 3. POWER SECTOR IN NAGALAND – AN OVERVIEW

##

## 3.1 Geographical Reality

The DPN is responsible for supply and distribution of electricity in the State of Nagaland which has a total area of 16,527 Sqkm. The total population of Nagaland State is around 19.81 lakhs as per 2011 census. The per capita consumption is about 277 kWh for the FY 2015-16.DPN serves 2,66,693 consumers of various categories at the end of March, 2016.

## 3.2 Power Supply

## 3.2.1. Own Generation

DPN has its own hydel generation capacity of 24 MW at Likhimro Hydro Power Project and other MHEPs. Apart from this, the power supply requirements of the DPN are met from its share from Central Generating Stations which is wheeled through the PGCIL network of NER and power purchases from electricity traders/other sources.

## 3.2.2. Power Purchase

The State is dependent on outside sources for meeting its energy requirement. The State has share from Central Sector Generating Stations and total firm share from the Central Sector Generating Stations of NEEPCO, NHPC, NTPC and OTPC is 145.96 MW. The total allocation to Nagaland from the generating stations is depicted in the Table below:

Table 3.1: Power allocation from Central Generating Stations (CGS)



(Source: Table 4.5 of ARR Petition)

The energy drawn from various central generating stations during the FY 2015-16 is given in Table below:

Table 3.2: Energy drawls from Central Generating Stations & Other Sources

****

## 3.3 Transmission and Distribution Network in the State

Nagaland being a hilly State with its population unevenly dispersed to the remote areas, the State of Nagaland is having large network of HT and LT lines as well as distribution transformers.

The details of transmission and distribution network, owned & operated by DPN as on 31.03.2016 are given in table below:

1. Length of voltage wise lines



1. Voltage wise sub-stations



1. Power Transformers



1. Distribution Transformers



## 3.4 Transmission and Distribution (T&D) Losses

The transmission and distribution losses of DPN system were given as 26.00% during the FY 2015-16 including external pool losses. The technical and commercial losses are not segregated.

## 3.5 Consumer Profile and Energy sales

The consumers profile and corresponding energy sales during the FY 2015-16 are given in table below:

Table 3.3: Consumer Profile and Energy Sales for FY 2015-16



## 3.6 Demand

The total connected load for the FY 2015-16 was 166.14 MW. The restricted peak power demand of DPN during the FY 2015-16 was 120 MW. The allocation (firm and infirm) from various central generating stations is 145.96 MW.

The energy drawl by DPN during the FY 2015-16 is 685.03 MUs apart from own generation of 88.73 MUs.

## 3.7 Energy Audit

DPN is not conducting Energy Audit effectively, neither at the state level nor at the consumer end. At present, the DPN does the calculation of loss by taking the energy input at 132kV and energy sales at consumer end and the difference is shown as distribution loss, which cannot be termed as energy audit. As a matter of fact, energy audit should be conducted Voltage wise and computed with standard norms. Any high loss areas should be identified and analyzed and effective measures to be taken to bring down the losses to the permissible limits. To achieve this all the line feeders, transformers and consumers should be provided with standard meters.

## 3.8 Energy Metering

DPN has not completed 100% consumers metering. Most of the meters are static type. Some are not tested for many years. Metering of 33KV, 11KV feeders and DTs are not completed.

# 4. Public Hearing

## 4.1 Public Response to the Petition

On admitting the Multi-year ARR for the control period of FY 2017-18 to FY 2019-20 and Tariff Petition for the FY 2017-18, the Commission directed the DPN to make copies of the petition available to the general public, post the petition on their website and also publish the same in newspapers in abridged form and invite comments / objections from them.

No written objections were received from public during the time period fixed by the Commission.

## 4.2 Public Hearing

In order to ensure transparency in the process of determination of tariff as envisages in the Electricity Act, 2003, public hearing was held at Kohima on 25th March, 2017 as scheduled.

During public hearing the participants from general public were given an opportunity to offer their views in respect of the Multi-year ARR and Tariff Petition of DPN. The list of stake holders who attended the public hearing is given in Para 4.3. The officers of DPN who were present during the public hearing responded on the issues raised by the objectors.

## 4.3 Proceedings of Public Hearing

After admitting the Multi Year Tariff Petition for the control period FY 2017-18 to 2019-20 & Tariff Petition for the FY 2017-18, the Commission directed the Department of Power, Nagaland (DPN) to publish the Petition in newspapers in an abridged form duly inviting Comments/Objections from public / stake holders.

In order to ensure transparency in the process of determination of tariff as envisaged in the Electricity Act 2003, the DPN arranged publication of petition in abridged form in 3 leading Local Newspapers on 21.01.2017, calling for objections / suggestions / comments, if any to be filed on or before 02nd Feb., 2017. The DPN or the Commission did not receive any objection / comment from the public till the aforesaid returnable date.

The Commission arranged issuing of Public Notice by publishing in 3 leading Local Newspapers on 12thMarch, 2017 calling for public hearing to be conducted on 25th March, 2017 in the Conference Hall of the Engineer-in-Chief, Department of Power. Accordingly, the Public Hearing was conducted on 25th March, 2017 as scheduled.

The name of the officers of the DPN and others who attended the Public Hearing are also listed here below:

1. Er. ImlikumzukAo, Chairman, NERC, Kohima
2. Er. KeviletuoYiese, Superintendent Engineer (Revenue).
3. Mr. Arvind Tewari, Director, ACE Business, Kolkata.
4. Mr. B. Malik, Manager, ACE Business Kolkata.
5. Mr. AbalieMedoze, Jt. Secretary, representing the All Nagaland Private School Association (ANPSA), Kohima
6. Officers & staffs of the NERC.

**Question raised by the Consumer**:

Mr. AbalieMedoze representing the All Nagaland Private School Association submitted the representation dated 15th March, 2017 before the Commission and submitted that, since the Private Schools in Nagaland are Non-profit Institution, the private school in Nagaland should be categorized under the Domestic Category and not under the Commercial Category in the Tariff Order.

**Reply by the DPN:**

Er. KeviletuoYiese representing the Department by referring to Schedule of Tariff (Clause 1) of General Conditions of Supply, 2007 published by the Department of Power, Nagaland, submitted that, Churches, Temples, Mosques, Monasteries, Schools & Colleges etc comes under the Domestic category.

**Decision of the Commission:**

The Commission after hearing the consumer as well as the representative from the Department examined the representation dated 15th March, 2017 and Schedule of Tariff under clause 1 of the General Conditions of Tariff 2007.

Clause 1 under the heading Schedule of Tariff in the General Conditions of Tariff 2007 reads as under: -

“the electric supply connected to consumers where human and animal dwelling is possible, place of worship like Churches, Temples, Mosques, Monasteries, Schools & Colleges etc comes under the category of Domestic Light, Fan and Heater”.

From a reading of the aforesaid provision it is clear that the School and Colleges comes under the Domestic Category as fairly submitted by the DPN representative. Therefore, the Commission has come to the finding that the consumer has made out a case and accordingly the Commission hereby directs the Department of Power to categories the private Schools in Nagaland under the category of Domestic consumer as per the aforesaid Schedule of Tariff. The said exercise should be intimated to all the sub divisions within the state and compliance report of the same should be submitted to the Commission.

# 5. ANALYSIS OF AGGREGATE REVENUE REQUIREMENT FOR THE CONTROL PERIOD OF FY 2017-18 TO FY 2019-20

## 5.1 Energy Sales

Proper estimation of category wise energy 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 DPN in their petition for assessment of ARR.

## 5.2 Consumer Categories

DPN serves about 2.67 lakhs consumers in their licensed area and the consumers are categorized as under.

Table 5.1: Category of Consumers

****

DPN serves the consumers at different voltage levels at which the consumers avail supply. The Commission has considered retaining the same categories as are existing.

## 5.3 Growth of Consumers and Connected Load

DPN has projected the category wise growth of consumers for theFY 2015-16 (actuals), FY 2016-17 (estimated) and FY 2017-18 to FY 2019-20 (projected) as given in the table below:

Table5.2: Number of Consumers



(Source: Table 4.2 of ARR Petition)

****

## 5.4 Category-wise Energy Sales

DPN has furnished category wise energy sales for the FY 2015-16 (Actuals), FY 2016-17 (Estimated) and Projections for the control period of FY 2017-18 to FY 2019-20 as given in the table below:

Table5.3: Projected Energy Sales



## 5.4.1 Analysis of Energy Sales Projections by DPN and the Commission’s decision

Based on the actual sales during the FY 2012-13 to FY 2015-16, the sales growth rate is worked out as detailed in the table below:

Table 5.4: Consumer Category-wise growth in Energy Sales

****

Considering the data submitted in the petition, the category-wise sales projected by the DPN and Commissions approvals are discussed below.

**Domestic**

The DPN has projected energy sales to domestic category at 318.65 MUs for the FY 2017-18, 350.19 MUs for the FY 2018-19 and 383.36 MUs for FY 2019-20, while the actual sales during FY 2015-16 are 284.48 MUs.The trend of the actual consumption in the category for theFY 2012-13 to FY 2015-16 is shown in the chart below:

****

The three year growth rate is 6.95% while 2 year CAGR is 2.68 % and YoY growth rate is (-) 3.81%. As the consumers are increasing year by year. 2 years growth rate per annum on the actuals sales during the FY 2015-16 is considered reasonable. Projection of sales during the control period with 2 year growth rate works out to 299.96 MUs for the FY 2017-18, 308.01 MUs for the FY 2018-19 and 316.28 MUs for the FY 2019-20respectively.

**The Commission approves the sales at 299.96 MUs, 308.01 MUs and 316.28 MUs for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively for Domestic category.**

**Commercial**

The DPN has projected energy sales for this category at 99.47 MUs for the FY 2017-18, 105.71 MUs for the FY 2018-19 and 111.21 MUs for the FY 2019-20, while the actual sales during the FY 2015-16 are 82.64 MUs.The trend of the actual consumption in the category for the FY 2012-13 to FY 2015-16 is shown in the chart below:

****

The three year growth rate is 27.50% while 2 year CAGR is 24.88% and YoY growth rate is 45.08%. The growth rate may not sustain, accordingly growth rate of 10.00% is considered reasonable to project the consumption during the control period on the actual sales during the FY 2015-16, which works out to 100 MUs for the FY 2017-18, 110 MUs for the FY 2018-19 and 121 MUs for the FY 2019-20 respectively.

**The Commission approves the sales at100 MUs, 110 MUs and 121 MUs for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively for Commercial category.**

**Industrial**

The DPN projected energy sales to this category at 72.51MUs for the FY 2017-18, 75.46 MUs for the FY 2018-19 and 78.53 MUs for the FY 2019-20 respectively. The actual sales during the FY 2015-16 are 63.36 MUs.The trend of the actual consumption in the category for the FY 2012-13 to FY 2015-16 is shown in the chart below:

****

The three year growth rate is 52.63%, 2 year CAGR is 58.72% and YOY growth rate is 128.89%. The growth rate may not sustain; accordingly, it is reasonable to adopt 15% growth rate to project sales for the control period based on actual sales during the FY 2015-16 which works out to 83.79 MUs for the FY 2017-18, 96.36 MUs for the FY 2018-19 and 110.81 MUs for the FY 2019-20 respectively.

**Accordingly, The Commission approves the sales at83.79 MUs, 96.36 MUs and 110.81 MUs for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively for Industrial category.**

**Public Lighting**

DPN has projected sales at 11MUs for the FY 2017-18, 11.21 MUs for the FY 2018-19 and 11.50 MUs for the FY 2019-20 respectively to this category.The trend of the actual consumption in the category for the FY 2012-13 to FY 2015-16 is shown in the chart below:

****

The three year growth rate is 27.80% while 2 year CAGR is 49.83% and YoY growth rate is 83.33%. The growth may not sustain and accordingly 10% growth rate is considered reasonable to project sales during the control period based on actual sales during the FY 2015-16, which works out to 13.31 MUs for the FY 2017-18, 14.64 MUs for the FY 2018-19 and 16.11 MUs for the FY 2019-20 respectively.

**The Commission approves the salesat 13.31 MUs, 14.64 MUs and 16.11 MUs for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively for Public Lighting category.**

**Public Water Works**

The DPN has projected energy sales to this category at 4.59 MUs for the FY 2017-18, 4.6 MUs for the FY 2018-19 and 4.86 MUs for the FY 2019-20 respectively. The actual sales during the FY 2015-16 are 4.59 MUs.The trend of the actual consumption in the category for the FY 2012-13 to FY 2015-16 is shown in the chart below:

****

The three year growth rate is 14.35%, 2 year CAGR is 21.68% and YOY growth rate is 39.51%. As per the past trend the sales are steadily increasing. 3 years growth rate per annum on the actuals sales during the FY 2015-16 is considered reasonable, which works out to 6 MUs for the FY 2017-18, 6.86 MUs for the FY 2018-19 and 7.85 MUs for the FY 2019-20 respectively.

**The Commission approves the salesat 6 MUs, 6.86 MUs and 7.85 MUs for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively for Public Water Works category.**

**Irrigation and Agriculture**

The DPN has projected energy sales to this category as NIL for the FY 2017-18 to FY 2019-20. The trend of the actual consumption in the category for the FY 2012-13 to FY 2015-16 is shown in the chart below:

****

Negative growth is observed during the FY 2013-14 & FY 2015-16 over the previous year’s sales. The actual sales in the category over last 4 years except for the FY 2015-16 has been in the range of 0.02 MUs to 0.05 MUs. Accordingly, the Commission considers it reasonable to approve sales of 0.05 MUs for each year of the control period.

**The Commission approves the salesat 0.05 MUs for each year of control period i.e. FY 2017-18, FY 2018-19 and FY 2019-20 for Irrigation and Agriculture category.**

**Bulk Supply**

The DPN has projected energy sales to this category at 109.88 MUs for the FY 2017-18, 119.99 MUs for the FY 2018-19 and 131.37 MUs for the FY 2019-20 respectively. The actual sales during the FY 2015-16 are 102.84 MUs.The trend of the actual consumption in the category for the FY 2012-13 to FY 2015-16 is shown in the chart below:

****

The three year growth rate is 25.94%, 2 year CAGR is 25.88% and YOY growth rate is 45.73%.The growth rate may not sustain, accordingly, Commission considers 10% growth rate to project sales during the control period based on actual sales during the FY 2015-16, which works out to124.44 MUs for the FY 2017-18, 136.88 MUs for the FY 2018-19 and 150.57 MUs for the FY 2019-20 respectively.

**Accordingly, The Commission approves the sales at124.44 MUs, 136.88 MUs and 150.57 MUs for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively for Bulk Supply category.**

**Total sales**

The trend of the total actual consumption within the state of Nagaland for the FY 2012-13 to FY 2015-16 is shown in the chart below:



## 5.5 Category-Wise Energy Sales

As discussed in para 5.4 supra category wise energy sales approved by the Commission for the control period ofFY 2017-18 to FY 2019-20 are furnished in table below:

Table 5.5: Category-wise energy sales approved by the Commission

****

The chart below depicts the category-wise comparison of sales projected by EPDS and approved by the Commission for the FY 2017-18:



## 5.6 Transmission and Distribution Losses (T&D Losses)

DPN has projected the T&D losses at 25% for the control period of FY 2017-18 to FY 2019-20. DPN has not segregated the transmission & distribution losses.

**Commission’s Analysis:**

The chart below depicts the trend of actual T&D losses for the FY 2012-13 to FY 2015-16.

 

The distribution losses projected by DPN for the control period of FY 2017-18 to FY 2019-20 have been examined by the Commission. The Commission had set the trajectory for T&D loss reduction during the FY 2017-18 to FY 2019-20 at 25%, 24.50% & 24% respectively in the Tariff Order for the FY 2016-17. Based on the above approved loss trajectory, the transmission & distribution loss is segregated as average transmission loss of 3% for the control period and distribution loss at 22%, 21.50% and 21% for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

An analysis has been done of the T&D loss of distribution utilities of other states and the same is provided in the chart below:



It is observed that T&D loss of Nagaland is lowest among the States compared.

**The Commissionaccordinglyapproves Transmission Losses of 3% for the control period and Distribution Losses at 22%, 21.50% and 21% for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively.**

## 5.7 Energy Requirement

The energy requirement for DPN is estimated based on the retail sales projections grossed up by estimated loss levels. The energy requirement expected for the FY 2017-18 to FY 2019-20 is as given below:

Table 5.6: Energy Requirement Projected by DPN



**Commission’s Analysis:**

The DPN has considered outside sales to arrive energy requirement which is not in order. Outside sales will arise if there is surplus power. Further, they will not contribute for distribution losses as the sales will take place at state periphery.

Based on approved sales within the state and distribution losses, the energy requirement is worked out as detailed in Table below:

Table 5.7: Energy Requirement approved by the Commission

****

## 5.8 Energy Availability

## 5.8.1 Own Generation

The DPN is having 1 HEP with an installed capacity of 24 MW and total net generation of 88.73 MUs for the FY 2015-16. DPN has projected the generation from above unit based on plant availability and estimated generation as detailed in table below:

Table 5.8: Projected Power Generation

****

The EPDS has projected a generation of90 MUsper annum from its own generating stations for the control period of FY 2017-18 to FY 2019-20.

**The Commission approves own generation (Net) at 90 MUs per annum for the control period of FY 2017-18 to FY 2019-20 from its own generating stationsas projected by DPN.**

## 5.8.2 Power Purchase

DPN has allocation of power from various central generating stations in north eastern region of NEEPCO, NHPC and eastern region of NTPC as given below:

Table 5.9: Power Allocation from Central Sector and Other Generating Stations



(Source Table 4.5 of Tariff Petition)

The chart below depicts the projected volume of allocation of power & % of total power procured by DPN from various sources:

****

## 5.8.3 Assumption of Power Purchase Projection

The merit order dispatch principles are to be adopted when determining the power purchases from various generating stations. However, in a power deficit scenario, these principles do not play a significant role as the utilities will try and purchase all the power that is available at its disposal. Accordingly, DPN has considered purchase of the entire power available from all the possible sources during the period to meet the demand to the extent possible.

## 5.8.4 Energy Drawalsfro CGS and Other Sources

The DPN projected energy drawal of about 764.80 MUs in the FY 2017-18, 832.89 MUs in the FY 2018-19 and 904.44 MUs in the FY 2019-20 as detailed in Table below:

The actual power procurement during the FY 2015-16, estimated for theFY 2016-17and projected for the FY 2017-18to FY 2019-20 are furnished in Table below:

Table 5.10: Summary of Power Purchase projected byDPN



**Commission’s Analysis:**

DPN in its projection has not considered procurement of power from Bongaigaon Thermal Power Project. The firm allocation for DPN from the project is 4.93%. Power from above project has been considered for arriving at the power available. The approved power quantity is provided in the table below.

Table 5.11: Power Purchase approved by the Commission



**The Commission approves power purchase of 760.92 MUs, 815.07 MUs and 874.54 MUs for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively.**

## 5.9 Energy Balance

The energy balance worked out by the DPN is furnished below:

Table 5.12: Energy Balance projected by DPN



**Commission’s Analysis:**

DPN has procured power from Eastern Region (ER) and North Eastern Region (NER). The power purchase from ER will be influenced by both ER and NER transmission losses while power purchased from NER will be influenced by only NER transmission losses. Since transmission losses have not been segregated by DPN, the intra state transmission loss is considered at 3% for the control period.

As per average weekly transmission loss in ER during the period 01.04.2015 to 31.03.2016 is about 2.26%, while in NER it is about 2.66%.

 Considering the above factors, the energy balance is recalculated as detailed in Table below:

Table 5.13: Energy Balance approved by the Commission

****

## 5.10 Aggregate Revenue Requirement

The components for calculation of revenue requirement (Total expenses) for the control period of FY 2017-18 to FY 2019-20 are as follows:

* Cost of Power Purchase
* Cost of Generation
* Cost of Fuel
* Operation and Maintenance Expenses
* Transmission charges
* SLDC Fees & Charges
* Intra-state Transmission Charges
* Interest & Finance Charges
* Depreciation
* Interest on working capital
* Return on Equity
* Prior Period Expenses
* Provision for bad debts

## 5.11 Projected expenses by DPN and decisions of the Commission

The Projected expenses by DPN undereach head and analysis and decisions of the Commission are discussed below.

## 5.12 Cost of Generation

DPN has submitted that it is an integrated utility whereby, function wise cost details w.r.t all the parameters of ARR are not readily available. The consolidated ARR of DPN is inclusive of the ARR of the Generation function. DPN has also submitted the O&M expenses incurred towards Likimro HEP. The cost furnished by DPN is provided in Table below.

Table 5.14: Cost of Generation projected by DPN

****

**Commission’s Analysis:**

The Generation system is being operated & maintained by DPN, cost towards generation has not been separately calculated in the petition. The cost of generation furnished by DPN is only the O&M charges paid for Likimro HEP. Other components of ARR has not been furnished. Further, function wise segregated accounts have also not been furnished. Therefore, cost of generation has not been approved separately. The same shall be approved separately after DPN segregates the accounts on basis of function viz. Distribution, Transmission & Generation.

**The Commission approves Cost of Generation at `15.04Crores, ` 15.90 Crores and ` 16.81 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively as projected by DPN.**

## 5.13 Power Purchase Cost

**Petitioner’s Submission:**

DPN has projected power purchase cost at `243.20 Crores, ` 277.32 Crores and ` 313.00 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

**The assumptions for power purchase costs are as detailed below:**

Power Purchase cost is a function of the energy requirement and price of available power from the different sources for meeting the energy requirement. The energy requirement of DPN for the FY 2017-18, FY 2018-19 and FY 2019-20 is proposed to be met from own generation & power purchase from available sources.

Power purchase cost for the control period, is determined on the following parameters:

* The quantum of power allocated to DPN from central generating station is based on the declared allocation;
* Power purchases from the CGS stations are accounted at the net energy availability at DPN periphery;
* PLF is assumed same as per the FY 2015-16;
* Fixed cost, energy charges and other charges for CGS have been considered with an escalation as per 5% over the previous year levels;
* Power purchase cost from other sources is considered as per the agreement with suppliers after escalating the same at 5% year over year to factor in the rise in the rates.

Station-wise power purchase cost projected for the control period of FY 2017-18 to FY 2019-20 are furnished in table below.

Table 5.15: Power Purchase Cost projected by DPN

****

**Commission Analysis:**

DPN in its projection has not considered procurement of power from Bongaigaon Thermal Power Project. The firm allocation for DPN from the project is 4.93%. Power from above project has been considered for arriving at the power available & power purchase cost. Further, requirement towards RPOhas also been calculated as per the NERC RPO Regulations. The allocation of power from CGSs is provided in table below.

Table 5.16: Allocation of power from CGS

****

Based on the above the approved power purchase cost is provided below:

Table 5.17: Power Purchase Cost approved by the Commission for FY 2017-18



Table 5.18: Power Purchase Cost approved by the Commission for FY 2018-19

****

Table 5.19: Power Purchase Cost approved by the Commission for FY 2019-20

****

**The Commission approves the power purchase cost at `266.44Crores,`294.01 Crores and ` 325.14 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively.**

## 5.14 Transmission and Other Chrages

The Transmission charges payable to PGCIL are estimated based on the quantum of power proposed for wheeling for the FY2017-18, FY2018-19 and FY2019-20 based on the cost actually incurred in the FY 2015-16 after escalating the same by 5% year over year. The transmission charges arrived for the FY 2016-17 are escalated by 5% to arrive the charges for the FY 2017-18 to FY 2019-20 to factor in the rise in the rates. The Transmission &Other Charges furnished by DPN for the control period is provided in the table below.

Table 5.20: Transmission and Other Charges projected by DPN

****

**Commission’s Analysis:**

The Commission has considered the transmission charges as projected by DPN. DPN has projected SLDC Fees and Charges. However, on verification of bills it was observed that it was POSOCO/RLDC Fees and Charges. Accordingly, the same has been considered and the Commission approves the transmission charges at ` 41.46 Crores, `43.53Crores and `45.71 Crores for the FY2017-18, FY 2018-19 and FY 2019-20 respectively.

The intra-state transmission system is being operated & maintained by DPN, transmission charges has not been separately calculated in the petition. Further, function wise segregated accounts have also not been furnished. Therefore, intrastate transmission charges have not been approved separately. The same shall be approved separately after DPN segregates the accounts on basis of function viz. Distribution, Transmission & Generation.

**The Commission approves Transmission and Other Charges at `41.46 Crores, `43.53 Crores and `45.71 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively as projected by DPN.**

## 5.15 Operation and Maintenance Expenses

Operation & Maintenance expenses comprise of the following heads of expenditure viz.

• Employee Expenses

• Administration & General Expenses

• Repair& Maintenance Expenses

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

The operation & maintenance expenses have been arrived at in accordance with the Regulation 89.6 of The NERC (Multi Year Tariff) Regulations, 2016. Details of Employee Expenses, Administration & General Expenses and Repair & Maintenance Expenses are discussed in the subsequent paras.

## 5.15.1 Employee Cost

The expense head of employee cost consists of salary and allowance, bonus, Leave Travel Concession (LTC) & Honorarium etc. DPN has projected the employee cost in accordance with the Regulation 89.6 of The NERC (Multi Year Tariff) Regulations, 2016. Accordingly, average of the actual expenses for the FY 2013-14, FY 2014-15 & FY 2015-16 has been considered as the employee expenses for the FY 2014-15 and the same has been escalated at the escalation factor of 4% to arrive at the employee expenses for the FY 2016-17. The employee expense for each subsequent year has been determined by escalating the base expenses determined for the FY 2016-17, at the escalation factor of 5.72%. The employee expenses as projected by DPN is provided in the table below.

Table 5.21: Employee Cost projected by DPN



**Commission’s Analysis and Approval:**

The employee’s productivity parameters of DPN over last few years are provided below:

****

****

Further, an analysis has also been made of the employee productivity parameters of other states.The comparative statement of the same is provided below:

****

*\* The details pertain only to the distribution function.*

It is observed that the number of personnel per 1000 consumers of Nagaland for the FY 2015-16 is only higher than Manipur among the states compared. In case of Manipur howeever, the details pertain to the distribution function only.

The Petitioner arrived the employee expenses for the control period of FY 2017-18 to FY 2019-20 considering the average of actual expenses of the FY 2013-14, FY 2014-15 &FY 2015-16 as baseline and escalated the same as per Regulation 89.6 of NERC MYT Regulations,2016 as discussed above and projected expenses for the control period of the FY2017-18 to FY2019-20.

**The Commission approves Employee Expenses at `101.80 Crores, `107.62 Crores and `113.78 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively as projected by DPN.**

## 5.15.2 Administrative and General Expenses

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

• Domestic Travelling Expenses

• Office Expenses

• Legal, Regulatory & Consultancy Fees

• Insurance etc.

The DPN has projected the A&G expenses in accordance with the Regulation 89.6 of The NERC (Multi Year Tariff) Regulations, 2016. Accordingly, average of the actual expenses for the FY 2013-14, FY 2014-15 & FY 2015-16 has been considered as the A&G expenses for the FY 2014-15 and the same has been escalated at the escalation factor of 4% to arrive at the A&G expenses for the FY 2016-17. The A&G expenses for each subsequent year has been determined by escalating the base expenses determined for the FY 2016-17, at the escalation factor of 5.72%. The A&G expenses as projected by DPN is provided in the table below.

Table 5.22: Administrative and General Expenses projected by DPN



**Commission’s Analysis:**

The productivity parameters w.r.t A&G expenses over last few years is provided below.

****

It is observed that A&G expenses per employee was showing upward trend from FY 2012-13 to FY 2013-14 & FY 2014-15 to FY 2015-16. Further, a downward trend was showing from FY 2013-14 to FY 2014-15.

****

It is observed that A&G expenses per 1000 consumers was showing upward trend from FY 2012-13 to FY 2013-14 & FY 2014-15 to FY 2015-16. Further, a downward trend was showing from FY 2013-14 to FY 2014-15.

Further, an analysis has also been made of the A&Gproductivity parameters of other states. The comparative statement of the same is provided below:

****

It is observed that the A&G expenses per personnel of Nagaland is on higher side as compared to Arunachal Pradesh & Mizoram.

****

It is observed that A&G expenses per 1000 consumers in Nagaland is highest except Sikkim among the states compared.

In view of the above analysis and comparisons, DPN needs to take steps to restrict the A&G expenses.

The Petitioner arrived at the A&G expenses for the control period of the FY 2017-18 to FY 2019-20 considering the average of actual expenses of the FY 2013-14, FY 2014-15 &FY 2015-16 as baseline and escalated the same as per Regulation 89.6 of NERC MYT Regulations,2016 as discussed above and projected expenses for the control period of the FY2017-18 to FY2019-20.

**The Commission approves A&G Expenses at `3.10 Crores, `3.28 Crores and `3.46 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively as projected by DPN.**

## 5.15.3 Repairs and Maintenance Expenses

DPN has been undertaking various Repairs and Maintenance activities as a step towards improvement of systems, reduction in breakdowns, reduction in response time and increasing preventive maintenance.

The DPN has projected the R&M expenses in accordance with the Regulation 89.6 of The NERC (Multi Year Tariff) Regulations, 2016. Accordingly, average of the actual expenses for the FY 2013-14, FY 2014-15 & FY 2015-16 has been considered as the R&M expenses for the FY 2014-15 and the same has been escalated at the escalation factor of 4% to arrive at the R&M expenses for the FY 2016-17. The R&M expenses for each subsequent year has been determined by escalating the base expenses determined for the FY 2016-17, at the escalation factor of 5.72%. The R&M expenses as projected by DPN is provided in the table below.

Table 5.23: Repair and Maintenance Expenses projected by DPN



**Commission’s Analysis:**

The productivity parameters w.r.t R&M expenses over last few years is provided below:

****

It is observed that the Repair &Maintenance expenses was showing upward trend upto FY 2014-15, but in the FY 2015-16 a reducing trend has been observed.

Further, an analysis has also been made of the productivity parameters of other states. The comparative statement is provided below:

****

It is observed that an R&M expenses as percentage of GFA islowest in Nagaland.

The Petitioner arrived at the R&M expenses for control period of the FY 2017-18 to FY 2019-20 considering the average of actual expenses of the FY 2013-14, FY 2014-15 & FY 2015-16 as baseline and escalated the same as per Regulation 89.6 of NERC MYT Regulations,2016 as discussed above and projected expenses for the control period of the FY2017-18 to FY2019-20.

**The Commission approves Repair & Maintenance Expenses at `5.72 Crores, `6.05 Crores and `6.39 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively as projected by DPN.**

## 5.15.4 Summary of O&M Expenditure approved by the Commission

The summary O&M Expenditure approved by the Commission is tabulated below:

Table 5.24: Summary of Operation & Maintenance Expenditure approved by Commission

## 5.16 Capital Expenditure &Capitalisation

DPN has undertaken significant capital expenditure during the FY 2015-16 & FY 2016-17 and has plans to implement schemes for development of infrastructure during the FY2017-18, FY2018-19 and FY2019-20. DPN has stated that the infrastructure is insufficient to cater to the present load and hence to meet the increasing demand, capital expenditure proposed are absolutely necessary.

The objective of incurring the capital expenditure is to continue the up-gradation and strengthening of the distribution network to meet the desirable standards of performance and provide better network reliability and sustainable performance to the consumers of DPN.

The capital expenditure plan envisaged will also assist in reducing system losses. DPN has projected Capex for the FY 2017-18 & FY 2018-19. No capex has projected for the FY 2019-20. The details of the capital expenditure schemes proposed for the control period are outlined in the table below:

Table 5.25: Capital Investment Plan projected by DPN

Summary of capital works in progress are furnished in Table below:

Table 5.26: Capital Works in Progress



**Commission’s Analysis:**

As seen from the above table the progress on completion of works is very slow, unless and until the assets are put to use the very purpose of huge capital investment cannot be achieved.

As such the DPN is directed to review the progress and see that the works are completed within the targeted date.

**With this observation the capital investment of `692.68Croresand ` 291.26 Crores for the FY 2017-18 and FY 2018-19 and capitalisation of `339.68 Crores, ` 106.19 Crores and` 906.90 Croresduring the control period of FY 2017-18, FY 2018-19 and FY 2019-20 respectively are approved.**

## 5.17 Gross Fixed Assets (GFA) and Depreciation

DPN has projected the Gross Fixed Asset in accordance with the Regulation 23 of The NERC (Multi Year Tariff) Regulations, 2016.

DPN has submitted that opening value of gross fixed assets (GFA) for the FY 2016-17 has been taken from Fixed Asset Register as on 31.03.2016 and the same has been increased by estimated addition during the FY 2016-17. Thereafter, planned additions during the FY2017-18, FY2018-19 and FY2019-20 have been considered and accordingly, GFA has been computed for the FY2017-18,FY2018-19 and FY2019-20.

DPN has submitted that the assets of the utility have been segregated on the basis of their functions i.e, Generation, Transmission & Distribution. The assets and corresponding depreciation as projected by DPN is detailed in table below:

Table 5.27: Depreciation projected by DPN



**Commissions Analysis:**

The DPN has submitted the Fixed Asset Register. The DPNhas projected depreciation for the FY 2017-18, FY 2018-19 and FY 2019-20 at ` 82.13 Crores, ` 93.91 Crores and ` 97.20 Crores respectively.

**Accordingly, the Commission approves Depreciation at ` 82.13 Crores, ` 93.91 Crores and ` 97.20 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively as projected by DPN.**

## 5.18 Interest and Finance Charges

Regulation 27 of The NERC (Multi Year Tariff) Regulations, 2016 provides the methodology for calculation of the Interest & Finance charges. It provides that 30% of the capital employed shall be considered as equity and balance 70% is to be considered as loan. The regulation provides for normative loan irrespective of actual loan availed by the utility. Repayment of loan and interest are also to be considered on normative basis.

DPN, in the MYT petition has considered 70% of the GFA as normative loan. Interest & Finance charges has been calculated accordingly. The details of interest calculation furnished by DPN is provided below:

Table 5.28: Interest on Loan projected by DPN



**Commission’s Analysis:**

The DPN has claimed normative interest for the FY 2017-18, FY 2018-19 and FY 2019-20 at` 105.12 Crores, ` 80.17 Crores and ` 94.76 Crores respectively. DPN has stated that the entire capital employed till date has been funded through budgetary support from government. Further, DPN has also not submitted that audited accounts.

**As such, the Commission has not considered intereston loan for the control period of FY 2017-18 to FY 2019-20.**

## 5.19 Interest on Working Capital

The DPN has computed the Interest on Working Capital for the FY2017-18, FY2018-19 and FY2019-20 in accordance with the Regulation 29.4 of The NERC (Multi Year Tariff) Regulations, 2016. The Interest on working capital projected by the department is provided in table below:

Table 5.29: Interest on Working Capital projected by DPN

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**Commission’s Analysis:**

As per the Regulations, for the purpose of computation of normative working capital and Interest on working capital, the components of working capital are as follows:

a) Operation and maintenance expenses for one month; plus

b) Maintenance spares at one (1) per cent of the historical cost escalated at 6% from the date of commercial operation; plus

c) Receivables equivalent to one (1) month of the expected revenue from sale of electricity at the prevailing tariffs; minus

d) Amount held as security deposits under clause (a) and clause (b) of sub-section (1) of Section 47 of the Act from consumers except the security deposits held in the form of Bank Guarantees;

Interest is required to be calculated at a rate equal to the State Bank Advance Rate (SBAR) as on 1stApril of the financial year in which the Petition is filed.

Interest on working capital has been calculated accordingly as detailed in the table below:

Table 5.30: Interest on Working Capital approved by the Commission



**The Commission approves the Interest on Working Capital at `10.63Crores, ` 11.85 Crores and ` 12.25 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively.**

## 5.20 Bad Debts

Regulation 89.8 of The NERC (Multi Year Tariff) Regulations, 2016 provides that bad debts written off may be allowed as a pass through in the ARR. DPN has not proposed any provision for bad debts and stated that the same shall be claimed on actuals while truing-up exercise.

**In view of the above the Commission has not allowed Bad Debts for the control period of FY 2017-18 to FY 2019-20.**

## 5.21 Return on Equity

Regulation 26 of The NERC (Multi Year Tariff) Regulations, 2016 read with Regulation 22 provides the methodology for calculation of the Interest & Finance charges. It provides that 30% of the capital employed shall be considered as equity and balance 70% is to be considered as loan.

DPN has submitted that it being a Government Department, the entire capital employed till date has been funded through fund infusion by the Government in form of budgetary support which are generally in the nature of grants and aids through financial institutions under various schemes like APDRP, RGGVY etc.

Further, the basic requirement of return on capital base or return on equity is the audited accounts. DPN has not furnished the Audited Accounts viz. Profit & Loss Account, Balance Sheet etc.

In absence of audited accounts, **the Commission cannot allow any return on equity or capital base**. The same shall be considered after the audited accounts are furnished.

## 5.22 Non-Tariff Income

Regulation 90 of The NERC (Multi Year Tariff) Regulations, 2016 provides that the Non-Tariff Income shall be deducted from the ARR in calculating the Tariff. Non-Tariff income includes revenue from Meter Rent, Meter testing Charge, disconnection/Reconnection Charge and other departmental charges. The Non-Tariff income for the FY2017-18, FY2018-19 and FY2019-20 has been projected by escalating the actual Non-Tariff income of the FY 2015-16 by 5% YOY. Non-Tariff income for the FY 2017-18, FY 2018-19 and FY 2019-20 projected by DPN is provided in the table below.

Table 5.31: Non-Tariff Income projected by DPN



**The Commission approvesthe non-tariff income at `9.86Crores, ` 10.35 Crores and ` 10.87 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively as projected by DPN.**

## 5.23 Revenue from Existing Tariff

The DPN has projected revenue from sale of energy with existing tariff at `318.70 Crores, ` 344.66 Crores and ` 371.79 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively within the State and ` 6.26 Crores, ` 6.57 Crores and ` 6.90 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively outside State.

**Commissions Analysis:**

The trend of revenue for over past few years is provided below to depict the growth in revenue.

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Category wise revenue projected by DPNfor the FY 2017-18 is provided in the chart below:



It is observed that the revenue from domestic category contributes about 29.59%, Single Point Metered Rural category contributes about 11.48% and Single Point Metered Urban category contributes 3.01%. Hence, impact of change in tariff on the revenue is mostly dependent on these categories. However, Commercial category also has significant consumption.With the approved sales of 627.54 MUs within the state for the FY 2017-18, the revenue approved at the existing Tariff is detailed in table below:

Table 5.32: Revenue from Existing Tariffapproved by the Commission for FY 2017-18



**The Commission approves the revenue from the existing tariff at `316.76Croresfrom sale of 627.54MUs within the State at an average rate of at `5.05/Kwh.**

## 5.24 Aggregate Revenue Requirement (ARR)

The Aggregate revenue requirement and gap projected by DPN for the FY 2017-18, FY 2018-19 and FY 2019-20 are furnished in table below:

Table 5.33: Aggregate Revenue Requirement projected by DPN

****

**Commissions Analysis:**

Commission has analyzed various items of expenditure as discussed earlier and approves the expenses and net ARR as shown in the Table below.

Table 5.34: Aggregate Revenue Requirement approved by the Commission





**The Commission approves the Net Revenue Requirement of `516.46Crores, ` 565.80 Croresand ` 609.86 Crores for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively.**

## 5.25 Revenue Gap

Based on the approved Aggregate Revenue Requirement and revenue from existing tariffs at approved sales forthe FY 2017-18, the resultant GAP is as shown in the table below.

Table 5.35: Revenue at Existing Tariff and Gap



## 5.26 Recovery of Revenue Gap for the FY 2017-18

As seen from para 5.25 above there is a revenue gap of `199.69 Crores which is about 38.67% of net ARR for the FY 2017-18.

In this DPN has submitted as below:

“*DPN does not propose to recover the entire Gap as these may result in huge burden on the consumers. Tariff is a sensitive subject having substantial impact on social, economic and financial well-being of the public at large as well as the viability and growth of power sector. Recovery of entire Gap through tariff increase is not practicable as this would make power unaffordable to the general consumers. DPN being a Government Department funded by budgetary support from State Government it proposes to absorb the unrecovered gap*.”

However, DPN proposed an average increase in tariff by 7.51% to bridge the gap partially.

However, the Commission is of the view that 7.51% hike in tariff would put burden on the consumers and DPN has to improve it billing & collection efficiency and bring down the losses to reduce the revenue gap. Accordingly, Commission considers it appropriate to revise the tariffs at an average of 2.78%, without giving much tariff shock to consumers to bridge the gap partially. Owing to revision of tariffs, the DPN is expected to get additional revenue of `8.82Crores as detailed in table below:

Table 5.36: Revenue from revised Tariff for FY 2017-18 approved by the Commission



With the revision of tariff, the DPN will generate additional revenue of `8.82 Crores.Thereby, the revenue gap is revised to `190.87 Crores (i.e. ` 199.69 Crores – `8.82 Crores), which the DPNshall meet from Government subsidy and by improving internal efficiency.

**The Commission, accordingly, approves revenue from revised tariffs at `325.58 Crores with the energy sales of 627.54MUs.Due to the approved tariff hike, the revenue gap has reduced to`190.87 Crores as against `199.69 Crores(approved in Para 5.25) for the FY 2017-18.**

## 5.27 Government Subsidy

As seen from the above it is clear that the revenue from sale of power is not sufficient to meet the expenditure of DPN. As a result of this the DPN shall continue to depend upon the subsidy from Government of Nagaland. Accordingly, `190.87 Crores shall be met from Government subsidy.

# 6. TARIFF PRINCIPLES AND DESIGN

## 6.1 Background

1. The Commission in determining the revenue requirement of DPN, Nagaland for the MYT control period FY 2017-18 to FY 2019-20 and the retail tariff for the FY 2017-18 has been guided by the provisions of the Electricity Act, 2003, the National Tariff Policy (NTP), Regulations on Terms and Conditions of Tariff issued by the Central Electricity Regulatory Commission (CERC) and Regulations on Terms and Conditions of Tariff notified by the NERC. 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 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 NTP notified by Government of India 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.

1. The mandate of the NTP on cross subsidy is that tariff should be within plus / minus 20% of the average cost of supply. This could not be achieved due to high cost of power, low paying capacity of the consumers and lack of industrialization. The DPN has not furnished the voltage-wise cost of supply. A directive has been issued in this order to build up data to arrive at cost of supply at various voltage levels etc. Hence, in working out the cost of supply, 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. However in this tariff order an element of performance target has been indicated by maintaining the set target for T&D loss reduction for the year 2017-18, 2018-19 and 2019-20. This guides the DPN for better performance by reduction of loss level, which will result in substantial reduction in average cost of supply.
2. Section 8.3 of National Tariff Policy lays down the following principles for tariff design:
3. In accordance with the National Electricity Policy, consumers below poverty line who consume below a specified level, say 30 units per Month, may receive a special support through cross subsidy. Tariffs for such designated group of consumers will be at least 50% of the average cost of supply. This provision will be re-examined after five years.
4. For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the SERC would notify the roadmap, with a target that tariffs are within ± 20% of the average cost of supply. The road map would have intermediate milestones, based on the approach of a gradual reduction in cross subsidy.
5. For example if the average cost of service is `3.00 per unit, at the end of year 2010-11 the tariff for the cross subsidized categories excluding those referred to in para-1 above should not be lower than ` 2.40 per unit and that for any of the cross subsidizing categories should not go beyond `3.60 per unit.
6. While fixing tariff for agricultural use, the imperatives of the need of using ground water resources in a sustainable manner would also need to be kept in mind in addition to the average cost of supply. The tariff for agricultural use may be set at different levels for different parts of the State depending on the condition of the ground water table to prevent excessive depletion of ground water.”
7. NERC MYT Regulations,2016 specifies that

a. The cross subsidy for a consumer category means the difference between the average per unit rate based on tariff schedule of the Commission for that Category and the combine average cost of supply per unit expressed in percentage terms as a portion of the combined average cost of supply.

b. In the first phase, the Commission shall determine the tariff, so that it progressively reflects the combined average cost of supply of electricity and also reduce cross-subsidies within a reasonable period. In the second phase, the Commission shall consider moving towards category wise cost of supply as a basis for determination of tariff.

1. NEP aims at increased access to electricity, supply of reliable and quality power at reasonable rates, minimum lifeline consumption, financial turnaround of consumer interest. The Commission has considered factors as far as possible which aim at achieving the objectives of NEP while determining the revenue requirement of the DPN and designing the retail tariff for its consumers. It has also aimed at to raise the per capita consumption of the State from the existing level.The Commission endeavors that the tariff progressively reflects cost of supply in a shortest period and the government subsidy is reduced gradually. The tariff has been rationalized with regards to inflation, paying capacity and avoid tariff shock.

## 6.2 Tariff Proposed by the DPN and approved by the Commission

## 6.2.1 Tariff Categories

In the ARR and MYT Tariff Petition of control period FY 2017-18 to FY 2019-20 DPN has not proposed any changes in the existing categories of consumers and tariff structure.

The Commission considers retaining the existing categories as stated below:

1 Category 'A' Domestic

2 Category 'B' Industrial

3 Category 'C' Bulk

4 Category 'D' Commercial

5 Category 'E' PWW

6 Category 'F' Public Light

7 Category 'G' Agriculture

8 Category 'H' Temporary Connection

9 Category 'I' Inter-state

10 KutiJyoti (Point)

11 Single Point Metered Rural

12 Single Point Metered Urban

## 6.2.2 Existing & Proposed Tariff

DPN in its MYT tariff petition for the FY 2017-18 has proposed for revision of the existing retail tariffs to various categories of consumers to earn additional revenue of ` 23.94 Crores to meet the gap partially as shown below:

The DPN has proposed tariff revision with an average increase of 7.51% from the existing tariff. The proposed hike is within the range varying from 7% to 9% across all categories of consumers to bridge the revenue gap partially. The summary of the tariff proposal by DPN for the FY 2017-18 is tabulated below:

Table 6.1: Existing Tariff v/s Proposed Tariff for FY 2017-18

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**Commissions analysis:**

The Commission after detailed analysis and prudent scrutiny of the aggregate revenue requirement filed by the DPN, has arrived at a more realistic revenue requirement.

## 6.2.3 Tariff approved by the Commission

Having considered the petition of DPN for approval of Annual Revenue Requirement (ARR) and determination of Retail Tariff for supply of energy and having approved the Annual Revenue Requirement (ARR) with a gap of `199.69 Crores, the Commission considers to revise the tariff under Telescopic billing with an average increase of 2.78% as detailed below:

Table 6.2:Tariff approved by the Commission for FY 2017-18



Details are given in tariff schedule in the Appendix.

## 6.2.4 Common Items

DPN has not proposed any changes in rates and general conditions of supply of electricity to consumers. The Commission has approved it as given in Tariff Schedule in Appendix.

## 6.2.5 Miscellaneous Charges

DPN has not proposed any changes in the miscellaneous items. The Commission has approved the same rates for all miscellaneous items of services as given in the Tariff Schedule in Appendix.

**This order shall come into force from 01.04.2017 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.**

 **Sd/-**

**(Er. IMLIKUMZUK AO)**

**Place: Kohima. Chairman-cum-Member**

**Date: 28.03.2017. NERC, Kohima.**

# 7. DIRECTIVES

**Background**

While examining the information and data contained in the proposed MYT petition for the control period of the FY 2017-18 to FY 2019-20 and Tariff Petition for the FY 2017-18, that there are data gaps and many vital information were based on certain assumptions; and as a result there has been difficulties in finalization of ARR and determination of Tariffs. Most of the areas of the operational and financial performance of DPN require substantial improvement.

Directives were issued in the previous orders for reducing costs and improving efficiency in the operation of the department. The Commission expected that DPN would take prompt action on the directives and monitor their implementation. DPN is yet to take action on most of the directives. In some cases, action has been initiated but monitoring of the implementation is essential to achieve the objectives of the directives.

In the above background the Commission is constrained to reiterate most of the directives which were issued in the earlier tariff orders and which have not been fully complied with and also hereby issue specific new directives.

**Directive 1: Maintenance of Asset Registers and Audited Annual Accounts**

The DPN has stated that the complete data of fixed assets is not available. Unless the function wise, asset wise data is up-dated, correct asset value and depreciation thereon cannot be ascertained. The DPN is directed to get the asset registers built up, and submit updated assets & depreciation registers.

Accounts are to be maintained for construction and operation activities of the Power Department. Audited Annual Accounts should be submitted. In the event of delay in getting Accounts audited by the Accountant General, the DPN can get the same audited by CAG empanelled auditors and submit the same with the future filing.

**The DPN is directed to start the process immediately and complete before submission of next Tariff Petition and report compliance by 30th June, 2013.**

**Compliance Status:**

It is submitted that the department has started the compilation of the details of Assets from many divisions. However, since the details of assets are to be reconciled with the capital expenditure booked to the Annual Accounts as audited by AG since 1981, it is taking time to trace & reconcile the records for the period of last 35 years. The Fixed Assets & Depreciation register shall be ready by 30.09.2016.

The Department will initiate the process of getting the accounts audited by CAG empanelled auditors pending audit by the Accountants General and submit compliance report to the Hon`ble Commission.

**Comments of the Commission:**

The DPN is directed to submit definite compliance report by 30.09.2016.

**Reply:**

It is submitted that the Fixed Asset Register has been compiled and is attached. The DPN has completed the compilation of Annual Accounts upto the FY 2014-15. AG Nagaland has audited the accounts upto the FY 2014-15. The audit certificate is yet to be issued. DPN is pursuing the same and shall submit to the Hon’ble Commission immediately on receipt of the same.

**Comments of the Commission:**

The initiative of DPN in regard to the Fixed Asset Register is appreciated. DPN is directed to update the Fixed Asset & Depreciation Register every year with all assets procured/constructed during the year, assets discarded/disposed off during the year, depreciation during the year. Further, details of assets which are totally depreciated should also be maintained. The updated asset register must be submitted along with the petition every year.

DPN has submitted that it has completed the compilation of Annual Accounts up-to the FY 2014-15. The annual account is to be compiled for every year. The audited annual account is required to be submitted along with the Tariff Petition. In absence of CAG audit, the same can be audited by CAG empanelled Chartered Accountants.

As per the MYT regulation, truing up of previous years is required to be done on the basis of the audited accounts.

**Hence, DPN is directed to submit the updated Fixed Asset Register and audited Annual Accounts along with the next tariff petition.**

**Directive 2: Management Information System (MIS)**

The DPN has not maintained proper data in respect of sales (slab and sub slab wise), revenue and revenue expenses as also the category wise / slab wise number of consumers, connected load / demand etc. for proper analysis of the past data, based on actuals and estimation of proper projections in consideration of the ARR and Tariff Petition.

The DPN is directed to take steps to build credible and accurate data base and management information system (MIS) to meet the requirements for filing ARR & Tariff Petition as per regulatory requirement and also to suit the Multi Year Tariff principles which the Commission may consider at an appropriate time under Regulation 20 of NERC (Terms and Conditions for Determination of Tariff) Regulations, 2010. The formats, software and hardware may be synchronized with the Regulatory Information and Management System (RIMS) circulated by Central Electricity Regulatory Commission (CERC).

**Compliance Status:**

It is submitted that the department is already collecting details from the fields to comply with the regulatory requirements and to provide the details as are required for filing of tariff petition. However, department is working on making the system of data maintenance computerized and online. The same is still not operational. The status report on the progress of the building management information system shall be reported to the Hon’ble Commission.

**Comments of the Commission:**

The progress on obtaining credible data may be reported every month, indicating level of progress achieved, starting from 04/2016 onwards.

**Reply:**

It is submitted that the comprehensive online system for maintenance of Regulatory information is yet to be developed. However, department is maintaining data as is required for filing of the petitions and other statutory & regulatory requirements. The data gaps as pointed out by the Hon’ble Commission are being worked upon and the same shall be made available once the information gathering & compilation system is made online.

**Comments of the Commission:**

Commission again reiterates its earlier directive to take steps to build credible and accurate data base and management information system (MIS) to meet the requirements for filing ARR & Tariff Petition as per regulatory requirement. The compliance report to be submitted quarterly to the Commission.

**Directive 3: Pilferage of Energy**

The DPN has furnished the T&D losses at 36.45% during FY 2011-12 and projected the losses at 32% for FY 2012-13 and 28% for FY 2013-14. The Department has not segregated the losses into technical losses, commercial losses. Voltage wise losses are not available. It is possible that the losses projected may include commercial losses on account of pilferage and malpractices.

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

The DPN is directed to chalk out an action plan in a month’s time and submit to the Commission.

**Compliance Status:**

It is submitted that the initiatives taken by the department in curtailing pilferage over the period of time is yielding results which is reflected in gradual reduction in AT&C losses. The status report on the results achieved vis-a-vis action taken shall be obtained from the field offices and submitted to the Hon’ble Commission by 31.05.2016.

Detailed action plan shall be submitted subsequently.

**Comments of the Commission:**

Details of steps taken by DPN and achievements made so far may be reported by May 31, 2016.

**Reply:**

It is submitted that the DPN is continuously making efforts to curtail the energy losses and has also achieved reduction to some extent. It is also submitted in this regard that identification of high loss area requires comprehensive metering (feeders, DTs etc.) apart from changing of consumer meters. The DPN is unable to implement these measures due to funding constraints. However, the DPN shall implement these measures at earliest to bring down the losses within permissible limits.

**Comments of the Commission:**

The AT&C losses of the DPN is on the higher side and steps are required to be taken to bring it within permissible limits. The Department has not segregated the losses into technical losses and commercial losses. DPN is directed to launch an extensive drive to remove illegal connections, if any, check meter tampering and replace the defective meters. DPN must submit quarterly progress report on the action taken in this regard to the Commission.

**Directive 4: Replacement of Non-Functional / Defective Meters**

It is reported that about 50% of total connections are with defective meters. Information on non-functional meters may be obtained from field officers and ensure that data is maintained correctly. Replacement is to be planned and pursued. Progress may be reported to the Commission once in a quarter.

**Compliance status:**

It is submitted that the Department has taken initiative to replace defective meters in phased manner. Category wise defective meters as on 31.03.2015 are as detailed below:

Sl.No. Category No. of defective meters

1. KutirJyothi - 1262 Un-metered connections

2. Domestic - 50886

3. Commercial - 4005

4. Small Industries - 407

5. Public Lighting - 4

6. Bulk Supply - 608

7. Total - 57,172

The current status of the defective meters and replacements over the period of last one year shall be submitted by 31.03.2016.

**Comments of the Commission:**

As seen from the above the overall percentage of defective meters which has been 43% as on 31.03.2012 has been reduced to 24% as on 31.03.2015. The category wise percentage of defective meters are as follows:

1. KutirJyothi - 1262 Un-metered connections

2. Domestic - 24%

3. Commercial - 21%

4. Small Industries - 15%

5. Public Lighting - 1%

6. Bulk Supply - 73%

Replacement of defective meters shall be planned on priority wise i.e., meters of Bulk supply, commercial, industrial and high value domestic categories to be replaced first. In respect of defective meters billing may be done by adopting standard method as envisaged in Supply Code. Quarterly report on replacement of defective meters may be submitted to Commission starting from 01.07.2016.

**Reply:**

It is submitted that DPN is replacing the defective meters in phased manner and all the meters shall be replaced however, the implementation is slow due to fund constraints.

**Comments of the Commission:**

DPN is directed to submit progress report to the Commission on the number of defective meters replaced quarterly.

**Directive 5: Consumers’ contribution for Capital Investment**

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

The DPN is directed to furnish the details of contributions being collected from consumers for capital works. The amounts collected from the consumers towards capital investment shall be brought out in the accounts. The depreciation and Return on Equity / Capital Base should not be claimed on the amount contributed by the consumers towards capital investment.

**Compliance status:**

It is submitted that the capital expenditure of the Department is funded through the budgetary support from the government and the assets does not include any amount of consumer contribution.

**Comments of the Commission:**

The fact of non availability of consumer contribution in capital investment should be specifically furnished from next tariff petition onwards.

**Reply:**

Complied.

**Comments of the Commission:**

DPN is directed to maintain record of the consumer contribution work wise and submit the same in the tariff petition every year. In case there is no consumer contribution in capital investment, the same should also be brought out in the tariff petition.

**Directive 6: Energy Audit**

In the tariff order for FY 2011-12, the T&D loss was fixed at 31.56% and for FY 2012-13 at 28%, for FY 2013-14 at 27%, for FY 2014-15 at 26.5% and for FY 2015-16 at 26%.

The DPN is directed to chalk out a programme to provide meters to all the feeders (132 kV, 66 kV, 33 kV and 11 kV) and distribution transformers to identify the high loss areas and take appropriate measures to reduce both technical and commercial losses to the level fixed by the Commission. The DPN shall also comply with loss reduction trajectory for T&D losses for the next three years.

The investment required to reduce the losses shall be included in the investment plan for augmentation of T&D system to be submitted to the Commission. Effective technical and administrative measures shall be taken to reduce the commercial losses.

**Compliance status:**

It is submitted that as directed, the department has taken steps for replacement of defective meters and for providing meters to unmetered connections. Further, efforts are being made to identify the high loss feeders. However, comprehensive feeder wise energy audit is yet to be taken up. The department shall take steps to conduct the energy audit and report the status to the Hon’ble Commission.

**Comments of the Commission:**

The actual T&D loss during FY 2011-12 works out to 36.45% as against 31.56% fixed by the Commission and for FY 2013-14 at 29.70% as against 27% fixed by the Commission. But during FY 2014-15, 26.25% recorded as against 26.5%. fixed by the Commission. This indicates that the measures taken by the DPN in reducing T&D Losses are yielding results. This should be continued and all defective meters be replaced with sound meters and unmetered connections be provided with meters and feeder wise energy audit be conducted and identify technical and commercial losses separately. Quarterly progress report be submitted to Commission starting from 01.07.2016.

**Reply:**

It is submitted that the DPN has not been able to conduct comprehensive energy audit across its operational area yet. However, steps for identification of high loss feeders and corrective measures are being taken at all divisions. The energy audit exercise shall be done at earliest and report submitted to the Hon’ble Commission.

**Comments of the Commission:**

DPN is directed to conduct energy audit and submit report at earliest. Further, all defective meters be replaced with sound meters and unmetered connections be provided with meters and feeder wise energy audit be conducted and identify technical and commercial losses separately. Quarterly progress report be submitted to Commission.

**Directive 7: Approval of Commission for Investment Plan**

Annual Investment Plan shall be submitted to the Commission and approval of Commission for all major capital works costing Rs. 5.00 Crore and above before execution of the works.

**Compliance status:**

It is submitted that a compilation of schemes/works undertaken during the FY 2015-16 costing Rs. 5 crore and above shall be submitted by 31.03.2016.

**Comments of the Commission:**

In this directive it is specifically mentioned to obtain the approval of the Commission for execution of all major works costing Rs.5 Crore and above. During the year FY 2012-13, DPN has spent capital investment to the tune of Rs. 163.92 Crore as against approved amount of Rs.136 Crore and from the year 2013-14 onwards Rs. 200 Crore P.A is contemplated. **So far no DPR was submitted to Commission for approval. Even the proposal for approval of deviation is not submitted. Proposal for approval of works costing more than Rs. 5 Crore be submitted to Commission from 01.04.2016 onwards, invariably**.

**Reply:**

It is submitted that the capital expenditure of the Department is mostly funded through approved schemes sponsored by the Central Government & various subsidies/grants received from state/ central government. However, as directed DPN shall submit the investment proposal for the approval of the Hon’ble Commission form FY 2017-18.

**Comments of the Commission:**

DPN has so far not submitted any proposal of capital investment for approval of the Commission. Proposal for approval of works costing more than Rs. 5 Crores be submitted to Commission from 01.04.2017 onwards, invariably.

**Directives 8: Interest on Security Deposit**

DPN did not indicate the amount of security deposit collected from the consumers. DPN is directed to maintain consumer-wise security deposit collected. **Such data shall be furnished with the next filing**.

**Compliance status:**

It is submitted that the department shall report in this regard by 31.05.2016.

**Comments of the Commission:**

As per regulation 6.10(8) of NERC (Electricity Supply Code) Regulations, 2012 read with Section 47 (4) of Electricity Act, 2003 the distribution licensee shall pay interest on security deposit to the consumers every year by crediting the amount in CC bills. Details of SD collected and interest paid to the consumers on such deposits shall be reported by 31st May, 2016.

**Reply:**

It is submitted that the department is compiling the details of the security deposits and shall submit the same at earliest.

**Comments of the Commission:**

The DPN has not complied with the direction. The commission reiterates its directive to compile the details of security deposits from consumers and submit the same before filing the next petition. DPN shall calculate Interest on the security deposits and pay the same to the consumers by crediting the same to the monthly bills.

**Directives 9: Revenue Realization**

As verified from the Annual Plan the percentage of collection of Revenue is 73% during FY 2009-10, which is increased to 78% during FY 2010-11. Thus an increase of 5% is achieved during FY 2010-11 over FY 2009-10. But during FY 2011-12 the percentage of collection is estimated at 76%, which is 2% less than the previous year collections. DPN is directed to sort out an action plan to improve collections by conducting special drive and disconnecting supply to all defaulting consumers effectively.

The DPN has neither submitted progress on collection of arrears due from consumers nor the arrears as on 31.03.2013.

**Compliance Status:**

It is submitted that the collection efficiency of the department for the last couple of years shall be submitted by 31.03.2016. Further, department has already compiled the details of long pending arrears of various categories of consumers. The same has been communicated to various divisions for taking action. It is further submitted that long pending arrears may constitute a substantial portion which may no longer be recoverable and may require write off. The department shall identify all such accounts to arrive at the recoverable accounts/amounts. The department shall also undertake revenue recovery drive to improve the collection. The report on the action in this regard shall be submitted by 31.03.2016.

**Comments of the Commission:**

Revenue realization is foremost task of the DPN to sustain financially. Top priority may be given to realize the dues. Quarterly progress report on realization of dues may be submitted to the Commission starting from 01.04.2016.

**Reply:**

It is submitted that DPN is undertaking revenue drives to increase the billing and collection efficiency. These steps are yielding results as the outstanding against the current billings is not increasing. However, substantial progress has not been made on the recovery of old dues as it is found that most the dues are not recoverable. DPN is taking steps for identification & recovery of the dues.

**Comments of the Commission:**

DPN is directed to start submitting progress report on realisation of dues from the 1st quarter of the FY 2017-18.

**Directives 10: Transformer failures**

It is reported that the percentage of transformer failures which was at 5.18% during FY 2009-10 has been increased to 22.46% during FY 2010-11 and reduced to 11.56% during FY 2011-12. Even the 11.56% is also on high side. It should be brought down to below 5%.

To minimize transformer failures, the LT network and DTR structures shall be maintained properly by rectification of defects. Field officers in charged of O&M of distribution shall be pulled up and Progress is to be watched. Field units where DTR failures are more, shall pay more attention.

A detailed plan of action should be submitted to the Commission by 30.06.2013.

**Compliance Status:**

It is submitted that department has restricted transformer failure during the FY 2014-15 to about 9%. Department shall take steps to bring the same to 5% by the end of next financial year.

**Comments of the Commission:**

Detailed action plan due on 30.06.2013 is yet to be received. Progress achieved in bring down the transformer failures be submitted by 30.06.2016 positively.

**Reply:**

It is submitted that the department is taking measures for bringing down the transformer failures and the same has been brought down from the previously assessed levels of 9%. The details of transformer failures shall be submitted separately.

**Comments of the Commission:**

DPN is directed to submit the progress report on the steps taken to bring down the transformer failure within 30.06.2017.

**Directives 11: Review petition**

The Commission has to undertake review, true up of earlier orders. True-up activity cannot be done in absence of audited accounts. DPN is directed to submit review/true-up petitions along with the audited accounts.

**Compliance Status:**

It is submitted that the department has updated the Annual accounts upto FY 2013-14. The accounts for the FY 2014-15 is being compiled and the department shall be able to file the review petition for the FY 2014-15 along with the next filing.

**Comments of the Commission:**

The DPN has not understood the difference between “Review and True Up” which are separate functions. As per Regulation 21 of NERC (Terms and Conditions for determination of Tariff) Regulations 2010, the Commission shall consider variations between approvals and revised estimates/pre-actuals of sale of electricity, income and expenditure for the relevant year and permit necessary adjustment/ changes in case of such variations are for adequate and justifiable. Such an exercise shall be called **“Review”.**

21 (2) As per regulation after audited accounts of the year are made available, the Commission shall undertake a similar exercise as above, based on final actual figures as per the audited accounts, which shall be called **“True up”**.

Review petition may be filed based on revised estimates and after audited accounts, are available true-up petition for that year shall be filed. This may be followed from next ARR onwards.

**Reply:**

It is submitted that DPN shall submit the review petition as directed from the current FY.

**Comments of the Commission:**

DPN is directed to file True-up for the FY 2015-16 & FY 2016-17 and Review for the FY 2017-18 along with the next petition. The audited accounts shall be filed along with the True-up petition.

**Directives 12: Progress on Completion of Capital Works**

As verified from the capital investment and capitalization, Rs. 163.92 Crore invested during FY 2012-13, bringing CWIP as on 31.03.2013 at Rs. 795.19 Crore and out of which only Rs. 40Crore are capitalized, which is about 5% of total CWIP as on 31.03.2013. Execution/completion of distribution works shall be completed in the same year. When works are completed and the asset is taken for operation, related costs can be capitalized. Based on capitalization, depreciation can be claimed by DPN.

The DPN is directed to list out all the completed works giving scheme-wise, work wise dates of commencement and completion duly capitalizing the related expenditure. Progress on this may be reported by 30th June, 2015.

**Compliance:**

It is submitted that the department is in the process of compiling the Asset & Depreciation Register and the details as required in the above directive will be provided once the exercise is completed. Further, as submitted in reply to Directive-1 above, department shall submit the report in this regard by 30.09.2016.

**Comments of the Commission:**

The CWIP may be reconciled and the completed works be brought into GFA. Reconciliation report be submitted by 30.09.2016 positively.

**Reply:**

It is submitted that the DPN has compiled the asset and depreciation register and the same is being submitted. The reconciliation report is being compiled and the same shall be submitted at earliest.

**Comments of the Commission:**

DPN is directed to update the Asset & Depreciation Register and reconcile the same with CWIP. The updated Asset & Depreciation Register along with reconciliation shall be submitted along with the next petition.

**Directives 13: Specific Tariff to Public Lighting**

Hitherto to charges towards Public Lighting are being collected from other categories of consumers. Now, the Commission is of the view to fix a specific tariff to public lighting as in the case of other categories to be paid by the concerned local bodies being custodians of public lighting. As such the DPN is directed to provide meters to all public lighting connections and take inventory of the connected load and measure the monthly consumption of each public lighting connection and propose specific tariff to public lighting as is prevailing in other electricity utilities in the country from the next tariff filing invariably.

**Compliance:**

It is submitted that the details of number of street light points and classification of street light points and their connected load is being compiled and shall be submitted subsequently. It is requested that the Hon’ble Commission may kindly consider allowing recovery of tariff of street lights in manner allowed in previous years pending compilation of the details as above. The fixation of specific Tariff for street light may kindly be deferred to the next financial year.

**Comments of the Commission:**

For raising bills for public lighting connections providing meters is not a prerequisite. It is sufficient that the number of street light points and classification of street light points and their connected load are available. So this data may be made available, distribution wise (Village-wise) as already directed to fix tariff for public lighting from FY 2017-18 invariably.

**Reply:**

It is submitted that the DPN is yet to complete the exercise of classification of street light points and their connected load. In view of the above it is requested that the Hon’ble Commission may kindly allow the recovery of street light charges in manner allowed in previous years pending compilation of the details as above.

**Comments of the Commission:**

DPN is directed to complete the exercise at earliest and furnish the details along with the next petition.

**Directive 14: Details of Single Point Consumers**

Number of Single Point Connections released (Urban & Rural separately) and actual consumption and amount billed during the previous year and estimated for current year and projected for ensuring year shall be filed along with next tariff filing. Further, point wise number of consumers existing as on the date should also be furnished as an annexure invariably without which the petition will not be admitted.

**Compliance:**

The details of single point connection is provided in the table below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl.No.** | **Details** | **FY 2013-14** | **FY 2014-15** | **FY 2015-16** |
| 1 | No. of single point consumers | 111000 | 119674 | 121900 |
| 2 | Units Consumed (MUs) | 116.80 | 180.00 | 200.00 |
| 3 | Amount Billed (Rs. Crores) | 31.26 | 33.00 | 34.00 |

**Comments of Commission:**

As verified from the data furnished average revenue billed is Rs. 2.68/kWh which is very low when compared to the tariff fixed. This has to be checked and furnish reasons. In future while furnishing category wise sales, specific sales from single point connections be furnished separately for rural and urban in addition to slab wise sales and consumers in domestic category. So also for commercial and Industrial categories.

**Reply:**

The details are being maintained as directed and shall be furnished form next petition onwards.

**Comments of Commission:**

DPN is directed to submit the sales from single point connections by 30.06.2017.

**Directive 15: Details of own Generation**

Details of own generating stations such as nature of generating stations, installed capacity, energy generated (gross), auxiliary consumption and station wise fuel cost incurred during the previous year and estimated for to current year and projected for ensuring year shall be provided in the prescribe format from the next tariff petition onwards.

**Compliance:**

The details as required is provided in the table below.

**Technical and commercial details of thermal plants**

**Name of the thermal power plant likhimrohydro electric project**

| **S.N.** | **Item** | **Unit** | **Previous year (Actual s) FY 2014-15** | **Current Year (Estimated) FY 2015-16** | **Ensuing year (Projection) FY 2016-17** |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | 6 |
| 1 | Installed Capacity | MW | 27 MW | 27 MW | 27 MW |
| 2 | Generation | MU | 84.39 | 85.29 | 85.29 |
| 3 | PLF | % | 35.68 | 36.06 | 36.06 |
| 4 | Plant Availability | ok |  |  |  |
| 5 | Auxiliary Consumption |  |  |  |  |
|  |  | MU | 0.24 | 0.29 | 0.29 |
|  |  | % | 0.28 | 0.34 | 0.34 |
| 6 | Net Generation | MU | 84.15 | 85.00 | 85.00 |
| 7 | Station Heat Rate | Kcal / kWh | Not Applicable |
| 8 | Calorific Value of Coal (Weighted Average) | Kcal / Kg |
| 9 | Coal Transit Loss | ok |
| 10 | Total Coal Consumption | Tonnes |
| 11 | Total Oil Consumption | KL |
| 12 | Specific Oil Consumption | m I/kWh |
| 13 | Calorific Value of Oil | Kcal / Litre |
| 14 | Price of Coal | Rs. / Tonne |
| 15 | Price of Oil | Rs. / KL |
| 16 | Total Coal Cost | Rs. Crores |
| 17 | Total Oil Cost | Rs. Crores |
| 18 | Total Fuel Cost | Rs. Crores |

**Comments of the Commission:**

The details of Hydel stations and Diesel stations should be furnished separately from FY 2017-18 onwards invariably.

**Reply:**

Complied.

**Comments of the Commission:**

DPN is directed to submit the generation details along with the petition every year.

**Suggestion: Physical verification of Consumer connections**

Physical verification of all consumer connections be done to verify the number of no meter connections, defective meters, wrong classification of categories, unauthorized connections, unauthorized additional load, tempered seal of the meter etc.

For this purposed an action plan should be chalked out making each sub-division as a unit and deploying all staff in the sub-division for one day in a week to check all connections in a nominated section on that day. Thus, in a month, four sections will be covered.

To execute this operation, the staff should be divided into batches making Junior Engineer as team leader who will record consumer wise data of all connections checked. This will hardly take two to three months to complete 100% physical verification of connections.

A brief outcome of the operation may also be reported to the Commission along with action proposed on the reports.

**Compliance:**

It is submitted that the department has undertaken physical verification of the consumer connections, although all the consumers have not be covered. A brief report on the outcome will be submitted by 31.03.2016.

**Comments of the Commission:**

The report may be submitted by 31.03.2016 invariably.

**Reply:**

The report is being compiled and shall be submitted separately. The Hon’ble Commission may kindly allow the same.

**Comments of the Commission:**

DPN is directed to conduct physical verification of the consumer connections and submit report within 30.09.2017.

**Directive 16: Separate Petitions be filed for true up of FY 2015-16 along with audited annual accounts and ARR for FY 2016-17 based on RE.**

The DPN is directed to file separate petitions for true up of FY 2015-16 along with audited annual accounts and annual performance review for FY 2016-17 as per RE along with next ARR and Tariff Petition for FY 2017-18 invariably.

All the petitions shall be self explanatory i.e. the information furnished in formats shall also be provided in the respective text of the petitions without fail.

**Reply:**

It is submitted that the Proforma Accounts of the Department has been completed and audited up-to FY 2014-15. The proforma Accounts for the FY 2015-16 is being compiled and True-up shall be submitted after the completion of audit.

**Comments of the Commission:**

DPN shall file the true-up petition for the FY 2015-16 & FY 2016-17 along with the next tariff petition. The petition shall be accompanied with the audited accounts of the respective year.

**Fresh Directive (FY 2017-18)**

**Directive 17: Assessment of arrears**

DPN is directed to conduct an exercise of review of Arrears from sale of power. This is required to be done category wise and division wise. The ageing analysis of the arrears is also required to be done. DPN should also identify the bad debts and recoverable debts. The report on the progress of the exercise shall be submitted to the Commission by 30.09.2017.

**Directive 18: Physical verification & assessment of stock**

Material stock has a huge impact on the cost of the capital works. DPN is directed to take an annual physical verification exercise of the stock and compile a stock register. The stock register shall provide the details of movement of stock along with the value. DPN shall submit the progress report on the same along with the next petition.

# WHEELING CHARGES

## 8.1 Wheeling Charges

The net ARR has been approved in chapter 5 table is ` 516.46Crores, `565.80Crores and `609.86Crores for the control period of the FY 2017-18, FY 2018-19 and FY 2019-20 respectively. The ARR approved is segregated into wire business and retail supply business in accordance with the matrix prescribed in Regulation 72. The allocation matrix is provided in table below:

Table 8.1: Allocation Matrix



## 8.2 Segregation of Cost

The total fixed cost excluding power purchase/generation costs and transmission charges are segregated into wire business and retail supply business as per the above matrix as detailed in table below:

Table 8.2: Segregation of Wire and Retail Supply Costs for FY 2017-18



Table 8.3: Segregation of Wire and Retail Supply Costs for FY 2018-19



Table 8.4: Segregation of Wire and Retail Supply Costs for FY 2019-20



## 8.3 Wheeling Tariff

The wheeling charges have been computed on the basis of approved costs of DPN for wire business and the total energy expected to be wheeled through its network. In the absence of segregated data on costs of operation of 33kV and 11kV networks and sales, wheeling charges are not segregated voltage wise. Combined wheeling charges determined are given in table below:

Table8.5: Wheeling Tariff approved by the Commission



 **The Commission approves wheeling Tariff at `2.26/Kwh, `2.32/Kwh and `2.26/Kwh for the FY 2017-18, FY 2018-19 and FY 2019-20 respectively.**

# FUEL AND POWER PURCHASE COST ADJUSTMENT

**9.1 Background**

Section 62 sub-section 4 of the Electricity Act, 2003 provides that no tariff or part of any tariff may ordinarily be amended, more frequently than once in every financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified. This provision of the Act requires the Commission to specify the formula for fuel surcharge.

Accordingly, the Commission has specified the formula for working out the Fuel and Power Purchase Cost Adjustment (FPPCA) charges and other terms and conditions of FPPCA allowed the distribution licensee to recover the FPPCA charges from the consumers vide Regulation 98 (13) of NERC (Terms and Conditions for determination of Tariff) Regulations, 2010.

Accordingly, the amount of Fuel and Power Purchase Cost Adjustment (FPPCA) charges shall be computed as under:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FPPCA(Ps./kWh) | = | Qc(RC­2–RC1)+Q0(RO2–RO1)+Qpp(RPp2­–Rpp1)+Vz+A | X | 100 |
| (QPg1 + Qpp1 + Qpp2) | X | [1 | - | L | ] |
| 100 |

Where,

|  |  |  |
| --- | --- | --- |
| Qc | = | Quantity of coal consumed during the adjustment period in Metric Tons (MT).  |
|  | = |  (SHR X Qpg) (1+TSL) X 1000/GCV, or actual whichever is less. |
| Rc1 | = | Weighted average base rate of coal supplied ex-power station coal yard as approved by the Commission for the adjustment period in `/MT  |
| Rc2 | = | Weighted average base rate of coal supplied ex-power station coal yard for the adjustment period in `/MT  |
| Qo | = | Actual Quantity of oil (in KL) consumedduring the adjustment periodornormativeoilconsumptionasper Tarifforderwhicheveris less. |
| Ro1 | = | Weighted average base rateof oil ex-powerstation(`/KL)approvedbytheCommissionfor theadjustmentperiod. |
| Ro2 | = | Weightedaverageactualrateofoil ex-powerstationsupplied(`/KL)during theadjustmentperiod. |
| Qpp | = | Total powerpurchasedfromdifferent sources(kWh)=Qpp2+Qpp3 |
| Qpp1   | = | Qpp3 $\left[1-\frac{TL}{100}\right]$ in kWh |
| TL | = | Transmissionloss(CTU)(inpercentageterms). |
| Qpp2 | = | Power Purchase from sources with delivery point within the state transmission or distribution system (in kWh) |
| Qpp3 | = | Power Purchase from sources on which CTU transmission loss is applicable (in kWh) |
| Rpp1 | = | Average rate of Power Purchase as approved by the Commission (`/kWh) |
| Rpp2 | = | Average rate of Power Purchase as approved by the Commission (`/kWh) |
| Qpg | = | Own power generation (kWh) |
| Qpg1 | = | Own Power generation (kWh) at generator terminal – approved auxiliary consumption  |
| L | = | Percentage T&D loss as approved by the Commission or actual, whichever is lower. |
| SHR | = | Station Heat Rate as approved by the Commission (Kcal / kWh) |
| TSL | = | Percentage Coal Transit and Stacking Loss as approved by the Commission |
| GCV | = | Weighted average gross calorific value of coal as fired basis during the adjustment period (Kcal / Kg) |
| VZ | = | Amount of variable charges on account of change of cost of unknown factors like water charges, taxes or any other unpredictable and unknown factors not envisaged at the time of Tariff fixation subject to prior approval of the Commission (`) |
| A | = | Adjustment, if any, to be made in the current period to account for any excess / shortfall in recovery of fuel of Power Purchase cost in the past adjustment period, subject to the approval of the Commission (`) |

If there are more than one power stations owned by the Licensee Qc, Rc1, Rc2, Qo, Ro1, Ro2, Qpg and Qpg1 will be computed separately for each power station and sum of the increase/decrease of cost of all power stations shall be taken into consideration.

The Generating Company can levy FPPCA charges with the prior approval of theCommission.

Terms and conditions for application of the FPPCA formula

1) The basic nature of FPPCA is ‘adjustment’ i.e. passing on the increase or decrease in the fuel costs and power purchase cost, as the case may be, compared to the approved fuel costs and power purchase costs in this Tariff Order.

2) The operational parameters / norms fixed by the Commission in the Tariff Regulations / Tariff Order shall be the basis of calculating FPPCA charges.

3) The FPPCA will be recovered every month in the form of an incremental energy charge (`/kwh) in proportion to the energy consumption and shall not exceed 10% of the approved avg. cost of supply in the Tariff order and balance amount, if any, in the FPPCA over and above this ceiling shall be carried forward to be billed in subsequent month.

4) Incremental cost of power purchase due to deviation in respect of generation mix or power purchase at higher rate shall be allowed only if it is justified to the satisfaction of the Commission.

5) Any cost increase by the licensee by way of penalty, interest due to delayed payments, etc. and due to operational inefficiencies shall not be allowed.

6) FPPCA charges shall be levied on all categories of consumers.

7) Distribution licensee shall file detailed computation of actual fuel cost in `/kWh for each month for each of power stations of the state generators as well as cost of power purchase (Fixed and Variable) from each source/station and a separate set of calculations with reference to permitted level of these costs.

8) The data in support of the FPPCA claims shall be duly authenticated by an officer of the licensee, not below the rank of Chief Engineer on an affidavit supported with the certified copy of energy bills of power purchase, transmission and RLDC charges, bill for coal purchase and its transportation cost, oil purchase bill and the quantity of coal and oil consumed during the month.

9) Levy of FPPCA charge will be allowed only when it is ten (10) paise or more per unit. If it is less than 10 (ten) paise/unit, the same may be carried forward for adjustment in the next month.

10) The incremental cost per kWh due to this FPPCA arrived for a month shall be recovered in the energy bill of the month subsequent to the order of the Commission approving FPPCA with full details of rate and unit(s) on which FPPCA charges have been billed. The Generating Company and the Distribution Companies shall provide along with the proposal of FPPCA (as applicable to them) for a month, a compliance report of the previous order of the commission in respect of FPPCA.

ANNEXURE - I

**MINUTES OF THE 11th MEETING OF**

**STATE ADVISORY COMMITTEE,**

**NAGALAND ELECTRICITY REGULATORY COMMISSION, KOHIMA.**

The 11th State Advisory Committee (SAC) Meeting of the Nagaland Electricity Regulatory Commission (NERC) was held at the Conference Hall of the Engineer-in-Chief, Power Department, Nagaland, Kohima on 24thMarch, 2017. The Meeting was chaired by Er. ImlikumzukAo, Chairman and Ex-Officio Chairman (SAC).

The following SAC Members and Special invitees attended the meeting:-

***SAC Members:-***

1. Capt. HekiyeSema.
2. Mr. C. R. Lotha.
3. Mr. Meren Paul.
4. Mr. BishnuBhattacharjee.
5. Mr. Jonas Yanthan.
6. Mr. KekhriengulieThenuo.

*(The other members could not attend the meeting due to certain unavoidable circumstances).*

***Special Invitees:-***

Engineer-in-Chief (Power), Director NRE and Chief Electrical Inspector could not attend the meeting due to the State Assembly Session. However, their representatives were present.

* 1. Er. VitosheRochill, Addl.CE (Civil) *DPN, Nagaland.*
	2. Er. KeviletouYiese, Suptd. Engineer (*Revenue), DPN, Nagaland.*
	3. Er. ShikatoSema, Suptd. Engineer (*T*), *DPN, Nagaland.*
	4. Er. Wabangmeren Jamir, Executive Engineer (*Revenue*), *DPN, Nagaland.*
	5. Er. VisakhoTherie, Executive Engineer (Civil) *DPN, Nagaland.*
	6. Er. T. K. Halder, Electrical Inspector- *Deptt. of Electrical Inspectorate, Nagaland.*
	7. Mr. Arvind Tewari, Director, ACE Business, Kolkata.
	8. Mr. B. Mallick, Manager, ACE Business, Kolkata.

The Hon’ble Chairman while welcoming all the SAC members & invitees explained that the meeting was held in the Power Department as the NERC office building was burned down during the recent mob agitation. He also said that despite the inconveniences, the meeting was convened in order to discuss the important issues including the finalization of Power Tariff for FY 2017-18 which is to be issued to Power Department within March, 2017.

**Agenda:**

1. **Review of the 10thSAC meeting.**

As per the resolution adopted in the 10th SAC meeting, the Members reviewed the last Meeting Minutes on the following points:

1. **Unbundling and Corporatization:**

In regard to unbundling & corporatization, the members were informed that the Commission has written to the State Government in September, 2016, advising unbundling & corporatization of Power Department as recommended by International Management Institute (IMI), New Delhi in the year 2006 which is now at the Government level under examination.

The members discussed about the other states including the neighboring state of Manipur who have already corporatized the power sector following which, they are performing very satisfactorily.

The members resolved to advise the Commission to take further step on the matter.

1. **Establishment of CGRF & Ombudsman:**

The Department officials present in the meeting informed that Establishment of CGRF & Ombudsman is linked up with the Standard of Performance (SoP) for which there is a huge financial implication. Therefore, due to fund constraint the said forum and SoP cannot be implemented at this juncture.

The members seriously deliberated on the establishment of CGRF & Ombudsman and observed that though it is mandatory as per Electricity Act, 2003, Nagaland and J&K are the only two states in the country which have not done so.

The members resolved to advise the Commission to take further step on the matter.

1. **186 MW Dikhu Hydro Electric Project:**

The Department officials present in the meeting informed that the disputes pertaining to land and nomenclature are amicably solved and the survey work has commenced. It was also informed that the aforesaid project will be developed through joint venture with a private firm and hence it is required to set up a corporation in the department to facilitate various activities specially the market borrowing for investment in development of the project which is now at the Govt. level for approval.

The members deliberated that the early completion of the said project will greatly benefit the consumers as the existing power supply in the State is insufficient.

The members resolved to advise the Commission to take further step on the matter.

**2) Multi Year Tariff Petition for theFY 2017-18.**

The Director, ACE Business, Kolkata, who is the Consultant for power tariff, informed the House that the Multi Year Tariff Petition (MYT) has been filed for the first time by the DPN. The consultant explained to the members present about the various aspects of the MYT and the advantages of adopting it over the single year tariff.

The Committee examined in depth the Tariff Petition for FY 2017-18 filed by the Department of Power, and was of the view that the proposed tariff hike of 7.51% is not reasonable as the same will only burden the honest paying consumers.

After thorough deliberation, the members advised the commission to go ahead with the petition filed by the department after ensuring that the proposed tariff hike of 7.51% is reduced to an extent so that the cost of power purchased is recovered during FY 2017-18.

**3) GOI initiative program on ‘’24x7 POWER FOR ALL’’ by 2018-19.**

The Power department apprised the members on the present status of the GoI initiative program on “24x7 Power for All” to be achieved by 2018-19. Further, the department official emphasized that the said initiative program will be executed by the State Government with the support of GOI as per the approved plans, schemes and policies. Also, stated that the present initiative can be achieved within the stipulated period depending upon the funds released by the GoI.

The meeting ended with the Chairman thanking all the members for making it convenient to attend the meeting despite their busy schedules.

*Sd/- Sd/-*

(**Er. IMLIKUMZUK AO**) (**W. Y. YANTHAN**)

 Chairman Secretary

 Nagaland Electricity Regulatory Nagaland Electricity Regulatory

 Commission (NERC), Kohima. Commission (NERC), Kohima.

ANNEXURE - II

**REVENUE FROM APPROVED/REVISED TARIFF FOR THE FY 2017-18**

****

 **APPENDIX**

**APPROVED TARIFFSCHEDULEFOR THE FY 2017-18**

|  |  |  |
| --- | --- | --- |
| **Sl. No.** | **Category** | **Rs./kwh** |
|  |  |  |
| **A.** | **1** | **CATEGORY ‘A’ DOMESTIC** |  |
| (a) up to 30 kwh | 3.55 |
| (b) 31 to 100 kwh | 4.75 |
| (c) 101 to 250 kwh | 5.75 |
| (d) Above 250 kwh | 6.70 |
|  | Monthly minimum charges (Rural) | Rs. 100.00 pm/kw of contract demand or part thereof |
|  | Monthly minimum charges (Urban) | Rs. 140.00 pm/kw of contract demand or part thereof |
| 2 | **CATEGORY ‘B’ INDUSTRIAL** |  |
| (a) up to 500 kwh | 5.10 |
| (b) 501 to 5000 kwh | 6.10 |
| (c) Above 5000 kwh | 7.00 |
|  | Monthly minimum charges | Rs.200.00 pm/kvaofcontract demand or part thereof |
| 3 | **CATEGORY ‘C’ BULK** | 6.10 |
|  | Monthly minimum charges | Rs.200.00 pm/kvaof contract demand or part thereof |
| 4 | **CATEGORY ‘D’ COMMERCIAL** |  |
| (a) up to 60 kwh | 6.50 |
| (b) 61 to 240 kwh | 7.70 |
| (c) Above 240 kwh | 8.80 |
|  | Monthly minimum charges | Rs.200.00 pm/kw of contract demand or part thereof |
| 5 | CATEGORY ‘E’ P.W.W. | 5.90 |
|  | Monthly minimum charges | Rs.100.00 pm/kva or part thereof |
| 6 | CATEGORY ‘F’ Public Light | To be recoveredfrom consumers\* |
| 7 | CATEGORY ‘G’ INTER-STATE | 5.60 |
| 8 | CATEGORY ‘H’ AGRICULTURE | 3.00 |
|  | Monthly minimum charges | Rs.75.00 pm/HP orpart thereof |
| 9 | CATEGORY ‘I’ TEMPORARY CONNECTION | DLF – 10.00Others – 13.00 |
| 10 | KutirJyoti(point) | Same as DLF |
| 11 | SINGLE POINT METERED RURAL | 3.50 |
| 12 | SINGLE POINT METERED URBAN | 4.50 |

\* Charges for public lighting have to be recovered from the Consumes of Domestic, Commercial, Industrial and Bulk categories at the rates shown below.

Domestic Rs. 10 per connection / month

Commercial Rs. 15 per connection / month

Industrial Rs. 20 per connection / month

Bulk Supply Rs. 25 per connection / month

|  |  |  |
| --- | --- | --- |
| **B.** | **OTHER CHARGES:** |  |
| (a) | Disconnection Charges | Rs. |
| i. Single phase L.T. | 150.00/connection |
| ii. Three phase L.T. | 250.00/ connection |
| iii. H.T. consumers (11 KV above) | 1500.00/ connection |
| (b) | Reconnection Charges |  |
| i. Single phase L.T. | 150.00/ connection |
| ii. Three phase L.T. | 250.00/ connection |
| iii. H.T. consumers (11 KV above) | 1500.00/ connection |
| **C.** | **METER RENT** | **Rs. per meter/month** |
| i. | Single phase L.T. | 20.00 |
| ii. | Three phase L.T.(whole current) | 50.00 |
| iii. | Three phase L.T.(CT operated) | 100.00 |
| iv. | 11 kv H.T. | 500.00 |
| v. | 33 kv H.T. | 750.00 |
| vi. | 66 kv EHV | 900.00 |
| vii. | 132 kv EHV | 1000.00 |
|  |  |  |
| **D.** | **METER TESTING CHARGES** | **Rs. per meter per test** |
| i. | Single phase L.T. | 100.00 |
| ii. | Three phase L.T. | 300.00 |
| iii. | H.T. consumers (11 KV above) | 1000.00 |
|  |  |  |  |
| **E.** | **SECURITY DEPOSIT** | **Rs. per connection** |
| i. | Single phase L.T. | 250 |
| ii. | Three phase L.T. | 750 |
| iii. | H.T. consumers (11 KV above) | 3000 |
| **F.** | **SURCHARGES (DELAYED PAYMENT)** | Rs. 0.10/kwh pm or part thereof |
|  |  |  |
| **G.** | **BILLING PERIODICITY** | Monthly |
| **H.** | **CHARGES OF POLES USAGE FOR ADVERTISEMENT** | **Rs.** |
|  | 1 | Charges for application and agreement forms | 100.00 |
| 2 | Charges towards dismantling of hoardings/banners | 300.00 |
| 3 | The pole rental charges for advertisements: - | Rs./month |
|  | a. Category I-Commercial area (Max size3'X2') | 100.00 |
|  | b. Category II - Residential area (Max size3'X2') | 60.00 |
|  | c. Category III-National Highway (Max size3'X2') (outside the city/town limit) | 40.00 |