

NAGALAND ELECTRICITY REGULATORY COMMISSION



ORDER ON
REVISED AGGREGATE REVENUE REQUIREMENT
AND
DETERMINATION OF TARIFF FOR THE FY 2018-19
FOR
DEPARTMENT OF POWER,
GOVERNMENT OF NAGALAND

Dated: 29th March, 2018.

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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.: 04/2018-19.

In the matter of

Determination of Tariff for the FY 2018-19 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 29th March, 2018)

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 Retail Tariff for the FY 2018-19 on 30.11.2017.
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 Revised ARR and determination of retail Tariff for the FY 2018-19 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 Revised ARR and Tariff Petition for the FY 2018-19.
5. Regulation 17 of the NERC MYT 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 Tariff Petition for the FY 2018-19 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 26th February, 2018.
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 17th March, 2018.
8. The proposal of DPN was also placed before the State Advisory Committee in its meeting held on 21st March, 2018 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 Revised ARR and Tariff Petition of DPN for the FY 2018-19 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 revised the ARR and the Tariff for the FY 2018-19.
11. The Commission has reviewed the directives issued earlier in the MYT Order for the FY 2017-18 to FY 2019-20 and noted that some of the directives are complied and some are partially attended. The Commission has dropped the directives complied 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 Revised ARR and Tariff petition for the FY 2018-19.
 3. Chapter 3: Power Sector in Nagaland - An overview.
 4. Chapter 4: Public hearing.
 5. Chapter 5: Analysis of Revised ARR alongwith Tariff Petition for the FY 2018-19 and approval of the Commission.
 6. Chapter 6: Tariff principles and design.
 7. Chapter 7: Directives.
 8. Chapter 8: Wheeling Charges for the FY 2018-19.
 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, 2018 and shall remain in force till 31st March, 2019 or till the next Tariff Order of the Commission.

Sd/-

Er. IMLIKUMZUK AO

Chairman-cum-Member,

NERC, Kohima.

Place: Kohima, Nagaland.

Date: 29.03.2018.

1. INTRODUCTION

1.1 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 21st February, 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 4th March, 2008 with the objectives and purposes for which the Commission has been established.

The Department of Power, Government of 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.

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

- a) Determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State: Provided that where open access has been permitted to a category of consumers under Section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;
- b) Regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;

- c) Facilitate intra-State transmission and wheeling of electricity;
- d) Issue licenses to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;
- e) Promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;
- f) Adjudicate upon the disputes between the licensees and generating companies; and to refer any dispute for arbitration;
- g) Levy fee for the purposes of this Act;
- h) Specify State Grid Code consistent with the Grid Code specified under Clause (h) of sub-section(1) of Section 79;
- i) Specify or enforce standards with respect to quality, continuity and reliability of service by licensees;
- j) Fix the trading margin in the intra-State trading of electricity, if considered, necessary;
- k) Discharge such other functions as may be assigned to it under the Act.

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

- a) Promotion of competition, efficiency and economy in activities of the electricity industry;
- b) Promotion of investment in electricity industry;
- c) Reorganization and restructuring of electricity industry in the State;

- d) Matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.

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

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

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

1.2 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 Revised ARR and Tariff Petition for the FY 2018-19 and file the petition in the month of November, 2017 for fixing the Tariff for the FY 2018-19. Accordingly, the DPN has filed the Tariff Petition for the FY 2018-19. In the petition, the DPN had estimated with an ARR of ₹ 565.80 Crores, the same as approved by the Commission in the MYT Order dated 28th March, 2017 for the FY 2018-19 and projected a gap of ₹ 186.56 Crores for the FY 2018-19.

1.3 Admission of the Petition and Public Hearing Process

The Commission observed that the petition 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 the FY 2018-19 was published by the DPN in the following newspapers.

Sl. No.	Name of the Newspaper	Language	Date of Publication
1	Nagaland Post	English	16.02.2018
2	The Morung Express	English	16.02.2018
3	Tir Yimiyim	Naga	16.02.2018

Through the public notice, the stakeholders/public were invited to file their objections and suggestions on the petition on or before 26th February, 2018.

No objection was received by the Commission on DPN petition.

1.4 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 17th March, 2018.

Sl. No.	Name of the Newspaper	Language	Date of Publication
1	Nagaland Post	English	07.03.2018
2	The Morung Express	English	07.03.2018
3	Eastern Mirror	English	07.03.2018

1.5 Public Hearing

Public hearing was held as scheduled on 17th March, 2018 at Conference Hall of the Engineer-in-Chief, Department of Power, Nagaland. During the public hearing no participant was present views on the petition of DPN before the Commission. The details of the public hearing are given in Chapter - 4.

1.6 Meeting of State Advisory Committee

The State Advisory Committee met on 21st March, 2018 at Conference Hall of the Engineer-in-Chief, Department of Power, Nagaland and discussed the revised ARR and Tariff proposal for the FY 2018-19 of DPN, The minutes of the Advisory Committee meeting are given in ANNEXURE – I.

2. 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 FY 2018-19 and Tariff proposal for the FY 2018-19 for meeting its expenses and the estimated revenue during the control period with the existing tariff. The projected ARR for the FY 2018-19 are shown in Table below.

Table 2.1: Aggregate Revenue Requirement projected by DPN

(₹ in Crores)		
Sl. No.	Particulars	FY 2018-19 (Projected)
1	Cost of Power Purchase	294.01
2	Cost of Generation	15.90
3	Cost of Fuel	0.00
4	Operation & Maintenance Expenses	116.95
5	Transmission Charges	43.53
6	SLDC Fees & Charges	0.00
7	Intra- state Transmission Charges	0.00
8	Interest & Finance Charges	0.00
9	Depreciation	93.91
10	Interest on Working Capital	11.85
11	Return on Equity	0.00
12	Prior period expenses	0.00
13	Provision for Bad Debt	0.00
14	Total Revenue Requirement	576.15
15	Less: Non Tariff Income	10.35
16	Less: Revenue from Sale of Power Exchange	0.00
17	Net Revenue Requirement (14-15-16)	565.80

(Source: Table 3.1 of ARR Petition)

2.2 Tariff

The DPN in its petition has submitted the proposed tariff for the FY 2018-19 as per the table below:

Table 2.2: Existing Tariffs v/s Proposed Tariffs for the FY 2018-19

Sl. No.	Category of Consumers	Existing Rate (In ₹/kwh)	Proposed Rate (In ₹/kwh)
1	Category 'A' Domestic		
a)	Up to 30 kwh	3.55	4.00
b)	31 to 100 kwh	4.75	5.00
c)	101 to 250 kwh	5.75	6.05
d)	Above 250 kwh	6.70	7.00
2	Category 'B' Industrial		
a)	Up to 500 kwh	5.10	5.40
b)	501 to 5000 kwh	6.10	6.40
c)	Above 5000 kwh	7.00	7.20
3	Category 'C' Bulk	6.10	6.20
4	Category 'D' Commercial		
a)	Up to 60 kwh	6.50	7.00
b)	61 to 240 kwh	7.70	8.10
c)	Above 240 kwh	8.80	9.00
5	Category 'E' PWW	5.90	6.20
6	Category 'F' Public Light	* To be recovered from the consumers	* To be recovered from the consumers
7	Category 'G' Agriculture	3.00	4.00
8	Category 'H' Temporary Connection	DLF - Rs. 10.00 Others - Rs. 13.00	DLF - Rs. 10.50 Others - Rs. 13.50
9	Category 'I' Inter-state	5.60	5.90
10	Kuti Jyoti (Point)	Same as DLF	Same as DLF
11	Single Point Metered Rural	3.50	4.00
12	Single Point Metered Urban	4.50	4.70
*	Charges for public lighting have to be recovered from the consumers of Domestic, Commercial, Industrial and Bulk categories at the rates shown below:		
a)	Domestic	Rs. 10 per connection / month	Rs. 10 per connection / month
b)	Commercial	Rs. 15 per connection / month	Rs. 15 per connection / month
c)	Industrial	Rs. 20 per connection / month	Rs. 20 per connection / month
d)	Bulk Supply	Rs. 25 per connection / month	Rs. 25 per connection / month

2.3 Prayers of DPN

The DPN has prayed in its petition for the following:

- To admit and approve the Petition for the FY 2018-19 alongwith Tariff proposal for the FY 2018-19.
- To approve the category-wise tariff submitted by DPN to meet revenue requirement for the FY 2018-19.

- To approve the suggestions regarding the tariff philosophy.
- Condone any 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 DPN serves 2,79,974 consumers of various categories with an annual energy consumption of about 571.15 MUs for the FY 2016-17.

3.2 Power Supply

3.2.1 Own Generation

DPN has its own hydel generation capacity of 27.50 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 (CGS) 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 including own Generation is 177.30 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)

Sl. No.	Source	Capacity (In MWs)	Allocation	
			(In %)	(In MWs)
A	Central Generating Stations			
I	NTPC			
1	Farakka STPS	1600	0.43	6.88
2	Kahalgaon STPS	840	0.42	3.53
3	Talcher STPS	1000	0.42	4.20
4	Bongaigaon TPS	500	4.93	24.65
	NTPC-Total	3940		39.26
II	NHPC			
1	Loktak HEP	105	6.44	6.76
	NHPC-Total	105		6.76
III	NEEPCO			
1	Doyang HEP (Incl. Free)	75	17.97	13.48
2	AGBPP	291	5.81	16.89
3	AGTPP	135	5.74	7.75
4	Khandong HEP	50	6.65	3.33
5	Kopili HEP	200	6.15	12.29
6	Ranganadi HEP	405	5.34	21.61
7	Kopili - II HEP	25	5.74	1.43
	NEEPCO-Total	1181		76.78
IV	OTPC			
1	Palatana	726	3.72	27.00
	OTPC-Total	726		27.00
V	Own Generation	28	100.00	27.50
VI	Total	5980		177.30

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:

I. Length of voltage wise lines

Sl. No.	Description	Length (In ckkm.)
1	132 kV	347.60
2	66KV	473.70
3	33kV	1,935.70
4	11kV	6,646.08
5	LT	11,252.10
6	Total	20,655.18

II. Voltage wise sub-stations

Sl. No.	Description	No.
1	132/66/33 kV	3
2	132/33 kV	3
3	66/33/11 kV	1
4	66/33 kV	9
5	66/11 kV	1
6	33/11 kV	102
7	33/0.4 kV	88
8	11/0.4 kV	3,516
9	Total	3,716

III. Power Transformers

Sl. No.	Description	Quantity (No.)	Capacity (In MVA)	Total Capacity (In MVA)
1	100 MVA, 132/66 kV	1	100	100.00
2	25 MVA, 132/66 kV	2	25	50.00
3	10 MVA, 132/66 kV	3	10	30.00
4	12.5 MVA, 132/33 kV	1	12.5	12.50
5	8 MVA, 132/33 kV	3	8	24.00
6	5 MVA, 132/33 kV	2	5	10.00
7	20 MVA, 66/33 kV	3	20	60.00
8	10 MVA, 66/33 kV	4	10	40.00
9	7.5 MVA, 66/33 kV	4	7.5	30.00
10	5 MVA, 66/33 kV	4	5	20.00
11	20 MVA, 66/11 kV	2	20	40.00
12	4.17 MVA, 11/66 kV	9	4.17	37.53
13	10 MVA, 33/11 kV	5	10	50.00
14	5 MVA, 33/11 kV	12	5	60.00
15	2.5 MVA, 33/11 kV	14	2.5	35.00
16	1.6 MVA, 33/11 kV	38	1.6	60.80
17	1 MVA, 33/11 kV	4	1	4.00
18	0.8 MVA, 33/11 kV	1	0.8	0.80
19	0.75 MVA, 33/11 kV	1	0.75	0.75
20	0.5 MVA, 33/11 kV	24	0.5	12.00
21	0.25 MVA, 33/11 kV	3	0.25	0.75
22	Total	140		678.13

IV. Distribution Transformers

Sl. No.	Capacity (In KVA)		Quantity (No.)	Capacity (In MVA)	Total Capacity (In MVA)
1	800	33/0.4 kV	1	0.8	0.80
2	500	33/0.4 kV	7	0.5	3.50
3	250	33/0.4 kV	10	0.25	2.50
4	100	33/0.4 kV	12	0.1	1.20
5	63	33/0.4 kV	11	0.063	0.69
6	50	33/0.4 kV	5	0.05	0.25
7	25	33/0.4 kV	42	0.025	1.05
8	1000	11/0.4 kV	1	1	1.00
9	800	11/0.4 kV	3	0.8	2.40
10	750	11/0.4 kV	9	0.75	6.75
11	500	11/0.4 kV	136	0.5	68.00
12	400	11/0.4 kV	2	0.4	0.80
13	315	11/0.4 kV	2	0.315	0.63
14	250	11/0.4 kV	386	0.25	96.50
15	200	11/0.4 kV	6	0.2	1.20
16	160	11/0.4 kV	6	0.16	0.96
17	160	11/0.4 kV	3	0.16	0.48
18	125	11/0.4 kV	2	0.125	0.25
19	100	11/0.4 kV	567	0.1	56.70
20	75	11/0.4 kV	1	0.075	0.08
21	63	11/0.4 kV	592	0.063	37.30
22	50	11/0.4 kV	7	0.05	0.35
23	25	11/0.4 kV	1689	0.025	42.23
24	16	11/0.4 kV	87	0.016	1.39
25	10	11/0.4 kV	39	0.01	0.39
26	Total		3626		327.39

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 2016-17 are given in the table below:

Table 3.2: Consumer Profile and Energy Sales for FY 2016-17

Sl. No.	Category	Energy Sales (In MUs)	Consumer (In No.)
1	Domestic including BPL	320.27	2,51,173
2	Commercial	74.30	21,968
3	Industrial Consumers	55.14	4,677
4	Public Lighting	12.87	621
5	Public Water works & Sewage	10.16	34
6	Irrigation & Agriculture	0.00	1
7	Bulk Supply	98.42	1,500
8	Outside state	0.00	-
9	Total	571.16	2,79,974

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 ARR and Tariff Petition for the FY 2018-19, 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 17th March, 2018 as scheduled.

During public hearing the participants from general public were given an opportunity to offer their views in respect of the ARR and Tariff Petition of DPN for the FY 2018-19. 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 Revised ARR & Tariff Petition for the FY 2018-19, the Commission directed the Department of Power, Government of Nagaland (DPN) to publish the Petition in newspapers in an abridged form duly inviting Comments/ Objections from public/ stakeholders.

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 Newspapers on 16th February, 2018, calling for objections/ suggestions/ comments, if any to be filed on or before 26th February, 2018. 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 Newspapers on 7th March, 2018 calling for public hearing to be conducted on 17th March, 2018 in the Conference Hall of the Engineer-in-Chief, Department of Power. Accordingly, the Public Hearing was conducted on 17th March, 2018 as scheduled.

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

1. Er. Imlikumzuk Ao, Chairman (NERC),
2. Shri. W. Yanthan, Secretary (NERC),
3. Er. Rukongutuo Suohu, EE (E), Department of Power, Kohima,
4. Er. Wabangmeren Jamir, EE (Rev), Department of Power, Kohima,
5. Shri. Limawapang, Legal Consultant (NERC),
6. Shri. Shivito Wotsa, A.O (NERC),
7. Er. Hekavi N Ayemi, Asst. Engineer (Tariff), NERC.

5. ANALYSIS OF AGGREGATE REVENUE REQUIREMENT FOR THE FY 2018-19

5.1 Energy Sales

Proper estimation of category wise energy sales is essential to determine the quantum of power purchase and the 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 2.80 lakhs consumers in their licensed area and the consumers are categorized as under.

Table 5.1: Category of Consumers

Sl. No.	Category
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 'T' Inter-state
10	Kuti Jyoti (Point)
11	Single Point Metered Rural
12	Single Point Metered Urban

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

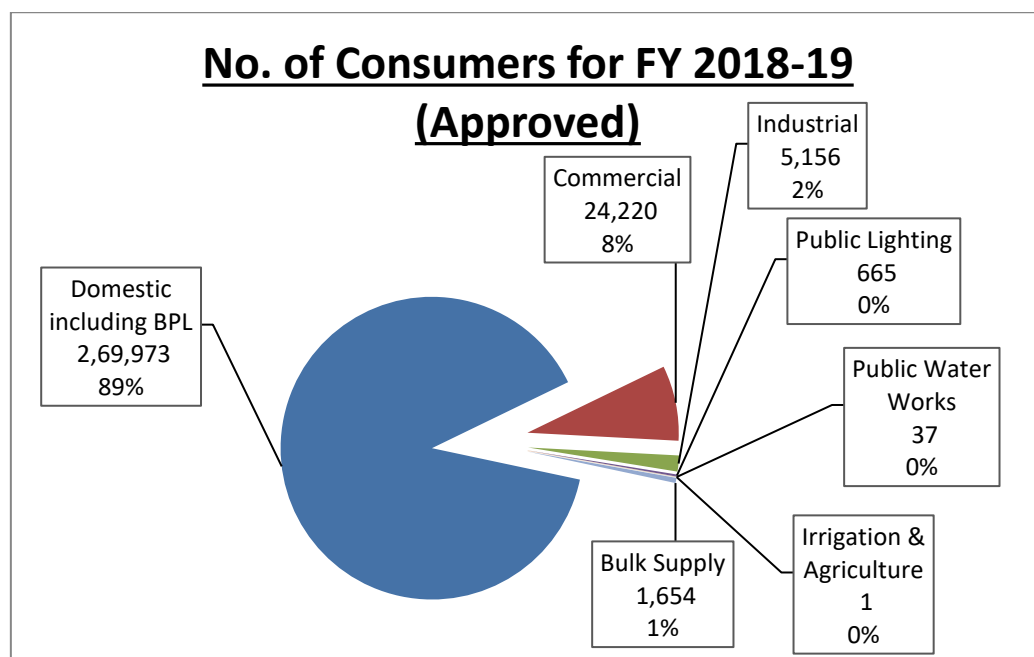
5.3 Growth of Consumers and Connected Load

As per the data given by the DPN & as same as approved in MYT Order dated 28th March, 2017, the Commission approves the No. of Consumers for the FY 2018-19 as given in the table below:

Table 5.2: Number of Consumers approved by Commission

(In No.)

Sl. No.	Category	FY 2018-19
1	Domestic including BPL	2,69,973
2	Commercial	24,220
3	Industrial	5,156
4	Public Lighting	665
5	Public Water Works	37
6	Irrigation & Agriculture	1
7	Bulk Supply	1,654
8	Outside State	-
9	Total	3,01,706



5.4 Category-wise Energy Sales

DPN has furnished category wise energy sales for the FY 2018-19 as same as approved by the Commission in the MYT Order dated 28th March, 2017, as given in the table below:

Table 5.3: Projected Energy Sales

(In MUs)

Sl. No.	Category	2018-19 (Projected)
1	Domestic including BPL	308.01
2	Commercial	109.99
3	Industrial	96.36
4	Public Lighting	14.64
5	Public Water Works	6.86
6	Irrigation & Agriculture	0.05
7	Bulk Supply	136.88
8	Outside State	0.00
9	Total	672.79

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 2016-17, the sales growth rate is worked out as detailed in the table below:

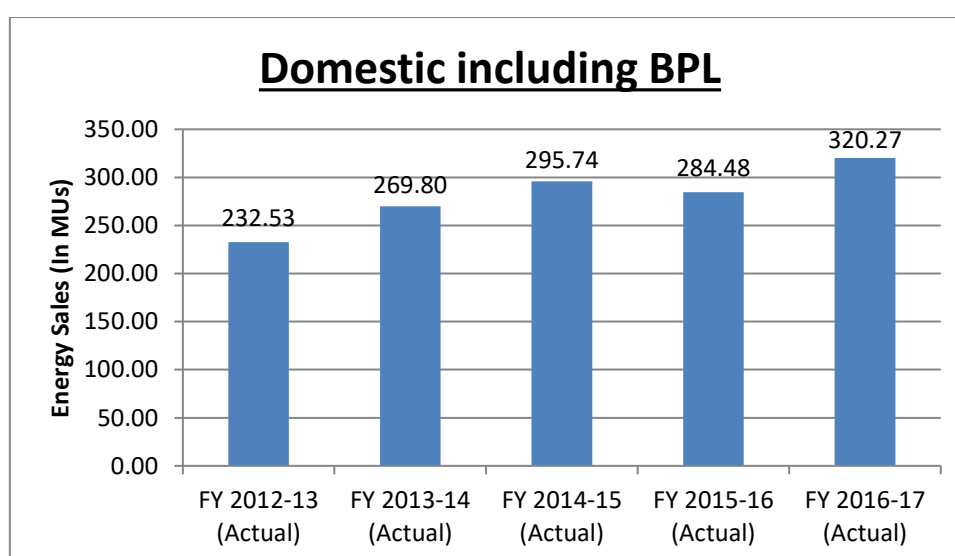
Table 5.4: Consumer Category-wise growth in Energy Sales

Sl. No.	Category	2012-13 (Actual)	2013-14 (Actual)	2014-15 (Actual)	2015-16 (Actual)	2016-17 (Actual)	CAGR for 4 years from FY 2012-13 to FY 2016-17	CAGR for 3 years from FY 2013-14 to FY 2016-17	CAGR for 2 years from FY 2014-15 to FY 2016-17	CAGR for YOY from FY 2015-16 to FY 2016-17
		(In MUs)							(In %)	
1	Domestic including BPL	232.53	269.80	295.74	284.48	320.27	8.33	5.88	4.06	12.58
2	Commercial	39.87	52.99	56.96	82.64	74.30	16.84	11.93	14.21	-10.09
3	Industrial	17.82	25.15	27.68	63.36	55.14	32.63	29.91	41.14	-12.97
4	Public Lighting	5.27	4.90	6.00	11.00	12.87	25.01	37.97	46.46	17.00
5	Public Water Works	3.07	3.10	3.29	4.59	10.16	34.88	48.54	75.73	121.35
6	Irrigation & Agriculture	0.04	0.02	0.05	0.00	0.00	-100.00	-100.00	-100.00	0.00
7	Bulk Supply	51.48	64.90	70.57	102.84	98.42	17.59	14.89	18.10	-4.30
8	Total	350.08	420.86	460.29	548.90	571.16				

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 308.01 MUs for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017, while the actual sales during FY 2016-17 is 320.27 MUs & 1st Half of the FY 2017-18 is 161.57 MUs. The trend of the actual consumption in the category for the FY 2012-13 to FY 2016-17 is shown in the chart below:

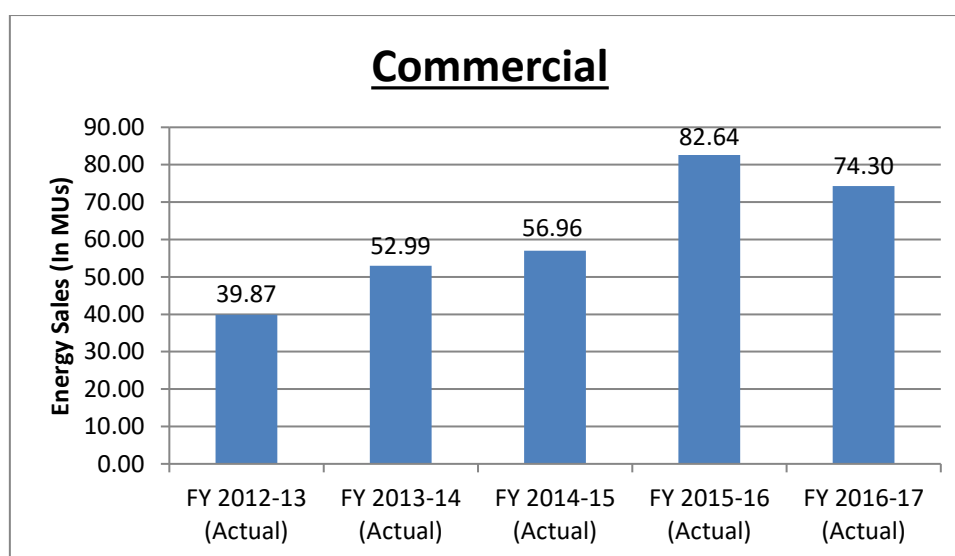


The four year growth rate is 8.33%, three year growth rate is 5.88%, two year growth rate is 4.06% and YoY growth rate is 12.58%. As the consumers are increasing year by year. 3 years growth rate per annum on the actuals sales during the FY 2016-17 is considered reasonable. Projection of sales during the FY 2018-19 with 3 year growth rate works out to 359.06 MUs.

The Commission approves the sales at 359.06 MUs for the FY 2018-19 for Domestic category.

Commercial

The DPN has projected energy sales for this category at 109.99 MUs for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017, while the actual sales during FY 2016-17 is 74.30 MUs & 1st Half of the FY 2017-18 is 44 MUs. The trend of the actual consumption in the category for the FY 2012-13 to FY 2016-17 is shown in the chart below:

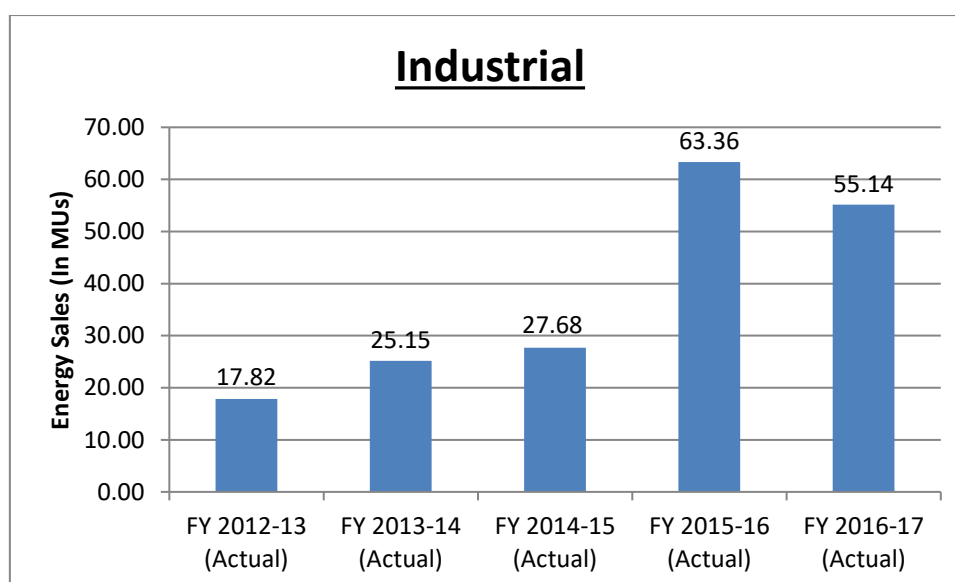


The four year growth rate is 16.84%, three year growth rate is 11.93%, two year growth rate is 14.21% and YoY growth rate is (-) 10.09%. The growth rate may not sustain, accordingly the Commission has considered 109.99 MUs for the FY 2018-19 as proposed by the DPN.

The Commission approves the sales at 109.99 MUs for the FY 2018-19 for Commercial category.

Industrial

The DPN has projected energy sales for this category at 96.36 MUs for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017, while the actual sales during FY 2016-17 is 55.14 MUs & 1st Half of the FY 2017-18 is 29.81 MUs. The trend of the actual consumption in the category for the FY 2012-13 to FY 2016-17 is shown in the chart below:

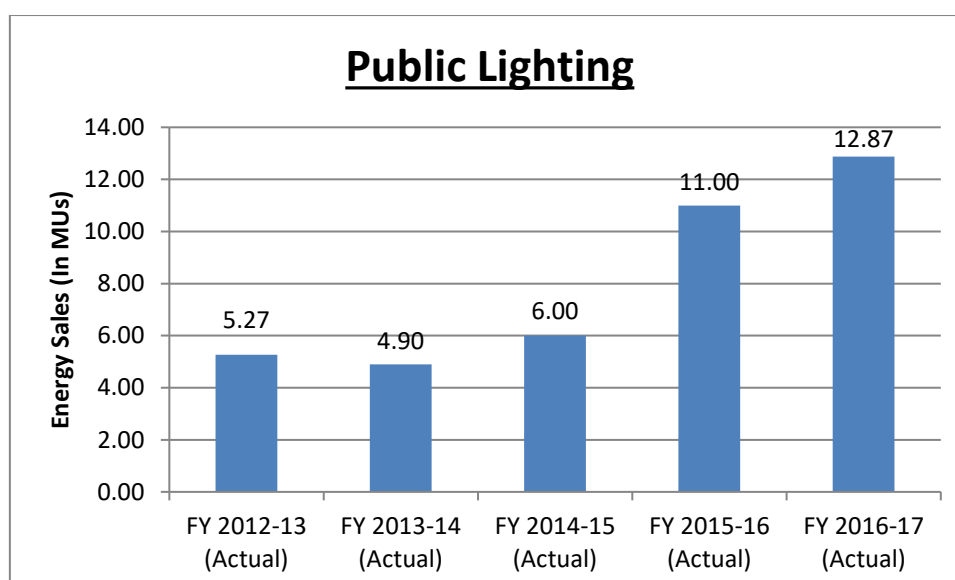


The four year growth rate is 32.63%, three year growth rate is 29.91%, two year growth rate is 41.14% and YoY growth rate is (-) 12.97%. The growth rate may not sustain, accordingly 10% growth rate is considered reasonable to project sales for the FY 2018-19 based on actual sales during the FY 2016-17, which works out to 66.72 MUs for the FY 2018-19.

The Commission approves the sales at 66.72 MUs for the FY 2018-19 for Industrial category.

Public Lighting

The DPN has projected energy sales for this category at 14.64 MUs for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017, while the actual sales during FY 2016-17 is 12.87 MUs & 1st Half of the FY 2017-18 is 5.48 MUs. The trend of the actual consumption in the category for the FY 2012-13 to FY 2016-17 is shown in the chart below:

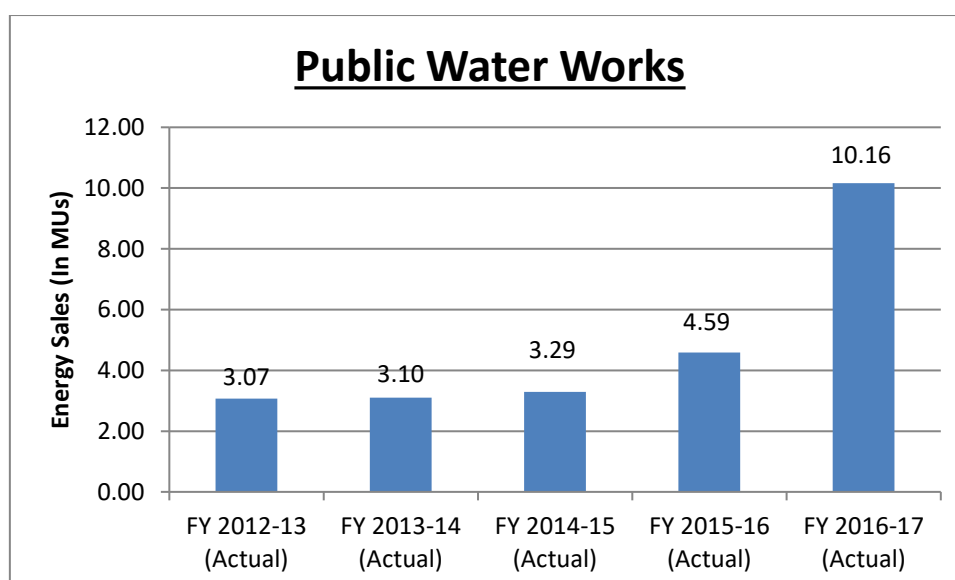


The four year growth rate is 25.01%, three year growth rate is 37.97%, two year growth rate is 46.46% and YoY growth rate is 17%. The growth rate may not sustain, accordingly 10% growth rate is considered reasonable to project sales for the FY 2018-19 based on actual sales during the FY 2016-17, which works out to 15.57 MUs for the FY 2018-19.

The Commission approves the sales at 15.57 MUs for the FY 2018-19 for Public Lighting category.

Public Water Works

The DPN has projected energy sales for this category at 6.86 MUs for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017, while the actual sales during FY 2016-17 is 10.16 MUs & 1st Half of the FY 2017-18 is 3.49 MUs. The trend of the actual consumption in the category for the FY 2012-13 to FY 2016-17 is shown in the chart below:

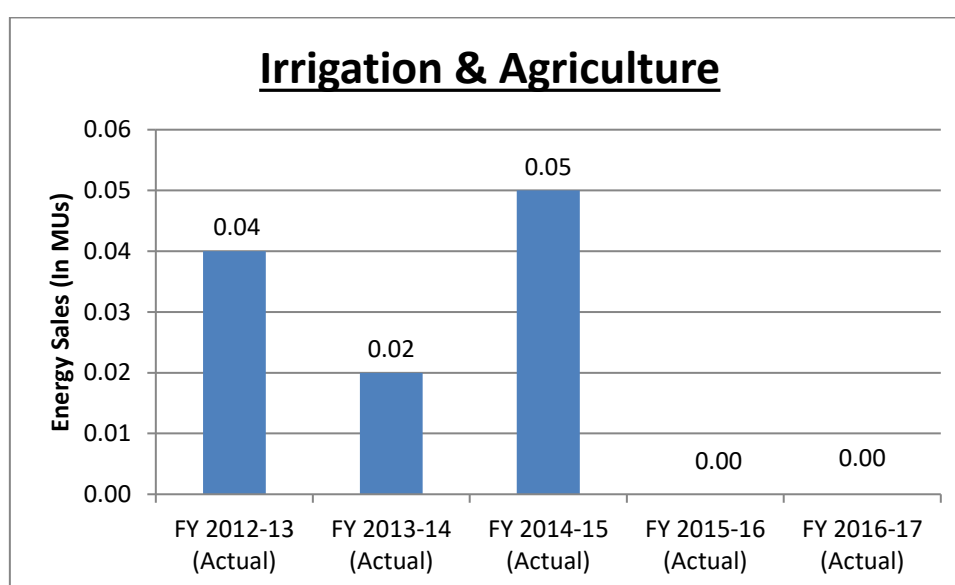


The four year growth rate is 34.88%, three year growth rate is 48.54%, two year growth rate is 75.73% and YoY growth rate is 121.35%. The growth rate may not sustain, accordingly the Commission has considered 6.86 MUs for the FY 2018-19 as proposed by the DPN.

The Commission approves the sales at 6.86 MUs for the FY 2018-19 for Public Water Works category.

Irrigation and Agriculture

The DPN has projected energy sales for this category at 0.05 MUs for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017, while the actual sales during FY 2016-17 is nil. The trend of the actual consumption in the category for the FY 2012-13 to FY 2016-17 is shown in the chart below:

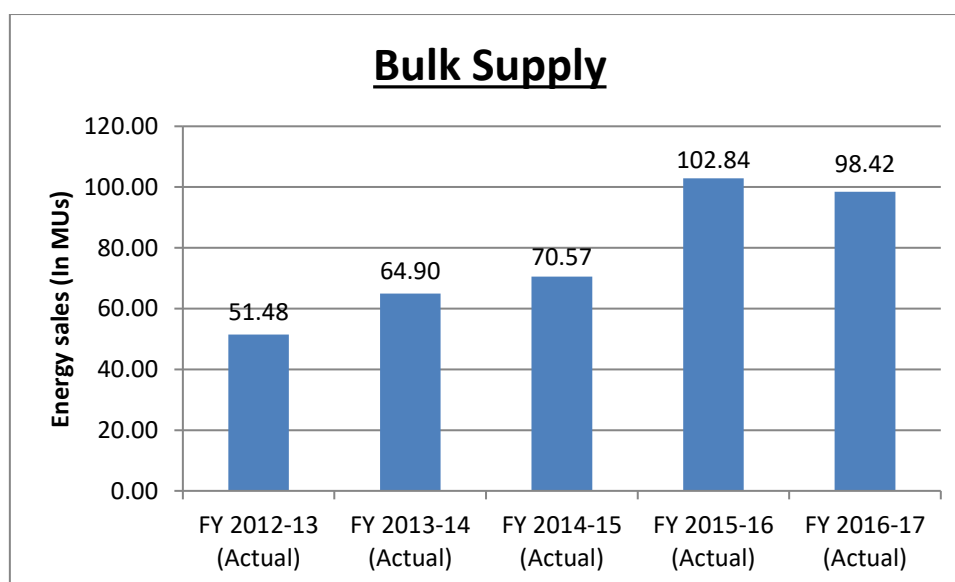


The growth rate may not sustain, accordingly the Commission has considered 0.05 MUs for the FY 2018-19 as proposed by the DPN.

The Commission approves the sales at 0.05 MUs for the FY 2018-19 for Irrigation and Agriculture category.

Bulk Supply

The DPN has projected energy sales for this category at 136.88 MUs for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017, while the actual sales during FY 2016-17 is 98.42 MUs & 1st Half of the FY 2017-18 is 53.31 MUs. The trend of the actual consumption in the category for the FY 2012-13 to FY 2016-17 is shown in the chart below:

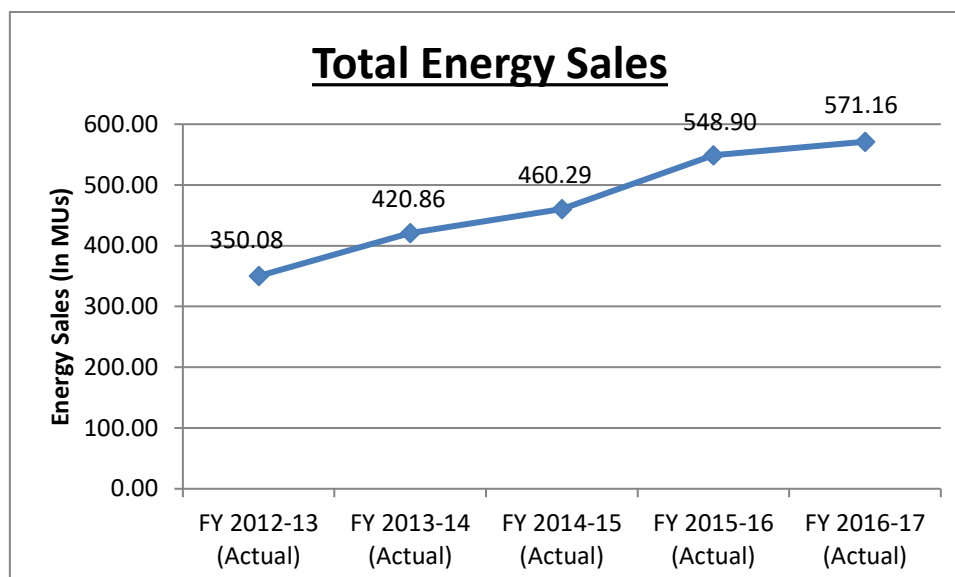


The four year growth rate is 17.59%, three year growth rate is 14.89%, two year growth rate is 18.10% and YoY growth rate is (-) 4.30%. The growth rate may not sustain, accordingly the Commission has considered 136.88 MUs for the FY 2018-19 as proposed by the DPN.

The Commission approves the sales at 136.88 MUs for the FY 2018-19 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 2016-17 is shown in the chart below:



5.5 Category-Wise Energy Sales

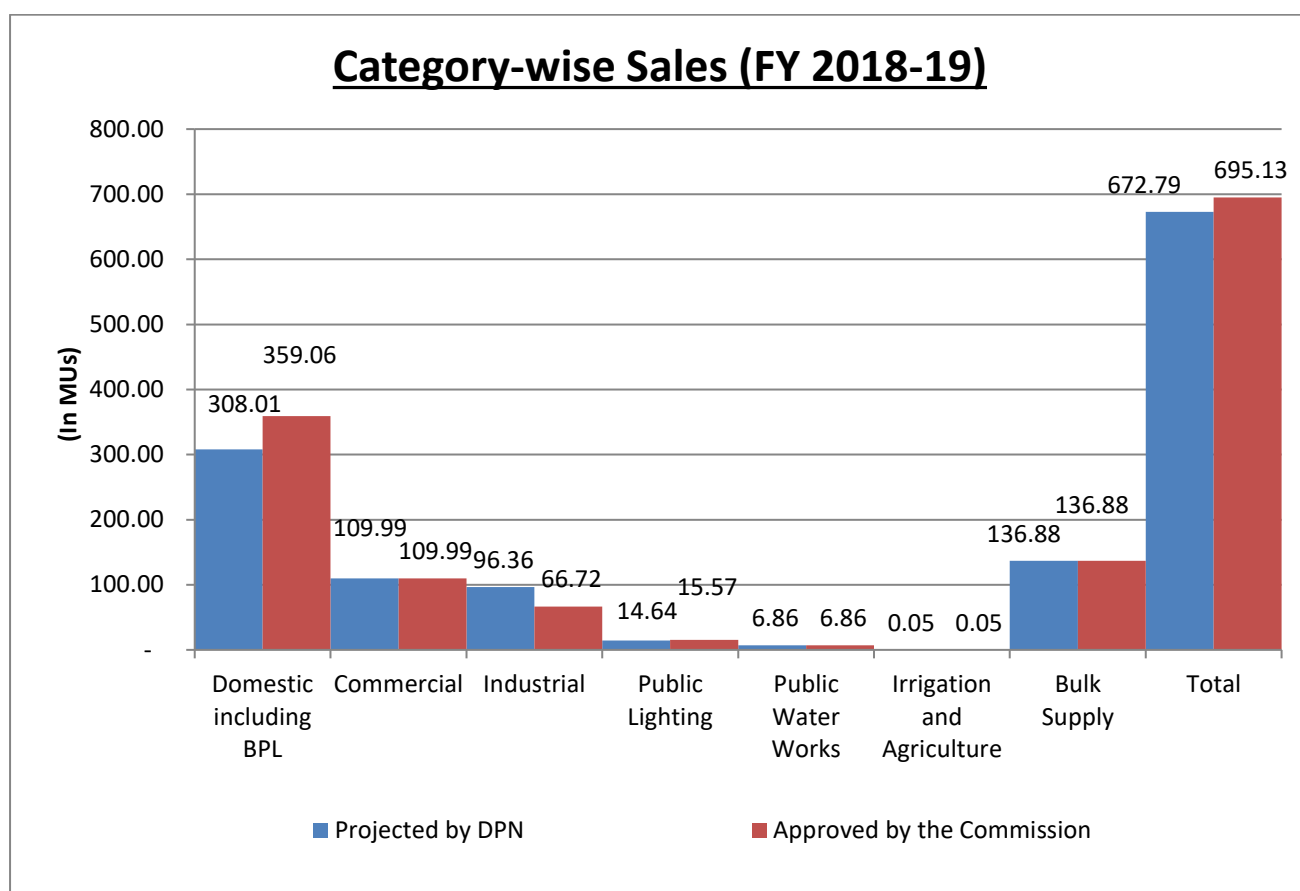
As discussed in para 5.4 supra category wise energy sales approved by the Commission for the FY 2018-19 are furnished in table below:

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

(In MUs)

Sl. No.	Category	FY 2018-19	
		Projected by DPN	Approved by the Commission
1	Domestic including BPL	308.01	359.06
2	Commercial	109.99	109.99
3	Industrial	96.36	66.72
4	Public Lighting	14.64	15.57
5	Public Water Works	6.86	6.86
6	Irrigation & Agriculture	0.05	0.05
7	Bulk Supply	136.88	136.88
8	Total	672.79	695.13

The below chart depicts the category-wise comparison of energy sales projected by EPDS and approved by the Commission for the FY 2018-19:

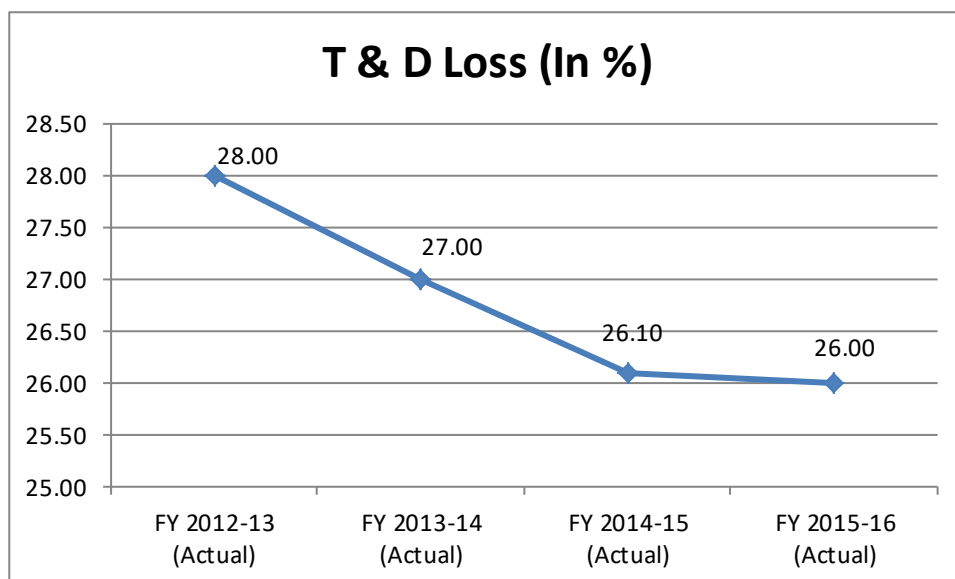


5.6 Transmission and Distribution Losses (T&D Losses)

DPN has projected the Distribution loss at 21.50% & Transmission loss at 3% and Total T&D losses at 24.50% for the FY 2018-19, as approved by the Commission in MYT Order dated 28th March, 2017.

Commission's Analysis:

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



The DPN did not submitted the actual T&D Losses for the FY 2016-17. The distribution losses projected by DPN for the FY 2018-19 have been examined by the Commission. The Commission had approved the transmission & distribution loss is segregated as average transmission loss of 3% and distribution loss at 21.50% for the FY 2018-19.

The Commission accordingly approves Transmission Losses of 3% and Distribution Losses at 21.50% for the FY 2018-19.

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 2018-19 is as given below:

Table 5.6: Energy Requirement Projected by DPN

(In MUs)	
Particulars	2018-19 (Projected)
ENERGY REQUIREMENT	
Energy Sales within State	672.79
Distribution Losses %	21.50
Distribution Losses (MUs)	184.27
Total Energy Requirement	857.06

Commission's Analysis:

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

Sl. No.	Particulars	Unit	FY 2018-19
1	Energy sales approved	MUs	695.13
2	Distribution Losses approved	%	21.50
3	Distribution Losses approved	MUs	190.38
4	Energy requirement	MUs	885.51

5.8 Energy Availability**5.8.1 Own Generation**

The DPN is having 1 HEP with an installed capacity of 27.50 MW. The 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

(In MUs)		
Sl. No.	Particulars	2018-19 (Projected)
1	Units Generated	90.91
2	Auxilliary Consumption	0.91
3	Net Generation	90.00

The EPDS has projected a generation of 90 MUs per annum from its own generating stations for the FY 2018-19, as approved by the Commission in the MYT Order dated 28th March, 2017.

Accordingly, the Commission approves own generation (Net) at 90 MUs per annum for the FY 2018-19 from its own generating stations as projected by DPN.

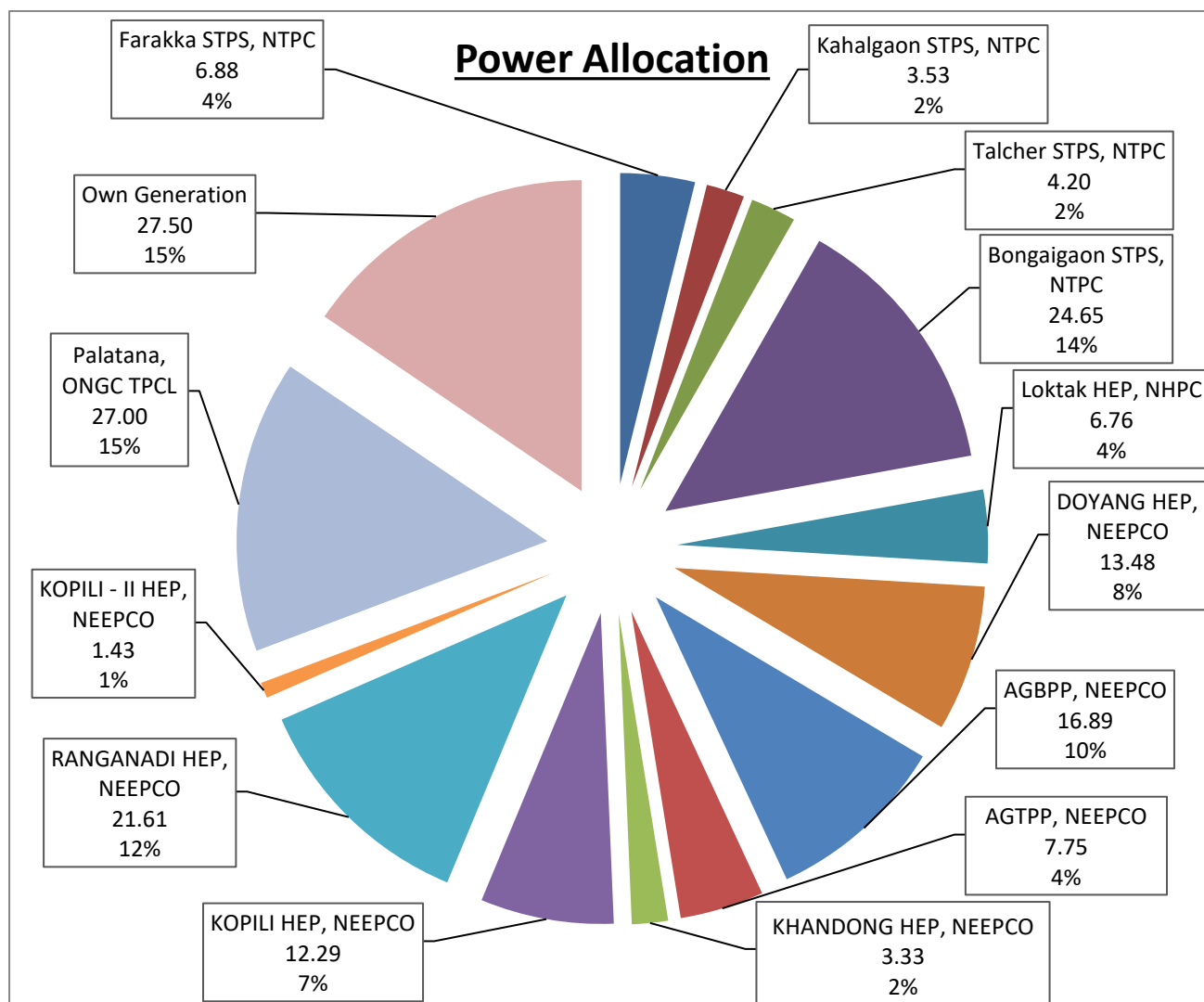
5.8.2 Power Purchase

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

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

Sl. No.	Source	Plant Capacity (MW)	Share in %	Share in MW
A	Central Generating Stations			
I	NTPC			
1	Farakka STPS	1600	0.43	6.88
2	Kahalgaoon STPS	840	0.42	3.53
3	Talcher STPS	1000	0.42	4.20
4	Bongaigaon TPS	500	4.93	24.65
	NTPC-Total	3940		39.26
II	NHPC			
1	Loktak HEP	105	6.44	6.76
	NHPC-Total	105		6.76
III	NEEPCO			
1	Doyang HEP (Incl. Free)	75	17.97	13.48
2	AGBPP	291	5.81	16.89
3	AGTPP	135	5.74	7.75
4	Khandong HEP	50	6.65	3.33
5	Kopili HEP	200	6.15	12.29
6	Ranganadi HEP	405	5.34	21.61
7	Kopili - II HEP	25	5.74	1.43
	NEEPCO-Total	1181		76.78
IV	OTPC			
1	Palatana	726	3.72	27.00
	OTPC-Total	726		27.00
V	Own Generation	28	100.00	27.50
VI	Total	5980		177.30

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 Drawals fro CGS and Other Sources

The DPN projected energy drawal of about 815.08 MUs in the FY 2018-19 as same as approved by the Commission in the MYT Order dated 28th March, 2017, as detailed in Table below:

Table 5.10: Summary of Power Purchase projected by DPN

(In MUs)

Sl. No.	Source	2018-19 (Projected)
A	Central Generating Stations	
I	NTPC	
1	FSTPS	45.94
2	KHTPS	28.59
3	TSTPS	32.05
4	BGTPP	45.74
	NTPC-Total	152.32
II	NHPC	
1	LOKTAK HEP	36.99
	NHPC-Total	36.99
III	NEEPCO	
1	DOYANG HEP	30.59
2	AGBPP	106.87
3	AGTPP	40.03
4	KHANDONG HEP	12.44
5	KOPII HEP	45.91
6	RANGANADI HEP	77.35
7	KOPII - II HEP	5.96
	NEEPCO - Total	319.15
IV	Other Stations/IPPs	
1	ONGCTPCL	136.84
2	GEPL	62.93
3	PTC	12.02
	Others-Total	211.79
B	UI	94.83
	Grand Total	815.08

Commission's Analysis:

The DPN had projected the power purchase including free energy at 815.08 MUs, as same as approved by the Commission in MYT Order dated 28th March, 2017. Now the approved power quantity for the FY 2018-19 is provided in the Table below.

Table 5.11: Power Purchase approved by the Commission

(In MUs)		
Sl. No.	Source	FY 2018-19
	Central Sector	
1	FSTPP, NTPC	45.94
2	KHSTPP, NTPC	28.59
3	TSTPP, NTPC	32.05
4	BGTPP, NTPC	45.74
5	LOKTAK HEP, NHPC	36.99
6	DOYANG HEP, NEEPCO	10.16
7	AGBPP, NEEPCO	106.87
8	AGTPP, NEEPCO	40.03
9	KHANDONG HEP, NEEPCO	12.44
10	KOPILI HEP, NEEPCO	45.91
11	RANGANADI HEP, NEEPCO	77.35
12	KOPILI - II HEP, NEEPCO	5.96
13	PALATANA, ONGCTPC,	136.84
	OTHER	
14	GEPL	62.93
15	PTC	12.02
16	UI / DEVIATION	123.60
17	FREE POWER	20.43
18	TOTAL	843.85

The Commission approves power purchase of 843.85 MUs for the FY 2018-19 including 20.43 MUs free power.

5.9 Energy Balance

The 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,

intra-state transmission losses have not been segregated by DPN. So, the intra state transmission losses is considered at 3% for the FY 2018-19.

Considering the above factors, the energy balance projected by the DPN & approved by the Commission are shown as detailed in Table below:

Table 5.13: Energy Balance approved by the Commission

Sl. No.	Particulars	(In MUs)	
		FY 2018-19	
		Projected	Approved
A	Energy Requirement		
1	Energy Sales	672.79	695.13
2	Distribution loss %	21.50	21.50
3	Distribution loss	184.27	190.38
4	Energy Requirement	857.06	885.51
B	Energy Availability		
5	Own generation	90.00	90.00
6	Power from ER	106.58	106.58
7	ER Total losses %	2.26%	2.14%
8	Regional Losses	2.41	2.28
9	Net Energy from ER (6-8)	104.17	104.30
10	Power from NER	613.67	613.67
11	Total power purchase (9+10)	717.84	717.97
12	NER Tr Loss %	2.66%	2.60%
13	NER Tr Loss	19.09	18.67
14	Net power available (11-13)	698.75	699.30
15	UI/ Deviation	94.83	123.60
16	Total power available at state periphery (5+14+15)	883.57	912.90
17	Intra state Tr Loss @ 3%	26.51	27.39
18	Net power available for sale in Distribution(16-17)	857.06	885.51
19	Surplus (18-4)	0.00	0.00

5.10 Aggregate Revenue Requirement

The components for calculation of revenue requirement (Total expenses) for the FY 2018-19 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 under each head with 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, as same as approved by the Commission in the MYT Order dated 28th March, 2017 for the FY 2018-19 is provided in Table below.

Table 5.14: Cost of Generation projected by DPN

(₹ in Crores)	
Particulars	FY 2018-19 (Projected)
Cost of Generation	15.90

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 the basis of function viz. Distribution, Transmission & Generation.

The Commission approves Cost of Generation at ₹ 15.90 Crores for the FY 2018-19 as projected by DPN.

5.13 Power Purchase Cost**Petitioner's Submission:**

DPN has projected power purchase cost at ₹ 294.01 Crores for the FY 2018-19, as approved by the Commission in the MYT Order dated 28th March, 2017.

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 2018-19 is proposed to be met from own generation & power purchase from available sources. The DPN had projected the same cost approved by the Commission in the MYT Order dated 28th March, 2017. Further, the Commission directs DPN to project the revised Cost as per the actual data/documents available in the time of Review & True-up.

Station-wise power purchase cost projected for the FY 2018-19, as same as approved by the Commission in the MYT Order dated 28th March, 2017 are furnished in table below.

Table 5.15: Power Purchase Cost projected by DPN

(₹ in Crores)

Sl. No.	Source	FY 2018-19
1	NTPC	
	FSTPP	18.70
	KHSTPP	10.51
	TSTPP	8.44
	BGTPP	37.71
2	NHPC	
	LOKTAK HEP	15.28
3	NEEPCO	
	DOYANG HEP	5.01
	AGBPP	48.08
	AGTPP	21.27
	KHANDONG HEP	2.75
	KOPILI HEP	4.77
	RANGANADI HEP	24.13
	KOPILI - II HEP	1.34
4	ONGCTPC	
	PALATANA	46.98
5	Other sources	
	GEPL	18.90
	PTC	4.46
	UI Purchase	24.93
6	Total Energy Purchase	293.26
7	Free Power	-
8	REC Purchase	0.75
9	Net Power Purchase Expenses	294.01

Commission Analysis:

As seen from the above, the DPN has claimed the power purchase cost for the FY 2018-19 at ₹ 294.01 Crores as approved by the Commission in MYT Order dated 28th March, 2017. The Commission has considered the power purchase cost at station-wise average rate on the basis of the rate approved by the Commission in MYT Order dated 28th March, 2017 to compute the power purchase cost for the FY 2018-19. Accordingly, the power purchase cost for the FY 2018-19 is worked out, as detailed in table below. Further, requirement towards RPO has also been recalculated 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

Sl. No.	Source	Capacity (In MWs)	Allocation	
			(In %)	(In MWs)
	Central Sector			
1	FSTPP, NTPC	1,600.00	0.43%	6.88
2	KHSTPP, NTPC	840.00	0.42%	3.53
3	TSTPP, NTPC	1,000.00	0.42%	4.20
4	BGTPP, NTPC	500.00	4.93%	24.65
5	LOKTAK HEP, NHPC	105.00	6.44%	6.76
6	DOYANG HEP, NEEPCO	75.00	5.97%	4.48
7	AGBPP, NEEPCO	291.00	5.81%	16.89
8	AGTPP, NEEPCO	135.00	5.74%	7.74
9	KHANDONG HEP, NEEPCO	50.00	6.65%	3.33
10	KOPI LI HEP, NEEPCO	200.00	6.15%	12.29
11	RANGANADI HEP, NEEPCO	405.00	5.34%	21.61
12	KOPI LI - II HEP, NEEPCO	25.00	5.74%	1.43
13	PALATANA, ONGCTPC,	726.00	3.72%	27.00
14	TOTAL	5,952.00		140.79

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

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

Sl. No.	Source	Energy received (MUs)	Unit Cost (₹ / Kwh)	Total Cost i/c supplementary bills (₹ in Crores)
1	NTPC			
	FSTPP	45.94	4.07	18.70
	KHSTPP	28.59	3.68	10.51
	TSTPP	32.05	2.63	8.44
	BGTPP	45.74	8.24	37.71
2	NHPC			
	LOKTAK HEP	36.99	4.13	15.28
3	NEEPCO			
	DOYANG HEP	10.16	4.93	5.01
	AGBPP	106.87	4.50	48.08
	AGTPP	40.03	5.31	21.27
	KHANDONG HEP	12.44	2.21	2.75
	KOPILI HEP	45.91	1.04	4.77
	RANGANADI HEP	77.35	3.12	24.13
	KOPILI - II HEP	5.96	2.25	1.34
4	ONGCTPC			
	PALATANA	136.84	3.43	46.98
5	Other sources			
	GEPL	62.93	3.00	18.90
	PTC	12.02	3.71	4.46
	UI/ Deviation	123.60	2.63	32.49
6	Total Energy Purchase	794.64		300.82
7	Free Power	20.43		-
8	REC Purchase			7.02
9	Net Power Purchase Expenses	815.07		307.84

The Commission approves the power purchase cost at ₹ 307.84 Crores including REC Purchase cost of ₹ 7.02 Crores & UI/Deviation Purchase cost of ₹ 32.49 Crores for the FY 2018-19.

5.14 Transmission and Other Chrages

The Transmission charges payable to PGCIL including SLDC Fees & Charges are estimated based on the quantum of power proposed for wheeling for the FY 2018-19 at ₹ 43.53 Crores as approved by the Commission in the MYT Order dated 28th March, 2017. The Transmission & Other Charges furnished by DPN for the FY 2018-19 is provided in the Table below.

Table 5.20: Transmission and Other Charges projected by DPN

(₹ in Crores)		
Sl. No.	Source	FY 2018-19
1	Transmission Charges	42.60
2	SLDC Fees and Charges	0.93
3	Total	43.53

Commission's Analysis:

The Commission has considered the transmission charges as projected by DPN.

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 the basis of function viz. Distribution, Transmission & Generation.

The Commission approves Transmission and Other Charges at ₹ 43.53 Crores for the FY 2018-19 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 for 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 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. The DPN has projected the employee cost in accordance with the Regulation 89.6 of The NERC (Multi Year Tariff) Regulations, 2016 at ₹ 107.62 Crores for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017. The employee expenses as projected by DPN is provided in the table below.

Table 5.21: Employee Cost projected by DPN

(₹ in Crores)	
Particulars	FY 2018-19 (Projected)
Employee Expenses	107.62

Commission's Analysis and Approval:

The Petitioner furnished the employee expenses at ₹ 107.62 Crores for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017. Further, the Commission directs DPN to project the revised Cost as per the actual data/documents available in the time of Review & True-up.

Now, The Commission approves Employee Expenses at ₹ 107.62 Crores for the FY 2018-19 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 at ₹ 3.28 Crores for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017. The A&G expenses as projected by DPN is provided in the table below.

Table 5.22: Administrative and General Expenses projected by DPN

(₹ in Crores)	
Particulars	FY 2018-19 (Projected)
A & G Expenses	3.28

Commission's Analysis:

The Petitioner furnished A&G Expenses at ₹ 3.28 Crores for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017. Further, the Commission directs DPN to project the revised Cost as per the actual data/documents available in the time of Review & True-up.

The Commission approves A&G Expenses at ₹ 3.28 Crores for the FY 2018-19 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 at ₹ 6.05 Crores for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017. The R&M expenses as projected by DPN is provided in the table below.

Table 5.23: Repair and Maintenance Expenses projected by DPN

Particulars	(₹ in Crores)
	FY 2018-19 (Projected)
R & M Expenses	6.05

Commission's Analysis:

The Petitioner furnished the Repair & Maintenance Expenses at ₹ 6.05 Crores for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017. Further, the Commission directs DPN to project the revised Cost as per the actual data/documents available in the time of Review & True-up.

The Commission approves Repair & Maintenance Expenses at ₹ 6.05 Crores for the FY 2018-19 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: Operation & Maintenance Expenditure approved by Commission

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19
1	Employee Expenses	107.62
2	Administrative & General Expenses	3.28
3	Repair & Maintenance Expenses	6.05
4	Total	116.95

5.16 Capital Expenditure & Capitalisation

DPN has undertaken significant capital expenditure during the FY 2018-19 and has plans to implement schemes for development of infrastructure during the FY 2018-19. The 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. The DPN has projected Capex for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017. The DPN had not furnished the revised plan for capital expenditure during the FY 2018-19. Further, the Commission directs DPN to project the revised Cost as per the actual data/documents available in the time of Review & True-up. The details of the capital expenditure & capital work in progress for the FY 2018-19 are outlined in the table below:

Table 5.26: Capital Works in Progress

(₹ in Crores)		
Sl. No.	Particulars	FY 2018-19
A	Opening Balance of CWIP	1,635.85
B	Fresh Investment during the year	291.26
C	Investment capitalised out of opening CWIP	-
D	Investment capitalised out of fresh investment	106.19
	Total Capitalisation during the year (C+D)	106.19
	Closing Balance of CWIP (A + B - C - D)	1,820.92

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 ₹ 291.26 Crores for the FY 2018-19 and capitalisation of ₹ 106.19 Crores during the FY 2018-19 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 had not submitted the updated Fixed Asset Register as on 31.03.2017. The 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

(₹ in Crores)		
Sl. No.	Particulars	FY 2018-19 (Projected)
A	Opening GFA	2,115.50
B	Additions during the year	106.19
C	Closing GFA	2,221.69
D	Total Depreciation	93.91

Commissions Analysis:

The DPN had not submitted the Fixed Asset Register as on 31.03.2017. The DPN has projected depreciation for the FY 2018-19 at ₹ 93.91 Crores as approved by the Commission in the MYT Order dated 28th March, 2017. Further, the Commission directs DPN to furnish the audited Fixed Asset Register as on 31.03.2018 with next filing of petition.

Accordingly, the Commission approves Depreciation at ₹ 93.91 for the FY 2018-19 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.

The DPN has not projected interest and finance charges during the FY 2018-19.

Commission's Analysis:

The Commission has not found any loan with EPDS. **As such, the Commission has not considered interest on loan for the FY 2018-19.**

5.19 Interest on Working Capital

The DPN has furnished the Interest on Working Capital for the FY 2018-19 in accordance with the Regulation 29.4 of The NERC (Multi Year Tariff) Regulations, 2016 at ₹ 11.85 Crores for the FY 2018-19 as approved by the Commission in the MYT Order dated 28th March, 2017. The Interest on working capital projected by the DPN is provided in table below:

Table 5.29: Interest on Working Capital projected by DPN

(₹ in Crores)	
Particulars	FY 2018-19 (Projected)
Interest on Working Capital	11.85

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 1st April 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

(₹ in Crores)		
Sl. No.	Particulars	FY 2018-19
A)	Receivables equivalent to 1 month of expected revenue from sale of electricity at prevailing rates	29.72
B)	Maintenance of spares at 1% of historical costs of fixed assets	22.22
C)	O&M Expenses for one month	9.75
D)	Amount held as Security Deposit in Cash	-
E)	Total Working capital ((A+B+C)-D)	61.69
F)	Rate of Interest @ SBAR of relevant year	12.80%
G)	Interest on Working Capital	7.90

The Commission approves the Interest on Working Capital at ₹ 7.90 Crores as against ₹ 11.85 Crores projected by DPN for the FY 2018-19.

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 FY 2018-19.

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 Return on Equity. 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 based on 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. The Non-Tariff income includes revenue from Meter Rent, Meter Testing Charge, Disconnection/Reconnection Charge and Other Departmental Charges. The Non-Tariff income for the FY 2018-19 has been projected at ₹ 10.35 Crores as approved by the Commission in the MYT Order dated 28th March, 2017. The Non-Tariff Income projected by the department is provided in table below:

Table 5.31: Non-Tariff Income projected by DPN

(₹ in Crores)	
Particulars	FY 2018-19 (Projected)
Non-Tariff Income	10.35

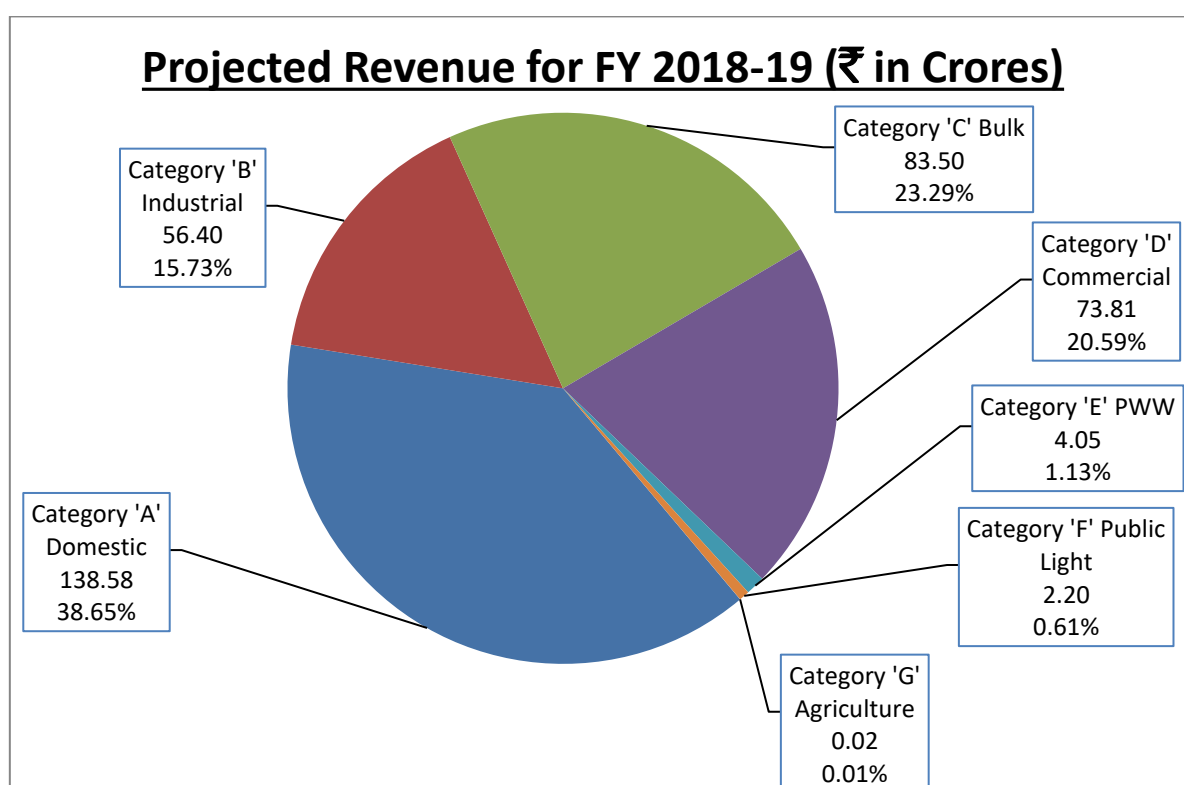
The Commission approves the Non-Tariff Income at ₹ 10.35 Crores for the FY 2018-19 as projected by DPN.

5.23 Revenue from Existing Tariff

The DPN has projected revenue from sale of energy with existing tariff at ₹ 358.54 Crores for the FY 2018-19.

Commissions Analysis:

Category wise revenue projected by DPN for the FY 2018-19 is provided in the chart below:



It is observed that the revenue from domestic category contributes about 38.65%, Hence, impact of change in tariff on the revenue is mostly dependent on these categories. However, Commercial, Industrial & Bulk category also has significant consumption. With the approved sales of 695.13 MUs within the state for the FY 2018-19, the revenue approved at the existing Tariff is detailed in table below:

Table 5.32: Revenue from Existing Tariff approved by the Commission for FY 2018-19

Sl. No.	Particulars	Energy Sales (In MUs)	Average Rate (₹/Kwh)	Amount (₹ in Crores)
1	Category 'A' Domestic	214.72	4.76	102.27
2	Category 'B' Industrial	66.72	5.59	37.30
3	Category 'C' Bulk	136.88	6.10	83.50
4	Category 'D' Commercial	109.99	6.66	73.31
5	Category 'E' PWW	6.86	5.90	4.05
6	Category 'F' Public Light	15.57	2.47	3.85
7	Category 'G' Agriculture	0.05	3.00	0.02
8	Category 'H' Temporary Connection	0.00	0.00	0.00
9	Category 'I' Inter-state	0.00	0.00	0.00
10	Kuti Jyoti (Point)	0.00	0.00	0.00
11	Single Point Metered Rural	125.68	3.50	43.99
12	Single Point Metered Urban	18.66	4.50	8.40
13	Total sales within State	695.13	5.13	356.67
14	Sales Outside State	0.00	0.00	0.00
15	Total Sales (13+14)	695.13	5.13	356.67

The Commission approves the revenue from the existing tariff at ₹ 356.67 Crores from sale of 695.13 MUs within the State at an average rate of at ₹ 5.13/Kwh.

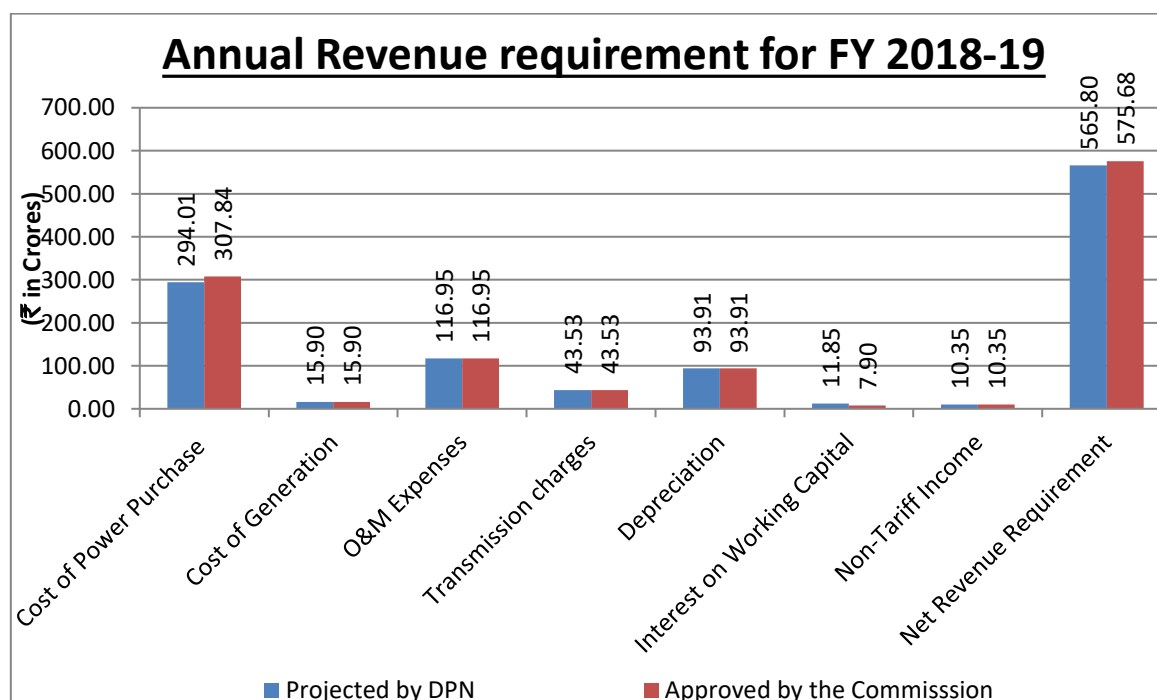
5.24 Aggregate Revenue Requirement (ARR)

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

(₹ in Crores)

Sl. No.	Particulars	FY 2018-19	
		Projected	Approved
1	Cost of Power Purchase	294.01	307.84
2	Cost of Generation	15.90	15.90
3	Cost of Fuel	0.00	0.00
4	Operation & Maintenance Expenses	116.95	116.95
5	Transmission charges	43.53	43.53
6	SLDC fees and charges	0.00	0.00
7	Intra- state Transmission Charges	0.00	0.00
8	Interest & Finance Charges	0.00	0.00
9	Depreciation	93.91	93.91
10	Interest on Working Capital	11.85	7.90
11	Return on Equity	0.00	0.00
12	Prior period expenses	0.00	0.00
13	Provision for Bad Debt	0.00	0.00
14	Total Revenue Requirement	576.15	586.03
15	Less: Non-Tariff Income	10.35	10.35
16	Less: Revenue from Sale of Power-Exchange	0.00	0.00
17	Net Revenue Requirement (14-15-16)	565.80	575.68



The Commission approves the Net Revenue Requirement of ₹ 575.68 Crores for the FY 2018-19.

5.25 Revenue Gap

Based on the approved Aggregate Revenue Requirement and revenue from existing tariffs at approved sales for the FY 2018-19, the resultant GAP is as shown in the table below.

Table 5.35: Revenue at Existing Tariff and Gap

(₹ in Crores)		
Sl. No.	Particulars	FY 2018-19
1	Net Revenue Requirement	575.68
2	Revenue from Retail Sales at Existing Tariff	356.67
3	Net Gap (1-2)	219.01
4	Energy Sales within the state (In MUs)	695.13
5	Average cost (In ₹/kwh)	8.28
6	Average revenue realisation (In ₹/kwh)	5.13

5.26 Recovery of Revenue Gap for the FY 2017-18

As seen from para 5.25 above there is a revenue gap of ₹ 219.01 Crores which is about 38.04% of net ARR for the FY 2018-19.

In this Petition the DPN has submitted as below:

“Tariff is a sensitive subject having substantial impact on social, economic and financial wellbeing of the public at large as well as the viability and growth of power sector. DPN proposes to recover a part of the gap through hike in tariff as recovery of the total gap would result in huge burden on the consumers. The proposed tariff for recovery of the gap is detailed in the subsequent section.

The basic requirement of any Tariff proposal is that it has to be transparent and justifiable against various policy guidelines and the framework evolved by the NERC and various SERCs. In the light of the experience gained by other utilities in implementation of the tariff orders and regulatory requirements specified under various states and policy guidelines an attempt has been made to improve upon the present tariff design. The Cost of supply computes to Rs.

8.41 per unit. Average revenue per unit at existing tariff is Rs.5.33 Thus, there is gap of Rs.3.08 per unit.

In view of the above submissions & general rise in prices DPN has proposed the increase in tariff. However, in this Tariff proposal only partial recovery of cost is proposed.”

However, DPN proposed an average increase in tariff by 5.77% to bridge the gap partially.

However, the Commission is of the view that 5.77% hike in tariff would put burden on the consumers and DPN has to improve its 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 2.93%, 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 ₹ 10.44 Crores as detailed in table below:

Table 5.36: Revenue from revised Tariff for FY 2018-19 approved by the Commission

Sl. No.	Particulars	Energy Sales (In MUs)	Average Rate (₹/Kwh)	Amount (₹ in Crores)
1	Category 'A' Domestic	214.72	4.89	105.05
2	Category 'B' Industrial	66.72	5.76	38.42
3	Category 'C' Bulk	136.88	6.30	86.23
4	Category 'D' Commercial	109.99	6.86	75.51
5	Category 'E' PWW	6.86	6.00	4.12
6	Category 'F' Public Light	15.57	2.47	3.85
7	Category 'G' Agriculture	0.05	3.00	0.02
8	Category 'H' Temporary Connection	0.00	0.00	0.00
9	Category 'I' Inter-state	0.00	0.00	0.00
10	Kuti Jyoti (Point)	0.00	0.00	0.00
11	Single Point Metered Rural	125.68	3.60	45.24
12	Single Point Metered Urban	18.66	4.65	8.68
13	Total sales within State	695.13	5.28	367.11
14	Sales Outside State	0.00	0.00	0.00
15	Total Sales (13+14)	695.13	5.28	367.11

With the revision of tariff, the DPN will generate additional revenue of ₹ 10.44 Crores. Thereby, the revenue gap is revised to ₹ 208.57 Crores (i.e. ₹ 219.01 Crores – ₹ 10.44 Crores), which the DPN shall meet from Government subsidy and by improving internal efficiency.

The Commission, accordingly, approves revenue from revised tariffs at ₹ 367.11 Crores with the energy sales of 695.13 MUs. Due to the approved tariff hike, the revenue gap has reduced to ₹ 208.57 Crores as against ₹ 219.01 Crores (approved in Para 5.25) for the FY 2018-19.

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, ₹ 208.57 Crores shall be met from Government subsidy.

6. TARIFF PRINCIPLES AND DESIGN

6.1 Background

- (a) The Commission in determining the revenue requirement of DPN for the FY 2018-19 and the retail tariff for the FY 2018-19 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.

- (b) 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 FY 2018-19. This guides the DPN for better performance by reduction of loss level, which will result in substantial reduction in average cost of supply.

- (c) Section 8.3 of National Tariff Policy lays down the following principles for tariff design:
- (i) 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.
 - (ii) 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 $\pm 20\%$ of the average cost of supply. The road map would have intermediate milestones, based on the approach of a gradual reduction in cross subsidy.
 - (iii) 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.
 - (iv) 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."

- (v) 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.
- (d) 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 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 Tariff Petition of DPN for the FY 2018-19 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 Kuti Jyoti (Point)
- 11 Single Point Metered Rural
- 12 Single Point Metered Urban

6.2.2 Existing & Proposed Tariff

DPN in its tariff petition for the FY 2018-19 has proposed for revision of the existing retail tariffs to various categories of consumers to earn additional revenue of ₹ 20.70 Crores to meet the gap partially as shown below:

The DPN has proposed tariff revision with an average increase of 5.77% from the existing tariff. In this Tariff proposal only partial recovery of cost is proposed. The summary of the tariff proposal by DPN for the FY 2018-19 is tabulated below:

Table 6.1: Existing Tariff v/s Proposed Tariff for FY 2018-19

Sl. No.	Category of Consumers	Existing Rate (In ₹/kwh)	Proposed Rate (In ₹/kwh)
1	Category 'A' Domestic		
a)	Up to 30 kwh	3.55	4.00
b)	31 to 100 kwh	4.75	5.00
c)	101-250 kwh	5.75	6.05
d)	Above 250 kwh	6.70	7.00
2	Category 'B' Industrial		
a)	Up to 500 kwh	5.10	5.40
b)	501 to 5000 kwh	6.10	6.40
c)	Above 5000 kwh	7.00	7.20
3	Category 'C' Bulk	6.10	6.20
4	Category 'D' Commercial		
a)	Up to 60 kwh	6.50	7.00
b)	61 to 240 kwh	7.70	8.10
c)	Above 240 kwh	8.80	9.00
5	Category 'E' PWW	5.90	6.20
6	Category 'F' Public Light	* To be recovered from the consumers	* To be recovered from the consumers
7	Category 'G' Agriculture	3.00	4.00
8	Category 'H' Temporary Connection	DLF - Rs. 10.00 Others - Rs. 13.00	DLF - Rs. 10.50 Others - Rs. 13.50
9	Category 'I' Inter-state	5.60	5.90
10	Kuti Jyoti (Point)	Same as DLF	Same as DLF
11	Single Point Metered Rural	3.50	4.00
12	Single Point Metered Urban	4.50	4.70
*	Charges for public lighting have to be recovered from the consumers of Domestic, Commercial, Industrial and Bulk categories at the rates shown below:		
a)	Domestic	Rs. 10 per connection / month	Rs. 10 per connection / month
b)	Commercial	Rs. 15 per connection / month	Rs. 15 per connection / month
c)	Industrial	Rs. 20 per connection / month	Rs. 20 per connection / month
d)	Bulk Supply	Rs. 25 per connection / month	Rs. 25 per connection / month

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 ₹ 208.57 Crores, the Commission considers to

revise the tariff under Telescopic billing with an average increase of 2.93% as detailed below:

Table 6.2: Tariff approved by the Commission for FY 2018-19

Sl. No.	Category of Consumers	Approved Rate (In ₹/kwh)
1	Category 'A' Domestic	
a)	Up to 30 kwh	3.65
b)	31 to 100 kwh	4.85
c)	101-250 kwh	5.95
d)	Above 250 kwh	6.95
2	Category 'B' Industrial	
a)	Up to 500 kwh	5.25
b)	501 to 5000 kwh	6.30
c)	Above 5000 kwh	7.20
3	Category 'C' Bulk	6.30
4	Category 'D' Commercial	
a)	Up to 60 kwh	6.70
b)	61 to 240 kwh	7.90
c)	Above 240 kwh	9.00
5	Category 'E' PWW	6.00
6	Category 'F' Public Light	* To be recovered from the consumers
7	Category 'G' Agriculture	3.00
8	Category 'H' Temporary Connection	DLF - Rs. 10.00 Others - Rs. 13.00
9	Category 'I' Inter-state	5.70
10	Kuti Jyoti (Point)	Same as DLF
11	Single Point Metered Rural	3.60
12	Single Point Metered Urban	4.65
*	Charges for public lighting have to be recovered from the consumers of Domestic, Commercial, Industrial and Bulk categories at the rates shown below:	
a)	Domestic	Rs. 10 per connection / month
b)	Commercial	Rs. 15 per connection / month
c)	Industrial	Rs. 20 per connection / month
d)	Bulk Supply	Rs. 25 per connection / month

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 01.04.2018 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.

Place: Kohima.

Date: 29.03.2018.

Sd/-

(Er. IMLIKUMZUK AO)

Chairman-cum-Member

NERC, Kohima.

7. DIRECTIVES

Background

While examining the information and data contained in the proposed Tariff petition for the FY 2018-19, it is observed 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 Revised ARR and determination of Tariff. 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.

Reply:

It is submitted that the Fixed Asset Register & Depreciation Register upto FY 2015-16 stands submitted. The department shall compile the Fixed Asset Register & Depreciation Register for the FY 2016-17 & submit the same to the Hon'ble Commission within 31.03.2018.

The Proforma Accounts for the FY 2014-15 has been audited by AG. The Accounts for the FY 2015-16 is being compiled and the same shall be submitted after the same is audited.

Comments of the Commission:

DPN is directed to compile & submit the updated Fixed Asset Register and the Annual Accounts along with the next Tariff Petition positively. Fixed Asset Register is required to be updated yearly.

Further, Power purchase is the major component of ARR, hence, DPN is directed to compile the source/utility wise details of power purchase units & cost. The detailed calculation of power purchase & transmission cost based on the CERC tariff orders for central generating/transmission utilities from which power is procured & PPAs signed in this respect is to be submitted. The details of power purchase cost for power procurements through bilateral/trading/banking mechanism is also to be reported. These reports are to be submitted 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.

Reply:

It is submitted that DPN is maintaining the information as required for Regulatory compliances.

Comments of the Commission:

It is observed from the Tariff Petition that several details like slab wise sales/revenue, function wise expenses/details apart from details of other parameters, is not available as required by the Regulations. DPN is directed to build up & maintain the data base & management information system (MIS) to provide the same in Tariff Petition filings.

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.

Reply:

It is submitted that DPN is taking steps to bring down the AT&C losses and for segregation of technical & commercial losses. Quarterly report on the steps taken in this regard as directed shall be submitted hence forth.

Comments of the Commission:

DPN is directed to submit the details of steps taken to bring down the pilferage of energy & segregation of technical & commercial losses by 30.06.2018.

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.	Kutir Jyothi	- 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. Kutir Jyothi	-	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.

Reply:

It is submitted that the details of replacement of defective meters shall be submitted separately by 31.01.2018. Hon'ble Commission may kindly allow the same.

Comments of the Commission:

DPN has not submitted the progress report till date. DPN is directed to submit the details by 30.06.2018.

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.

Reply:

It is submitted that DPN has not been able to conduct energy audit. However, steps shall be taken for compliance of the Directive and report shall be submitted.

Comments of the Commission:

DPN is directed to get the energy audit done & submit the report along with next Tariff Petition.

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 from 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.

Reply:

Details of all capital investments more than Rs. 5 Crores planned during the FY 2017-18 & 2018-19 shall be submitted by 31.01.2018. Hon'ble Commission may kindly allow the same.

Comments of the Commission:

DPN is directed to submit the proposal for approval of works costing more than Rs. 5 Crores to Commission from the FY 2018-19.

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.

Reply:

It is submitted that DPN has not been able to compile the data relating to security deposits and shall complete the exercise within the FY 2017-18. DPN shall submit the compliance report after the completion of the exercise. Hon'ble Commission may kindly allow the same.

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 by 30.06.2018.

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.

Reply:

It is submitted that DPN shall submit the progress report on realization of dues within 31.01.2018.

Comments of the Commission:

DPN is directed to make a comprehensive assessment of of total dues & do the aging analysis of the same. The dues with which are outstanding for more than 6 months/1 year are to identified and special drive is to be taken to recover the same. Further, the unrecoverable & doubtful dues are to be identified and reported separately.

DPN is directed to report the action taken in this regard before filing of the next Tariff Petition.

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.

Reply:

The progress report on the steps taken to bring down the transformer failure shall be submitted within 31.01.2018.

Comments of the Commission:

The DPN is directed to submit the details of transformer failures during the FY 2017-18 alongwith steps taken to bring down the same.

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.

Reply:

It is submitted that the Annual Accounts for the FY 2015-16 is being compiled and shall be ready by 30.11.2017. The true-up petition shall be submitted after the same is audited by AG.

Comments of the Commission:

DPN is directed to get the accounts updated and audited. The DPN must file the review & true -up petition based on the audited accounts along with the next Tariff petition positively.

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. 40 Crore 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.

Reply:

It is submitted that DPN has updated the Asset & Depreciation Register upto 31.03.2016. DPN shall initiate the exercise for yearly updating of Fixed Asset Register and submit the same along with the Tariff Petition.

Comments of the Commission:

DPN is directed to update the Fixed Asset Register and reconcile the same with CWIP. The Tariff Petition shall be filed on the basis of audited Annual Accounts & updated Fixed Asset Register.

Further, DPN is directed to submit the compliance report of regarding updation of Accounts & Fixed Asset Register by September, 2018.

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.

Reply:

It is submitted that DPN has not been able to complete the exercise of classification of street light points and their connected load therefore it is requested that 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.

Reply:

It is submitted that the sales from single point connections shall be submitted by 31.01.2018.

Comments of Commission:

DPN has not provided the details of single point consumers till date. It is directed to submit the same within 30.06.2018 positively.

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.

Reply:

It is submitted that the physical verification of all consumer connections has not been done. DPN shall conduct the exercise and submit report along with the next petition. Hon'ble Commission may kindly allow the same.

Comments of the Commission:

DPN shall complete the exercise by 30.06.2018 and report compliance to the Commission.

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.

Reply:

It is submitted that DPN has not been able to conduct the exercise of review of Arrears from sale of power. It is submitted that the Hon'ble Commission may kindly allow the same to be filed along with the next petition.

Comments of the Commission:

DPN is directed to conduct the exercise of review of Arrears from sale of power and report the status by 30.09.2018 to the Commission.

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.

Reply:

DPN shall initiate the exercise of Annual Physical verification of stock and submit the report. Hon'ble Commission may kindly time till 30.06.2018 for compliance of the Directive.

Comments of the Commission:

DPN is directed to submit the status by 30.06.2018 to the Commission.

Fresh Directive (FY 2018-19)**Directive 19: Consumer Awareness/ Sensitisation**

The DPN is directed to carry out “Consumer Awareness / Sensitisation” campaigns so as to educate the consumers and the general public on the various initiatives and subsidies announcement by the government and manner of obtaining these benefits.

The DPN is also directed to create awareness and sensitise its employees on the need to be fully aware of various acts, rules & regulations, safety practices etc., DPN may consider imparting trainings, arrangement workshops etc. for its employees.

Directive 20: Renewable Energy Projects

As the Government of India is keen on building up its Renewable Energy capacity, the State could also look at the option of taking up Renewable Energy projects to increase its overall generation capacity.

Directive 21: Filing of Revised ARR

It is observed that the DPN had not filed the revised ARR against ARR approved in the MYT Order, based on the actual data for the relevant current year. As such, it is directed that the DPN must be submitted the revised ARR with all relevant documents/data alongwith the Tariff Petition in future.

8. WHEELING CHARGES

8.1 Wheeling Charges

The net ARR has been approved in chapter 5 is ₹ 575.68 Crores for the FY 2018-19. 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

(In %)			
Sl. No.	Particulars	Wire Business	Retail Supply Business
1	Power Purchase Expenses	0	100
2	Standby Charges	0	100
3	Employee Expenses	60	40
4	Administration & General Expenses	50	50
5	Repair & Maintenance Expenses	90	10
6	Depreciation	90	10
7	Interest on Long-term Loan Capital	90	10
8	Interest on Working Capital and on consumer security deposits	10	90
9	Bad Debts Written off 0% - 100% Income Tax	90	10
10	Transmission Charges intra-State	0	100
11	Contribution to contingency reserves, if any	100	0
12	Return on Equity	90	10
13	Non-Tariff Income	10	90

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 2018-19

(₹ in Crores)

Sl. No.	Particulars	Approved Total Cost	Wire Business	Retail Supply Business
1	Cost of Power Purchase	307.84	-	307.84
2	Cost of Generation	15.90	-	15.90
3	Employee Cost	107.62	64.57	43.05
4	Administration & General Expenses	3.28	1.64	1.64
5	Repair & Maintenance Expenses	6.05	5.45	0.61
6	Transmission charges	43.53	-	43.53
7	Depreciation	93.91	84.52	9.39
8	Interest on Working Capital	7.90	0.79	7.11
9	Total Revenue Requirement	586.03	156.97	429.07
10	Less: Non-Tariff Income	10.35	1.04	9.32
11	Net Revenue Requirement (9- 10)	575.68	155.93	419.75

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:

Table 8.3: Wheeling Tariff approved by the Commission

Sl. No.	Particulars	FY 2018-19
1	ARR for wheeling function approved by the Commission (₹ in Crores)	155.93
2	Total sales within State - approved (In MUs)	695.13
3	Wheeling Tariff (₹/Kwh)	2.24

The Commission approves wheeling Tariff at ₹ 2.24/Kwh for the FY 2018-19.

9. 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:

$$\text{FPPCA (Ps./kWh)} = \frac{Q_c(RC_2 - RC_1) + Q_0(RO_2 - RO_1) + Q_{pp}(R_{pp2} - R_{pp1}) + V_z + A}{(QP_{g1} + Q_{pp1} + Q_{pp2})} \times \left[1 - \frac{L}{100} \right] \times 100$$

Where,

Q_c = Quantity of coal consumed during the adjustment period in Metric Tons (MT).

= $(SHR \times Q_{pg}) (1 + TSL) \times 1000 / GCV$, or actual whichever is less.

R_{c1} = Weighted average base rate of coal supplied ex-power station coal yard as approved by the Commission for the adjustment period in ₹/MT

R_{c2} = Weighted average base rate of coal supplied ex-power station coal yard for the adjustment period in ₹/MT

Q_o	=	Actual Quantity of oil (in KL) consumed during the adjustment period or normative oil consumption as per Tariff order whichever is less.
R_{o1}	=	Weighted average base rate of oil ex-power station (₹/KL) approved by the Commission for the adjustment period.
R_{o2}	=	Weighted average actual rate of oil ex-power station supplied (₹/KL) during the adjustment period.
Q_{pp}	=	Total power purchased from different sources (kWh) = $Q_{pp2} + Q_{pp3}$
Q_{pp1}	=	$Q_{pp3} \left[1 - \frac{TL}{100} \right]$ in kWh
TL	=	Transmission loss (CTU) (in percentage terms).
Q_{pp2}	=	Power Purchase from sources with delivery point within the state transmission or distribution system (in kWh)
Q_{pp3}	=	Power Purchase from sources on which CTU transmission loss is applicable (in kWh)
R_{pp1}	=	Average rate of Power Purchase as approved by the Commission (₹/kWh)
R_{pp2}	=	Average rate of Power Purchase as approved by the Commission (₹/kWh)
Q_{pg}	=	Own power generation (kWh)
Q_{pg1}	=	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)
- V_z = 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 the Commission.

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 12th Meeting of the State Advisory Committee (SAC)
Held on 21st March, 2018**

Venue : Conference Hall, Power Department Kohima, Nagaland.
Date : Friday, the 21st March, 2018
List of Participants : Enclosed as Annexure-I

The meeting was chaired by Er. Imlikumzuk Ao, Chairman, Nagaland Electricity Regulatory Commission (NERC). He welcomed all the SAC Members, representatives from Department of Power (DoP), New & Renewable Energy (N&RE), Electrical Inspectorate and Special Invitees to the Meeting. He also expressed his wish for a good interaction and a fruitful meeting with definite solutions.

In his opening address, the Chairperson highlighted the challenges faced in the State Power Sector. The two main important issues which primarily effects quality power supply are the prevalence of **High AT&C Losses** and **Weak Distribution Network**.

After the Chairman's address, the Committee Members deliberated on the Agenda one by one.

AGENDA:

- (i) Review of Minutes of the 11th SAC Meeting.
- (ii) Tariff proposal of DPN for FY 2018-19.
- (iii) Promotion of Renewable Energy in Nagaland.
- (iv) Any other item with permission of Chair

AGENDA NO: (i) Review of Minutes of the 11th SAC Meeting.

While reviewing the minutes of the last SAC meeting, the Officers from the DoP, gave the following update on the actions taken since then, and the present state of affairs.

a) Unbundling & Corporatization:

The DoP Officials present in the meeting informed that, under the directive of the Chief Secretary, a Core Committee has been constituted to look into the Corporatization of Power Department. In this regard, proposal was submitted to the government for partial Corporatization, initially for Dimapur and Kohima, which was returned for re-submission after further review.

The Committee Members deliberated in details on the issue. The Members point it out the International Management Institute (IMI) Report 2006 entrusted by the Government of Nagaland to carry out the study on State Power Sector Reform. As per the recommendation in the Report, the state government to Corporatized the entire Power Department immediately following which, privatization can be considered in the later stage for Divisions like Dimapur and Kohima or as per requirement. The Corporatization is a step towards privatization which will finally bring about reform in the Power Sector of the State.

The Committee Members further suggested that the Department to consult with other corporatized States like Manipur, which is learned to be performing well after Corporatization. It was also suggested that the DoP initiate for Corporatization as recommended in the IMI report 2006.

The Committee Members also resolved that they will actively participate along with the Commission in this regard as and when required.

b) Establishment of CGRF & Ombudsman:

The DoP Officials present in the meeting informed that the Department has not constituted the CGRF & Ombudsman till date since it is linked with defined Standard of Performance (SoP) and the Department is not in a position to implement the said SoP due to lack of funds and manpower.

The Committee Members deliberated on the issues and felt that, unless such CGRF & Ombudsman are established and a minimum SoP maintained in the activities of the Department, the Power quality to consumers will not be improved. The Members reminded the DoP to set up CGRF & Ombudsman as per the NERC Regulations 2012, in order to protect the interest of the Consumers in the state.

c) 186 MW Dikhu Hydro Electric Project:

The DoP Officials updated on the latest status of the project implementation, stating that land acquisition is still yet to be completed. They have approached the concerned District Administration and will start the survey work within a week.

The Committee Members mentioned that, delay in implementation of the Project will only result in higher cost/tariff due to price escalation in the market. They also reminded the DoP to expedite the work for its early completion which will be beneficial for the State and consumers.

AGENDA NO: (ii) Tariff proposal of DoP for FY 2018-19:

The Commission highlighted the Tariff proposal of DoP for FY 2018-19, and informed that the components in the ARR approved by the Commission in the MYT Order 2017 are all projected figures, since it was a business plan for 3 years of control period (i.e. FY 2017-18 to FY 2019-20). Therefore, DoP is to submit the True up for FY 2016-17, Annual Performance Review for FY 2017-18 etc to the Commission for determination of tariff for FY 2018-19.

The Committee Members suggested that, the tariff for FY 2018-19 may be determined considering the power purchase cost, after obtaining necessary clarifications/ documents from DoP.

The DoP Officials present in the meeting informed that, various activities pertaining to improvement in revenue collection have been initiated, such as surprise checking to curb unauthorized consumers, on-line payment of electricity bill etc. This is expected to increase revenue by about 15% during FY 2017-18.

The Committee Members also deliberated on the poor Revenue and requested that the DoP to look into the followings points.

1. Despite the hike in Tariff every year, DoP is unable to improve/achieve its revenue as projected in NERC tariff orders.
2. Realize all outstanding arrears of electricity bills from various defaulting Government Departments.

3. To curb all illegal consumer(s) in the State, as it is only the Accounted/Genuine consumers who are paying for the entire energy purchased by the State.
4. The payment towards Street Lights should be borne by the Concerned Municipal/Local Authorities.
5. Replacement of all defective Meters to ensure 100% metering with special emphasis on Pre-paid Meter/Smart Meter.
6. The DoP to examine the feasibility of setting up (with necessary safe guard) authorized private shop/firms at appropriate places to make Meters available so that consumer(s) can procure them directly, for either new connections or replacement of defective meters, subjected to proper testing and certification from the 'Meter Inspection & testing Cell' of the Department.

AGENDA NO: (iii) Promotion of Renewable Energy (RE) in Nagaland:

The Commission informed the members that 2 (two) RE Projects (i.e. 22.5 MW Hydro-project and 20 MW Solar project) are proposed to be set up by Private Developers in the State for which Commission has received petitions for determination of Generation Tariff.

The Commission also highlighted on the status of Renewable Energy in the State and informed that, the DoP is yet to comply with the Renewable Purchase Obligation (RPO) as notified in NERC Regulation. It was also reminded that, GoI have set RPO at 17% of State own consumption (Minus hydro) to be complied by all the State utilities across the country to achieve the set target of 175GW RE Power by 2022. Also, reminded its penalty for non compliance to RPO under Section 142 of the Electricity Act, 2003.

The Committee Members after deliberation on the issue, advice the Commission to take up with the government and suggested that the N&RE Department, being the State Nodal Agency, should carry out feasibility studies and action plan for development of RE projects including Solar Rooftop Projects in the State.

Concluding Remarks:

The Chairperson appreciated the SAC Members, the Departmental officers and other representatives, for participating in the meeting and extending a positive support for consensus building on critical issues related to the power sector.

Sd/-

W. Y. YANTHAN

Member Secretary, SAC

Nagaland Electricity Regulatory

Commission (NERC), Kohima.

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Attendance for 12th SAC Meeting on 21st March, 2018.

Sl. No	Name	Designation	Signature
1	Fr. Imlikumyuk. Ar.	Chairman	
2	T. Meren Paul	member	
3	M.B. Longkumer	Member	
4	Asijed Bonmah	Asst. Manager, IER, Delhi	
5	C. R. Latha	SAC Member	
6	Kekhuengukhe Theinaw	Member, SAC	
7	James Panthan	Member, SAC	
8	Fr. P. T. Philip P	Sp. E-I	
9	SUSHIL KUMAR	Sp. Executive	
10		Director	
11	BISHNU BHATTACHARJEE	SAC Member	
12	Fr. VITOSEK ROCHILL	ADDY CE (CIVIL) DPN	
13	Fr. Mota Aisy	S.E (Revenue) DPN	
14	Er. KHOSÉ SALE	C.E. (DER) DOP	
15	W. Y. Panthan	Secy (NERC)	
16	Er. Hekani N. Angemi	A.E (Tariff), NERC	
17	Er. Indianoba Tally	S.E. (Gen)	
18	Limaupan X	Legal Counsel NERC	
19	Imkongakum Longkumer	Office Assistant, NERC	
20	Imbakum	J.E (Elect) NERC	

Contd. 2

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(59)

Sl. No	Name	Designation	Signature
21	Shivito Wotza	A.O (NERC)	<i>[Signature]</i>
22	BYOMKESH MALLICK	Consultants.	<i>[Signature]</i>
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ANNEXURE - II

REVENUE FROM APPROVED/REVISED TARIFF FOR THE FY 2018-19

Sl. No.	Category	No. of Consumers	Energy Sales (In MU)	Energy Charges (₹ / Kwh)	Revenue (₹ in Crores)	Average Revenue (₹ / kwh)
1	Category 'A' Domestic					
a)	Up to 30 kwh		60.84	3.65	22.21	
b)	31 to 100 kwh		105.53	4.85	51.18	
c)	101-250 kwh		19.44	5.95	11.57	
d)	Above 250 kwh		28.91	6.95	20.09	
	Total	1,53,809	214.72		105.05	4.89
2	Category 'B' Industrial					
a)	Up to 500 kwh		41.84	5.25	21.97	
b)	501 to 5000 kwh		16.20	6.30	10.20	
c)	Above 5000 kwh		8.68	7.20	6.25	
	Total	5,156	66.72		38.42	5.76
3	Category 'C' Bulk	1,654	136.88	6.30	86.23	6.30
4	Category 'D' Commercial					
a)	Up to 60 kwh		99.36	6.70	66.57	
b)	61 to 240 kwh		5.73	7.90	4.53	
c)	Above 240 kwh		4.90	9.00	4.41	
	Total	24,220	109.99		75.51	6.86
5	Category 'E' PWW	37	6.86	6.00	4.12	6.00
6	Category 'F' Public Light	665	15.57		3.85	2.47
7	Category 'G' Agriculture	1	0.05	3.00	0.02	3.00
8	Category 'H' Temporary Connection					
9	Category 'I' Inter-state					
10	Kuti Jyoti (Point)					
11	Single Point Metered Rural	1,06,673	125.68	3.60	45.24	3.60
12	Single Point Metered Urban	9,491	18.66	4.65	8.68	4.65
13	Outside State Sale					
14	Grand Total	3,01,706	695.13		367.11	5.28
<i>Calculation of Revenue from Public Light</i>						
a)	Domestic	269973 X 10 X 12			3.24	
b)	Commercial	24220 X 15 X 12			0.44	
c)	Industrial	5156 X 20 X 12			0.12	
d)	Bulk Supply	1654 X 25 X 12			0.05	
	Total				3.85	

APPENDIX**APPROVED TARIFF SCHEDULE FOR THE FY 2018-19**

Sl. No.	Category	Rs./kwh
A.	1 CATEGORY 'A' DOMESTIC	
	(a) up to 30 kwh	3.65
	(b) 31 to 100 kwh	4.85
	(c) 101 to 250 kwh	5.95
	(d) Above 250 kwh	6.95
	Monthly minimum charges (Rural)	Rs. 150.00 pm/kw of contract demand or part thereof
	Monthly minimum charges (Urban)	Rs. 200.00 pm/kw of contract demand or part thereof
	2 CATEGORY 'B' INDUSTRIAL	
	(a) up to 500 kwh	5.25
	(b) 501 to 5000 kwh	6.30
	(c) Above 5000 kwh	7.20
	Monthly minimum charges	Rs.200.00 pm/kva of contract demand or part thereof
	3 CATEGORY 'C' BULK	6.30
	Monthly minimum charges	Rs.200.00 pm/kva of contract demand or part thereof
	4 CATEGORY 'D' COMMERCIAL	
	(a) up to 60 kwh	6.70
	(b) 61 to 240 kwh	7.90
	(c) Above 240 kwh	9.00
	Monthly minimum charges	Rs.200.00 pm/kw of contract demand or part thereof
	5 CATEGORY 'E' P.W.W.	6.00
	Monthly minimum charges	Rs.100.00 pm/kva or part thereof
	6 CATEGORY 'F' Public Light	To be recovered from consumers*
	7 CATEGORY 'G' INTER-STATE	5.70
	8 CATEGORY 'H' AGRICULTURE	3.00
	Monthly minimum charges	Rs.75.00 pm/HP or part thereof
	9 CATEGORY 'I' TEMPORARY CONNECTION	DLF – 10.00 Others – 13.00
	10 Kutir Jyoti(point)	Same as DLF
	11 SINGLE POINT METERED RURAL	3.60
	12 SINGLE POINT METERED URBAN	4.65

* Charges for public lighting have to be recovered from the Consumers 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
C. METER RENT		iii. H.T. consumers (11 KV above)	1500.00/ connection
			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.	250.00
	ii.	Three phase L.T.	750.00
	iii.	H.T. consumers (11 KV above)	3000.00
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 size 3'X2')	100.00
		b. Category II - Residential area (Max size 3'X2')	60.00
		c. Category III-National Highway (Max size 3'X2') (outside the city/town limit)	40.00