

NAGALAND ELECTRICITY REGULATORY COMMISSION



ORDER ON

**PROVISIONAL TRUE UP FOR THE FY 2014-15,
REVIEW FOR THE FY 2018-19 & REVISED
AGGREGATE REVENUE REQUIREMENT**

AND

TARIFF FOR THE FY 2019-20

FOR

**DEPARTMENT OF POWER,
GOVERNMENT OF NAGALAND**

Dated: 23rd April, 2019.

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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
Rs.	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 Nagaland

Case No.: 01/2019-20

In the matter of

Petition for Aggregate Revenue Requirement (ARR) & Tariff for the FY 2019-20, Review for the FY 2018-19 and True Up for the FY 2014-15 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 23rd April, 2019)

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 2019-20 on 30.11.2018.
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 in continuation to T.O letter No. NERC/PWR/TARIFF/T-4/2019-20/405 dated 23rd April, 2019, hereby issues this order for approval of the Revised ARR & determination of retail Tariff for the FY 2019-20 and Review for the FY 2018-19 for supply of electricity in the state of Nagaland under NERC (MYT) Regulations, 2016. Further, the Commission approved the True up for the FY 2014-15 for supply of electricity in the state of Nagaland under NERC Regulations.
4. Tariff Regulations specify that the distribution licensee shall file ARR and Tariff Petition in all aspects along with requisite fee as specified in NERC (Conduct of Business) Regulations, 2010 on or before 30th November of the preceding year. Accordingly the DPN has filed the Revised ARR and Tariff Petition for the FY 2019-20.
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 2019-20 in an abridged form as public notice in newspapers having wide circulation in the state inviting suggestions/objections on the Tariff Petition.
6. Accordingly, DPN has published the Tariff Petition in the abridged form as public notice in various newspapers on 17th & 18th Jan., 2019 and the Tariff petition was also placed on the website of DPN and NERC. The last date of submission of suggestions/objections was fixed on 6th February, 2019.
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 Kohima (headquarters of the state). Accordingly, the Commission held public hearing at Kohima on 5th March, 2019.

8. The proposal of DPN was also placed before the State Advisory Committee in its meeting held on 8th March, 2019 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 True Up for the FY 2014-15, Review for the FY 2018-19 and Revised ARR & Tariff Petition of DPN for the FY 2019-20 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 in the meeting of the State Advisory Committee, has approved the True Up for the FY 2014-15, revised the ARR for the FY 2018-19 & FY 2019-20 and the Tariff for the FY 2019-20.
11. The Commission has reviewed the directives issued earlier in the Tariff Order for the FY 2018-19 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 11 chapters as detailed below:
 1. Chapter 1: Introduction.
 2. Chapter 2: Summary of Revised ARR and Tariff petition for the FY 2019-20.
 3. Chapter 3: Power Sector in Nagaland - An overview.
 4. Chapter 4: Public hearing.
 5. Chapter 5: True Up for the FY 2014-15.
 6. Chapter 6: Review for the FY 2018-19.
 7. Chapter 7: Analysis of Revised ARR along with Tariff Petition for the FY 2019-20 and approval of the Commission.
 8. Chapter 8: Tariff principles and design.
 9. Chapter 9: Directives.
 10. Chapter 10: Wheeling Charges for the FY 2019-20.
 11. Chapter 11: 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, 2019 and shall remain in force till 31st March, 2020 or till the next Tariff Order of the Commission.

Dated Kohima, the 23rd April, 2019

Sd/-
Er. IMLIKUMZUK AO
Chairman
NERC, Kohima

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 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 2019-20 and file the petition in the month of November, 2018 for fixing the Tariff for the FY 2019-20. Accordingly, the DPN has filed the Tariff Petition for the FY 2019-20 including True Up for the FY 2014-15 & Review for the FY 2018-19. In the petition, the DPN had estimated with an ARR of Rs. 974.64 Crores for the FY 2019-20 and projected a gap of Rs. 528.84 Crores for the FY 2019-20.

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 on 15-01-2019 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 2019-20 was published by the DPN in the following newspapers.

Sl. No.	Name of the Newspaper	Language	Date of Publication
1	The Morung Express	English	17.01.2019
2	Nagaland Post	English	18.01.2019
3	Tir Yimyim	Naga	18.01.2019

Through the public notice, the stakeholders/publics were invited to file their objections and suggestions on the petition on or before 6th February, 2019.

No objection was received by the DPN or 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 05th March, 2019.

Sl. No.	Name of the Newspaper	Language	Date of Publication
1	The Morung Express	English	13.02.2019
2	Nagaland Post	English	13.02.2019

1.5 Public Hearing

Public hearing was held as scheduled on 05th March, 2018 at Conference Hall of the Engineer-in-Chief, Department of Power, Nagaland. During the public hearing no participant was present to 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 8th March, 2019 at Conference Hall of the Engineer-in-Chief, Department of Power, Nagaland and discussed the revised ARR and Tariff proposal for the FY 2019-20 including True Up for the FY 2014-15 & Review 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 2019-20 and Tariff proposal for the FY 2019-20 for meeting its expenses and the estimated revenue during the control period with the existing tariff. The projected ARR for the FY 2019-20 are shown in Table below.

Table 2.1: Aggregate Revenue Requirement projected by DPN for FY 2019-20

(Rs. in Crores)

Sl. No.	Particulars	Approved in T.O. dated 28.03.2017	Revised / Proposed
1	Cost of Power Purchase	325.14	323.96
2	Cost of Generation	16.81	16.96
3	Operation & Maintenance Expenses	123.63	166.07
4	Transmission Charges	45.71	39.18
5	Interest & Finance Charges	-	208.34
6	Depreciation	97.20	97.20
7	Interest on Working Capital	12.25	9.41
8	Return on Equity	-	124.39
9	Total Revenue Requirement	620.74	985.51
10	Less: Non Tariff Income	10.87	10.87
11	Net Revenue Requirement (9-10)	609.86	974.64

(Source: Table 51 of Tariff Petition)

2.2 Tariff

The DPN in its petition has submitted the proposed tariff for the FY 2019-20 as per the table below:

Table 2.2: Existing Tariffs v/s Proposed Tariffs for the FY 2019-20

Sl. No.	Category of Consumers	Existing Rate (In Rs./kWh)	Proposed Rate (In Rs./kWh)
1	Category 'A' Domestic		
a)	Up to 30 kwh	3.65	4.50
b)	31 to 100 kwh	4.85	5.40
c)	101 to 250 kwh	5.95	6.00
d)	Above 250 kwh	6.95	7.00
2	Category 'B' Industrial		
a)	Up to 500 kwh	5.25	5.80
b)	501 to 5000 kwh	6.30	6.50
c)	Above 5000 kwh	7.20	7.20
3	Category 'C' Bulk	6.30	6.30
4	Category 'D' Commercial		
a)	Up to 60 kwh	6.70	7.00
b)	61 to 240 kwh	7.90	8.10
c)	Above 240 kwh	9.00	9.20
5	Category 'E' PWW	6.00	6.60
6	Category 'F' Public Light	* To be recovered from the consumers	* To be recovered from the consumers
7	Category 'G' Agriculture	3.00	4.70
8	Category 'H' Temporary Connection	DLF - Rs. 10.00 Others - Rs. 13.00	DLF - Rs. 11.00 Others - Rs. 14.00
9	Category 'I' Inter-state	5.70	6.00
10	Kutir Jyoti (Point)	Same as DLF	Same as DLF
11	Single Point Metered Rural	3.60	5.00
12	Single Point Metered Urban	4.65	5.50
*	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:

- ☐ Examine the proposal submitted by the Petitioner for a favourable dispensation as detailed in the enclosed proposal;
- ☐ Consider the submissions and allow the True-Up for FY 2014-15, revised estimate for FY 2018-19 and approve Aggregate Revenue Requirement and Retail Tariff for DPN for FY 2019-20;

- ☐ Approve the revenue gap and appropriate tariff increase as detailed in the enclosed proposal;
- ☐ Pass suitable orders for implementation of the tariff proposals for the FY 2019-20 for making it applicable from April 1, 2019 onwards;
- ☐ Approve the terms and conditions of Tariff Schedules and various other matters as and the proposed changes therein;
- ☐ Condone any inadvertent delay/ omissions/ errors/ rounding off differences/ shortcoming and DPN may please be permitted to add/ change/ modify/ alter the petition;
- ☐ 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 2,87,372 consumers of various categories with an annual energy consumption of about 655.87 MUs for the FY 2017-18.

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 projected as 24.00% for the FY 2019-20. The technical and commercial losses are not segregated.

3.5 Consumer Profile and Energy sales

The consumers profile and corresponding energy sales projected by DPN for the FY 2019-20, are given in the table below:

Table 3.2: Consumer Profile and Energy Sales for FY 2019-20

Sl. No.	Category	Energy Sales (In MUs)	Consumer (In No.)
1	Domestic including BPL	408.30	300,100
2	Commercial	114.09	24,111
3	Industrial Consumers	76.82	6,523
4	Public Lighting	24.33	633
5	Public Water works & Sewage	17.99	38
6	Irrigation & Agriculture	0.02	1
7	Bulk Supply	125.49	2,196
8	Outside state	29.52	-
9	Total	796.58	333,602

3.6 Demand

The total connected load for the FY 2019-20 was projected 197.212 MW. The allocation (firm and infirm) from various central generating stations is 145.96 MW.

The energy drawl projected by DPN during the FY 2019-20 as 958.55 MUs apart from own generation of 98.40 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 2019-20 including True Up for the FY 2014-15 & Review 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 5th March, 2019 as scheduled.

4.3 Proceedings of Public Hearing

After admitting the True Up for the FY 2014-15, Review for the FY 2018-19 and Revised ARR & Tariff Petition for the FY 2019-20, 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 17th & 18th Jan., 2019, calling for objections/ suggestions/ comments, if any to be filed on or before 6th February, 2019. 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 2 leading Newspapers on 13th Feb., 2019 calling for public hearing to be conducted on 05th March, 2019 in the Conference Hall of the Engineer-in-Chief, Department of Power. Accordingly, the Public Hearing was conducted on 05th March, 2019 as scheduled.

Though the notice was duly published by the Commission calling the consumers to come forward and express their objection/suggestion, if any, to the tariff petition filed by the DPN, on the day of public hearing there was no response from the consumers, therefore, the Commission after expiry of the time allotted in the Notice closed the public hearing informing the DPN official present in the room that the instant petition would be finalised after authenticating/examining the actual data projected in the petition.

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. Er. Hekavi N Ayemi, Asst. Engineer (Tariff), NERC,
7. Shri. Shivito Wotsa, A.O (NERC).

5. PROVISIONAL TRUE UP FOR THE FY 2014-15

5.1 Preamble

The Commission had approved the ARR and Tariff for the FY 2014-15 vide its Order dated 31.03.2014, based on the projected data submitted by the DPN. Now, the DPN has submitted proposals for True up for the FY 2014-15, duly furnishing the actual for the FY 2014-15, stating that these are as per the audited accounts.

The DPN has not submitted the copy of the audited accounts for the FY 2014-15. Therefore, true up cannot be done. In absence of the audited copy of accounts for the FY 2014-15, the Commission has approved the Provisional True up with regard to the actual data furnished for the FY 2014-15. This is discussed in the succeeding paragraphs.

5.2 Energy demand (Sales)

The energy sales approved by the Commission, vide its Tariff Order for the FY 2014-15, the actual sales given by DPN, as per provisional accounts with the ARR & Tariff Petition for the FY 2019-20 and now approved by the Commission, are summarised in the table below.

Table 5.1: Energy Sales approved by Commission for FY 2014-15

(In MUs)

Sl. No.	Category	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	Domestic including BPL	279.00	298.51	298.51
2	Commercial	53.00	64.68	64.68
3	Industrial	23.38	51.29	51.29
4	Public Lighting	6.00	9.48	9.48
5	Irrigation & Agriculture	0.05	-	-
6	Public Water Works	3.70	4.67	4.67
7	Bulk Supply	65.00	81.52	81.52
8	Total	430.13	510.15	510.15
9	Inter State	2.40	0.52	0.52
10	Outside state	43.52	11.55	11.55
11	Grand Total	476.05	522.22	522.22

The Commission now approves energy sales for the FY 2014-15 at 522.22 MUs including Inter State Sale of 0.52 MUs & Outside state sale of 11.55 MUs, as per the actuals furnished by DPN.

5.3 Transmission and Distribution Losses (T&D Losses)

The Commission in its order for the FY 2014-15, had fixed the target of T&D Losses at 26.50% for the FY 2014-15. The DPN in its ARR & Tariff Petition for the FY 2019-20, has stated that the actual T&D Losses during the FY 2014-15 is 26.01% as per provisional accounts.

Commission's Analysis:

The inter-state transmission loss (pool loss) for the FY 2014-15 has been considered at 3.48% and T&D Loss, when recalculated, is as shown in table below. The detailed discussion & calculation is provided in the Para no. 5.5.

Table 5.2: T&D Losses approved by Commission for FY 2014-15

Sl. No.	Particulars	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	T&D Losses	26.50	26.01	23.67

The Commission accordingly approves T&D Losses of 23.67% for the FY 2014-15.

5.4 Energy Availability

5.4.1 Own Generation

The Commission in its Tariff Order dated 31.03.2014 had approved Own Generation for the DPN at 115.00 MUs for the FY 2014-15. Now, the DPN has furnished actual own generation was 84.14 MUs during the FY 2014-15, as detailed in the table below.

Table 5.3: Power Generation approved by Commission for the FY 2014-15

(In MUs)				
Sl. No.	Particulars	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	Total Generation	115.00	84.14	84.14
2	Total	115.00	84.14	84.14

The Commission now approves Own Generation of DPN during the FY 2014-15 at 84.14 MUs, as per actuals furnished by DPN.

5.4.2 Power Purchase

The Commission in its Tariff Order dated 31.03.2014 had approved the power purchase quantity of 540.00 MUs including free power quantity of 27.00 MUs. Now, the DPN has furnished actuals for the FY 2014-15 at 621.68 MUs including free power of 18.70 MUs in the ARR and Tariff Petition for the FY 2019-20, as detailed in table below.

Table 5.4: Power Purchase approved by Commission for the FY 2014-15

(In MUs)				
Sl. No.	Particulars	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	Power Purchase from CGS/UI	513.00	602.98	602.98
2	Free Power from DHEP	27.00	18.70	18.70
3	Total	540.00	621.68	621.68

The Commission approves power purchase of 621.68 MUs for the FY 2014-15 including 18.70 MUs free power.

5.5 Energy Balance

The details of energy requirement and availability approved by the Commission in its Tariff Order dated 31.03.2014 for the FY 2014-15 and the actuals furnished by the DPN, and now approved by the Commission, are presented in table below:

Table 5.5: Energy Balance approved by Commission for the FY 2014-15

Sl. No.	Category	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
A	Energy Requirement			
1	Energy Sales within State	432.53	510.15	510.15
2	Sales to other distribution licensees	-	12.07	12.07
3	Total Energy Sales	432.53	522.22	522.22
4	Overall T & D Losses %	26.50	26.01	23.67
5	Overall T & D Losses (MUs)	155.95	183.61	161.97
6	Total Energy Requirement	588.48	705.83	684.19
B	Energy Availability			
7	Power Purchase from CGS/UI	513.00	602.98	602.98
8	Free Power from DHEP	27.00	18.70	18.70
9	Generation	115.00	84.14	84.14
10	Regional Transmission Losses %	3.48		3.48
11	Regional Transmission Losses	19.00		21.63
12	Total Energy Availability	636.00	705.83	684.19
13	Energy Surplus/(Gap)	47.52	0.00	0.00

5.6 Fuel Cost

The details of fuel cost approved by the Commission in its Tariff Order dated 31.03.2014 for the FY 2014-15 and the actuals furnished by the DPN, and now approved by the Commission, are presented in table below:

Table 5.6: Fuel Cost approved by Commission for the FY 2014-15

(Rs. in Crores)				
Sl. No.	Particulars	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	Fuel Cost	0.08	0.33	0.33
2	Total	0.08	0.33	0.33

The Commission now approves the fuel cost of Rs. 0.33 Crores for the FY 2014-15, as per actuals furnished by DPN.

5.7 Power Purchase Cost

The details of power purchase cost approved by the Commission in its Tariff Order dated 31.03.2014 for the FY 2014-15 and the actuals furnished by the DPN, and now approved by the Commission, are presented in table below:

Table 5.7: Power Purchase Cost approved by Commission for the FY 2014-15

(Rs. in Crores)				
Sl. No.	Particulars	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	Power Purchase Cost	196.30	235.35	235.35
2	Total	196.30	235.35	235.35

The Commission now approves the power purchase cost of Rs. 235.35 Crores for the FY 2014-15, as per actuals furnished by DPN.

5.8 Operation and Maintenance Expenses

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

- Employee Expenses
- Administration & General Expenses
- Repair & Maintenance Expenses

Details of Employee Expenses, Administration & General Expenses and Repair & Maintenance Expenses are discussed in the subsequent paras.

5.8.1 Employee Cost

The Commission vide its Order dated 31.03.2014, had approved employee cost at Rs. 76.35 Crores for the FY 2014-15. The DPN has furnished actuals at Rs. 93.38 Crores for the FY 2014-15 and the cost now approved by the Commission are given in the table below.

Table 5.8: Employee Cost approved by Commission for the 2014-15

(Rs. in Crores)

Sl. No.	Particulars	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	Employee Cost	76.35	93.38	93.38
2	Total	76.35	93.38	93.38

The Commission now approves the employee cost of Rs. 93.38 Crores for the FY 2014-15, as per actuals furnished by DPN.

5.8.2 Administrative and General Expenses

The Commission vide its Order dated 31.03.2014, had approved A&G expenses at Rs. 2.68 Crores for the FY 2014-15. The DPN has furnished actuals at Rs. 2.62 Crores for the FY 2014-15 and the cost now approved by the Commission are given in the table below.

Table 5.9: Administrative and General Expenses approved by Commission for the 2014-15

(Rs. in Crores)

Sl. No.	Particulars	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	A&G Expenses	2.68	2.62	2.62
2	Total	2.68	2.62	2.62

The Commission now approves the A&G Expenses of Rs. 2.62 Crores for the FY 2014-15, as per actuals furnished by DPN.

5.8.3 Repair and Maintenance Expenses

The Commission vide its Order dated 31.03.2014, had approved Repair & Maintenance expenses at Rs. 14.57 Crores for the FY 2014-15. The DPN has furnished actuals at Rs. 19.17 Crores for the FY 2014-15 and the cost now approved by the Commission are given in the table below.

Table 5.10: Repair and Maintenance Expenses approved by Commission for the 2014-15

(Rs. in Crores)

Sl. No.	Particulars	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	R&M Expenses	14.57	19.17	19.17
2	Total	14.57	19.17	19.17

The Commission now approves the Repair & Maintenance Expenses of Rs. 19.17 Crores for the FY 2014-15, as per actuals furnished by DPN.

5.8.4 Summary of O&M Expenditure approved by the Commission

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

Table 5.11: O&M Expenses approved by Commission for the FY 2014-15

(Rs. in Crores)

Sl. No.	Particulars	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	Employee Cost	76.35	93.38	93.38
2	A&G Expenses	2.68	2.62	2.62
3	R&M Expenses	14.57	19.17	19.17
4	Total	93.60	115.17	115.17

5.9 Capital Expenditure & Capitalisation

The capital expenditure plan envisaged will also assist in reducing system losses. Capital investment and capitalisation during the FY 2014-15 actuals has furnished by the DPN are shown in table below:

Table 5.12: Capital Works in Progress for the FY 2014-15

(Rs. in Crores)

Sl. No.	Particulars	Actuals
1	Opening balance of CWIP	929.46
2	Capital Investment during the year	50.88
3	Total (1+2)	980.34
4	Capitalisation during the year	-
5	Closing balance of CWIP (3-4)	980.34

The Commission now approves the capital investment of Rs. 50.88 Crores and no capitalization done during the FY 2014-15.

5.10 Gross Fixed Assets (GFA) and Depreciation

The DPN in its ARR and Tariff Petition for the FY 2019-20, has furnished the data for the FY 2014-15, as detailed in table below:

Table 5.13: Gross Fixed Assets for the FY 2014-15

(Rs. in Crores)

Sl. No.	Particulars	Actuals
1	Opening GFA	282.84
2	Additions during the year	-
3	Closing GFA (1+2)	282.84

Commissions Analysis:

In the absence of audited annual accounts, the information furnished by DPN cannot be taken as authentic

Further, the Commission vide its Order dated 31.03.2014, had approved Depreciation at Rs. 4.49 Crores for the FY 2014-15. The DPN has furnished actuals at Rs. 5.78 Crores for the FY 2014-15 and the cost now approved by the Commission are given in the table below.

Table 5.14: Depreciation approved by Commission for the FY 2014-15

(Rs. in Crores)

Sl. No.	Particulars	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	Depreciation	4.49	5.78	5.78
2	Total	4.49	5.78	5.78

The Commission now approves the Depreciation of Rs. 5.78 Crores for the FY 2014-15, as per actuals furnished by DPN.

5.11 Interest and Finance Charges

The DPN has proposed for the purpose of determination of opening normative loan for FY 2014-15, the approved opening normative loan for FY 2014-15 in the Tariff Order for the year has been considered as opening normative loan for FY 2014-15. The addition in normative loan has been considered based on 70:30 debt-equity ratio in line with the Regulations notified by the Hon'ble Commission. Repayment of the loan has been considered to be equal to the depreciation for the year as provided in the MYT Regulations. An interest rate of 14.75% as on April 1st, 2014 which is the SBI PLR rate has been applied on the average normative debt in order to estimate the normative interest cost for the FY 2014-15. The DPN has projected Interest on Loan of Rs. 11.47 Crores for the FY 2014-15. The detailed are furnished by DPN is provided in the table below.

Table 5.15: Interest on Loan furnished by DPN for the FY 2014-15

(Rs. in Crores)

Sl. No.	Particulars	Approved in Tariff Order dated 31.03.2014	Actuals
1	Opening Normative Loan	-	84.85
2	Add: Normative Loan during the year		-
3	Less: Normative repayment		14.14
4	Closing Normative Loan		70.71
5	Average Normative Loan		77.78
6	Rate of Interest (@SBAR rate)		14.75%
7	Interest on Loan		11.47

Commission's Analysis:

The DPN has stated that the entire capital employed has been funded through infusion of funds by Government of Nagaland through budgetary support without any external borrowings. Further, the Commission has not found any loan with DPN. **As such, the Commission has not considered interest on loan for the FY 2014-15.**

5.12 Interest on Working Capital

The DPN in its ARR and Tariff Petition for the FY 2019-20, has furnished Interest on Working Capital at Rs. 4.31 Crores during the FY 2014-15.

Commission's Analysis:

As per Regulation 98 (6) (b) of NERC (Terms and Conditions for determination of Tariff) Regulations, 2010, working capital shall be the sum of one-month requirement of the following

- Fuel Cost
- Power Purchase Cost
- Employee Cost
- Administration & General Expenses
- R & M Expenses

and the rate of interest on working capital shall be equal to the short-term prime lending rate of SBI on 1st April of the relevant year.

Accordingly, the Commission has arrived at the interest on working capital as shown in the Table below.

Table 5.16: Interest on Working Capital calculated by Commission for the FY 2014-15

(Rs. in Crores)		
Sl. No.	Particulars	Working Capital & Interest
1	Fuel Cost for 1 month	0.03
2	Power Purchase Cost for 1 month	19.61
3	O&M Expenses for 1 month	9.60
4	Total Working Capital	29.24
5	Rate of Interest	14.75%
6	Interest on Working Capital	4.31

Table 5.17: Interest on Working Capital approved by Commission for the FY 2014-15

(Rs. in Crores)				
Sl. No.	Particulars	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	Interest on Working Capital	3.48	4.31	4.31
2	Total	3.48	4.31	4.31

The Commission now approves the Interest on Working Capital of Rs. 4.31 Crores for the FY 2014-15, as per actuals furnished by DPN.

5.13 Bad Debts

The DPN has not proposed any Bad Debts for the FY 2014-15. In view of the above the Commission has not allowed Bad Debts for the FY 2014-15.

5.14 Return on Equity

Tariff determination Regulations provides the methodology for calculation of the Return on Equity. It provides that 30% of the capital base or the actual equity whichever is lower @ 15.50% p.a. Accordingly, DPN has proposed the Return on Equity of Rs. 21.92 Crores for the FY 2014-15.

In absence of audited accounts, **the Commission cannot allow any return on equity or capital base.** In addition, since it is a State Government Department, the expenses are funded by the Government. As such, no separate return is to be allowed as return on equity.

5.15 Non-Tariff Income

The Commission vide its Order dated 31.03.2014, had approved Non-Tariff Income at Rs. 5.78 Crores for the FY 2014-15. The DPN has furnished actuals at Rs. 5.52 Crores for the FY 2014-15 and now approved by the Commission are given in the table below.

Table 5.18: Non-Tariff Income approved by Commission for the FY 2014-15

(Rs. in Crores)				
Sl. No.	Particulars	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	Non-Tariff Income	5.78	5.52	5.52
2	Total	5.78	5.52	5.52

The Commission approves the Non-Tariff Income at Rs. 5.52 Crores for the FY 2014-15, as per actuals furnished by DPN.

5.16 Revenue from Existing Tariff

Revenue from existing tariffs approved by the Commission for the FY 2014-15 in the Tariff Order dated 31.03.2014, and actuals furnished by the DPN and now approved by the Commission are furnished in the table below.

Table 5.19: Revenue from Sales approved by Commission for the FY 2014-15

(Rs. in Crores)				
Sl. No.	Category	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	Revenue from sale of Power	218.18	159.24	159.24
2	Total	218.18	159.24	159.24

The Commission approves the revenue from the tariff at Rs. 159.24 Crores including revenue from outside sales for the FY 2014-15, as per the actuals furnished by DPN.

5.17 Aggregate Revenue Requirement (ARR)

The ARR for the FY 2014-15 approved by the Commission in its Tariff Order dated 31.03.2014, actuals furnished by the DPN and now approved by the Commission are furnished in the table below.

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

(Rs. in Crores)				
Sl. No.	Category	Approved in Tariff Order dated 31.03.2014	Actuals	Now approved by the Commission
1	Fuel Cost	0.08	0.33	0.33
2	Power Purchase Cost	196.30	235.35	235.35
3	Employee Cost	76.35	93.38	93.38
4	A&G Expenses	2.68	2.62	2.62
5	R&M Expenses	14.57	19.17	19.17
6	Depreciation	4.49	5.78	5.78
7	Interest & Finance Charges	-	11.79	-
8	Interest on Working Capital	3.48	4.31	4.31
9	Provision for Bad Debts	0.15	-	-
10	Return on Equity	-	21.92	-
11	Total Revenue Requirement	298.10	394.66	360.94
12	Less: Non-Tariff Income	5.78	5.52	5.52
13	Net Revenue Requirement	292.32	389.14	355.42
14	Revenue from Sale of Power	218.18	159.24	159.24
15	Surplus/(Gap) during the year	(74.14)	(229.90)	(196.18)

Provisional True up for the FY 2014-15 indicates that the revenue gap has been increased to Rs. 196.18 Crores, as against Rs. 74.14 Crores approved by the Hon'ble Commission in the Tariff Order dated 31.03.2014.

As the utility is a Government Department and the expenditure is already met the gap of Rs. 196.18 Crores is considered fully covered under the budgetary support of the State Government and as such no pass through of the gap (loss) in the next tariff order is allowed.

6. REVIEW FOR THE FY 2018-19

6.1 Preamble

The Commission had approved the ARR and Tariffs for the FY 2018-19 in its order dated 29.03.2018 based on the projected data furnished by the DPN. Now the DPN has submitted proposals for review of the FY 2018-19 duly furnishing data based on the revised estimates for the FY 2018-19.

6.2 Energy demand (Sales)

Vide its Tariff Order dated 29.03.2018, the Commission had approved energy sales of 695.13 MUs for the FY 2018-19. The DPN in its Review Petition for the FY 2018-19 has submitted the estimated sales considering actual for a certain period and estimate for the balance period.

Accordingly comparative statements of category-wise energy sales approved by the Commission for the FY 2018-19, estimate by DPN and approved by the Commission are shown in table below.

Table 6.1: Energy Sales approved by Commission for FY 2018-19

(In MUs)

Sl. No.	Category	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
1	Domestic including BPL	359.06	377.25	367.10
2	Commercial	109.99	98.41	92.93
3	Industrial	66.72	70.28	69.32
4	Public Lighting	15.57	19.61	17.10
5	Irrigation & Agriculture	0.05	0.02	0.02
6	Public Water Works	6.86	13.78	11.62
7	Bulk Supply	136.88	113.25	110.20
8	Total	695.13	692.60	668.28

The Commission now approves energy sales for the FY 2018-19 at 668.28 MUs against 692.60 MUs estimated by DPN.

6.3 Transmission and Distribution Losses (T&D Losses)

The Commission in its order for the FY 2018-19, had fixed the target of T&D Losses at 24.50% for the FY 2018-19. The DPN in its ARR & Tariff Petition for the FY 2019-20, has estimated the same as approved for T&D Losses during the FY 2018-19 at 24.50%.

The detailed discussion & calculation is provided in the Para no. 6.5.

Table 6.2: T&D Losses approved by Commission for FY 2018-19

Sl. No.	Particulars	Approved in Tariff Order dated 31.03.2014	Review Estimate	Now approved by the Commission
1	T&D Losses	24.50	24.50	24.50

The Commission accordingly approves T&D Losses of 24.50% including 3% Intra State Transmission Losses for the FY 2018-19.

6.4 Energy Availability

6.4.1 Own Generation

The Commission in its Tariff Order dated 29.03.2018 had approved Own Generation for DPN at 90.00 MUs for the FY 2018-19. Now, the DPN has estimated own generation of 96.20 MUs during the FY 2018-19, as detailed in the table below.

Table 6.3: Power Generation approved by Commission for the FY 2018-19

(In MUs)				
Sl. No.	Particulars	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
1	Total Generation	90.00	96.20	96.20
2	Total	90.00	96.20	96.20

The Commission now approves Own Generation of DPN during the FY 2018-19 at 96.20 MUs, as per details furnished by DPN.

6.4.2 Power Purchase

The Commission in its Tariff Order dated 29.03.2018 had approved the power purchase quantity of 843.85 MUs including free power quantity of 20.43 MUs. Now, the DPN has estimated for the FY 2018-19 at 871.54 MUs including free power of 31.19 MUs in the ARR and Tariff Petition for the FY 2019-20, as detailed in table below.

Table 6.4: Power Purchase approved by Commission for the FY 2018-19

(In MUs)				
Sl. No.	Particulars	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
	Central Sector			
1	FSTPP, NTPC	45.94	40.79	40.79
2	KHSTPP, NTPC	28.59	23.52	23.52
3	TSTPP, NTPC	32.05	29.19	29.19
4	BGTPP, NTPC	45.74	69.64	69.64
5	LOKTAK HEP, NHPC	36.99	55.04	55.04
6	DOYANG HEP, NEEPCO	10.16	15.48	15.48
7	AGBPP, NEEPCO	106.87	79.62	79.62
8	AGTPP, NEEPCO	40.03	34.22	34.22
9	KHANDONG HEP, NEEPCO	12.44	16.75	16.75
10	KOPI LI HEP, NEEPCO	45.91	63.34	63.34
11	RANGANADI HEP, NEEPCO	77.35	73.94	73.94
12	KOPI LI - II HEP, NEEPCO	5.96	6.31	6.31
13	PALATANA, ONGCTPC,	136.84	131.09	131.09
	OTHER			
14	GEPL	62.93	201.41	130.69
15	PTC	12.02		
16	UI / DEVIATION	123.60		
17	FREE POWER	20.43	31.19	31.19
18	TOTAL	843.85	871.53	800.81

The Commission approves power purchase of 800.81 MUs for the FY 2018-19 including 31.19 MUs free power.

6.5 Energy Balance

The details of energy requirement and availability approved by the Commission in its Tariff Order dated 29.03.2018 for the FY 2018-19 and estimated by the DPN, and now approved by the Commission, are presented in table below:

Table 6.5: Energy Balance approved by Commission for the FY 2018-19

Sl. No.	Particulars	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
A	Energy Requirement			
1	Energy Sales	695.13	722.14	668.28
2	Distribution loss %	21.50	21.50	21.50
3	Distribution loss	190.38	197.78	183.03
4	Energy Requirement	885.51	919.92	851.31
B	Energy Availability			
5	Own generation	90.00	96.20	96.20
6	Power from ER	106.58	93.50	93.50
7	ER Total losses %	2.14%	2.14%	2.14%
8	Regional Losses	2.28	2.00	2.00
9	Net Energy from ER (6-8)	104.30	91.50	91.50
10	Power from NER	613.67	576.63	576.62
11	Total power purchase (9+10)	717.97	668.13	668.12
12	NER Tr Loss %	2.60%	2.60%	2.60%
13	NER Tr Loss	18.67	17.37	17.37
14	Net power available (11-13)	699.30	650.76	650.75
15	UI/ Deviation	123.60	201.41	130.69
16	Total power available at state periphery (5+14+15)	912.90	948.37	877.64
17	Intra state Tr Loss @ 3%	27.39	28.45	26.33
18	Net power available for sale in Distribution(16-17)	885.51	919.92	851.31
19	Surplus (18-4)	0.00	0.00	0.00

6.6 Fuel Cost

The details of fuel cost approved by the Commission in its Tariff Order dated 29.03.2018 for the FY 2018-19 and estimated by the DPN, and now approved by the Commission, are presented in table below:

Table 6.6: Fuel Cost approved by Commission for the FY 2018-19

(Rs. in Crores)				
Sl. No.	Particulars	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
1	Fuel Cost	15.90	15.42	15.42
2	Total	15.90	15.42	15.42

The Commission now approves the fuel cost of Rs. 15.42 Crores for the FY 2018-19, as per review estimated by DPN.

6.7 Power Purchase Cost

The details of power purchase cost approved by the Commission in its Tariff Order dated 29.03.2018 for the FY 2018-19 and the estimated by the DPN, and now approved by the Commission, are presented in table below:

Table 6.7: Power Purchase Cost approved by Commission for the FY 2018-19

(Rs. in Crores)

Sl. No.	Particulars	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
1	NTPC			
	FSTPP	18.70	84.35	16.60
	KHSTPP	10.51		8.66
	TSTPP	8.44		7.68
	BGTPP	37.71		57.38
2	NHPC			
	LOKTAK HEP	15.28	14.40	14.40
3	NEEPCO			
	DOYANG HEP	5.01	78.44	7.63
	AGBPP	48.08		35.83
	AGTPP	21.27		18.17
	KHANDONG HEP	2.75		3.70
	KOPILI HEP	4.77		6.59
	RANGANADI HEP	24.13		23.07
	KOPILI - II HEP	1.34		1.42
4	ONGCTPC			
	PALATANA	46.98	46.35	46.35
5	Other sources			
	GEPL	18.90	59.35	38.81
	PTC	4.46		
	UI/ Deviation	32.49		
6	Total Energy Purchase	300.82	282.89	286.28
7	Free Power	-	-	-
8	REC Purchase	7.02	-	6.69
9	Transmission Charges - PGCIL	42.60	36.82	36.82
10	NERLDC Charges - POSOCO	0.93	0.49	0.49
11	Net Power Purchase Expenses	351.37	320.20	330.28

The Commission now approves the power purchase cost of Rs. 330.28 Crores for the FY 2018-19 against Rs. 320.20 Crores estimated by DPN.

6.8 Operation and Maintenance Expenses

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

- Employee Expenses
- Administration & General Expenses
- Repair & Maintenance Expenses

Details of Employee Expenses, Administration & General Expenses and Repair & Maintenance Expenses are discussed in the subsequent paras.

6.8.1 Employee Cost

The Commission vide its Order dated 29.03.2018, had approved employee cost at Rs. 107.62 Crores for the FY 2018-19. The DPN has estimated at Rs. 116.80 Crores for the FY 2018-19 and the cost now approved by the Commission are given in the table below.

Table 6.8: Employee Cost approved by Commission for the 2018-19

(Rs. in Crores)				
Sl. No.	Particulars	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
1	Employee Cost	107.62	116.80	107.62
2	Total	107.62	116.80	107.62

The Commission now approves the employee cost of Rs. 107.62 Crores for the FY 2018-19 against Rs. 116.80 Crores estimated by DPN.

6.8.2 Administrative and General Expenses

The Commission vide its Order dated 29.03.2014, had approved A&G expenses at Rs. 3.28 Crores for the FY 2018-19. The DPN has estimated at Rs. 2.43 Crores for the FY 2018-19 and the cost now approved by the Commission are given in the table below.

Table 6.9: Administrative and General Expenses approved by Commission for the 2018-19

(Rs. in Crores)

Sl. No.	Particulars	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
1	A&G Expenses	3.28	2.43	2.43
2	Total	3.28	2.43	2.43

The Commission now approves the A&G Expenses of Rs. 2.43 Crores for the FY 2018-19, as per review estimated by DPN.

6.8.3 Repair and Maintenance Expenses

The Commission vide its Order dated 29.03.2018, had approved Repair & Maintenance expenses at Rs. 6.05 Crores for the FY 2018-19. The DPN has estimated at Rs. 31.75 Crores for the FY 2018-19 and the cost now approved by the Commission are given in the table below.

Table 6.10: Repair and Maintenance Expenses approved by Commission for the 2018-19

(Rs. in Crores)

Sl. No.	Particulars	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
1	R&M Expenses	6.05	31.75	25.40
2	Total	6.05	31.75	25.40

The Commission now approves the Repair & Maintenance Expenses of Rs. 25.40 Crores for the FY 2018-19 against Rs. 31.75 Crores estimated by DPN.

6.8.4 Summary of O&M Expenditure approved by the Commission

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

Table 6.11: O&M Expenses approved by Commission for the FY 2018-19

(Rs. in Crores)

Sl. No.	Particulars	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
1	Employee Cost	107.62	116.80	107.62
2	A&G Expenses	3.28	2.43	2.43
3	R&M Expenses	6.05	31.75	25.40
4	Total	116.95	150.98	135.45

The Commission now approves the O&M Expenses of Rs. 135.45 Crores for the FY 2018-19 against Rs. 150.98 Crores estimated by DPN.

6.9 Capital Expenditure & Capitalisation

The capital expenditure plan envisaged will also assist in reducing system losses. Capital investment and capitalisation during the FY 2018-19 has estimated by the DPN are shown in table below:

Table 6.12: Capital Works in Progress for the FY 2018-19

(Rs. in Crores)

Sl. No.	Particulars	Review Estimate
1	Opening balance of CWIP	1,635.85
2	Capital Investment during the year	291.26
3	Total (1+2)	1,927.11
4	Capitalisation during the year	106.19
5	Closing balance of CWIP (3-4)	1,820.92

The Commission now approves the capital investment of Rs. 291.26 Crores and capitalization of Rs. 106.19 Crores for the FY 2018-19.

6.10 Gross Fixed Assets (GFA) and Depreciation

The DPN in its ARR and Tariff Petition for the FY 2019-20, has furnished the data for the FY 2018-19, as detailed in table below:

Table 6.13: Gross Fixed Assets for the FY 2018-19

(Rs. in Crores)

Sl. No.	Particulars	Review Estimate
1	Opening GFA	2,115.50
2	Additions during the year	106.19
3	Closing GFA (1+2)	2,221.69

Commissions Analysis:

In the absence of audited Fixed Asset Register, the information furnished by DPN cannot be taken as authentic

Further, the Commission vide its Order dated 29.03.2018, had approved Depreciation at Rs. 93.91 Crores for the FY 2018-19. The DPN has estimated the same for the FY 2018-19 and the cost now approved by the Commission are given in the table below.

Table 6.14: Depreciation approved by Commission for the FY 2018-19

(Rs. in Crores)

Sl. No.	Particulars	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
1	Depreciation	93.91	93.91	93.91
2	Total	93.91	93.91	93.91

The Commission now approves the Depreciation of Rs. 93.91 Crores for the FY 2018-19, as same as the approved by the Commission in the Tariff Order dated 29.03.2018.

6.11 Interest and Finance Charges

The DPN has proposed the opening normative loan has been considered at 70% of GFA and the actual assets capitalized for the FY 2017-18 & approved capitalisation for the FY 2018-19 has been considered for arriving at the total normative loan for the year.

The normative loan during the FY 2018-19 has been considered equivalent to the depreciation in line with the MYT Regulations. Since, there is no actual loan for DPN the

interest at the SBI Bank rate of 13.45% as on April 1st, 2018 has been applied on the average normative debt in order to project the interest on normative loans for FY 2018-19. The detailed are furnished by DPN is provided in the table below.

Table 6.15: Interest on Loan furnished by DPN for the FY 2018-19

(Rs. in Crores)			
Sl. No.	Particulars	Approved in Tariff Order dated 29.03.2018	Review Estimate
1	Opening Normative Loan	-	1,480.85
2	Add: Normative Loan during the year		74.33
3	Less: Opening Cumulative Repayments		181.12
4	Less: Normative repayment		93.91
5	Closing Normative Loan		1,280.15
6	Average Normative Loan		1,380.50
7	Rate of Interest		13.45%
8	Interest on Loan		185.68

Commission's Analysis:

The DPN has stated that the entire capital employed has been funded through infusion of funds by Government of Nagaland through budgetary support without any external borrowings. **As such, the Commission has not considered interest on loan for the FY 2018-19.**

6.12 Interest on Working Capital

The DPN in its ARR and Tariff Petition for the FY 2019-20, has furnished Interest on Working Capital at Rs. 8.65 Crores for the FY 2018-19.

Commission's Analysis:

As per clause 29.4 of NERC MYT Regulations 2016 the working capital of a licensee shall consist of

- Operation and maintenance expenses for one month; plus
- 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; and the rate of interest on working capital shall be equal to the SBI Advance rate on 1st April of the relevant year. Accordingly, the Commission has arrived at the interest on working capital as shown in the Table below.

Table 6.16: Interest on Working Capital approved by Commission for the FY 2018-19

(Rs. in Crores)

Sl. No.	Particulars	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
1	Receivables equivalent to 1 month of expected revenue from sale of electricity at prevailing rates	29.72	30.61	29.56
2	Maintenance of spares at 1% of historical costs of fixed assets	22.22	21.16	22.22
3	O&M Expenses for one month	9.75	12.58	11.29
4	Amount held as Security Deposit in Cash	-	-	-
5	Total Working capital ((1+2+3)-4)	61.69	64.34	63.07
6	Rate of Interest @ SBAR of relevant year	12.80%	13.45%	13.45%
7	Interest on Working Capital	7.90	8.65	8.48

The Commission now approves the Interest on Working Capital of Rs. 8.48 Crores for the FY 2018-19 against Rs. 8.65 Crores estimated by DPN.

6.13 Bad Debts

The DPN has not proposed any Bad Debts for the FY 2018-19. In view of the above the Commission has not allowed Bad Debts for the FY 2018-19.

6.14 Return on Equity

Regulation 26 of MYT Regulations 2016 provides for Return on Equity (RoE) as follows:

“Return on equity shall be computed on the paid up equity capital determined in accordance with Regulation 22 relating to the Generating Company or Transmission Licensee or Distribution Licensee as the case may be and shall be allowed at the rate of 15.5% for Generating Companies, including hydro generation stations above 25 MW, Transmission Licensee, and Distribution Licensee”

The DPN has considered opening normative equity at 30% of GFA and the actual assets capitalized for the FY 2017-18 & approved capitalisation for the FY 2018-19 has been considered for arriving at the total normative equity for the year. Rate of return on equity is considered 15.50% as per provision 26 of the MYT regulations 2016.

In line of the above methodology, DPN has estimated of Return of Equity at Rs. 100.84 Crores for the FY 2018-19.

In absence of audited accounts, **the Commission cannot allow any return on equity or capital base.** In addition, since it is a State Government Department, the expenses are funded by the Government. As such, no separate return is to be allowed as return on equity.

6.15 Non-Tariff Income

The Commission vide its Order dated 29.03.2018, had approved Non-Tariff Income at Rs. 10.35 Crores for the FY 2018-19. The DPN has estimated at Rs. 10.35 Crores for the FY 2018-19 and now approved by the Commission are given in the table below.

Table 6.17: Non-Tariff Income approved by Commission for the FY 2018-19

(Rs. in Crores)				
Sl. No.	Particulars	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
1	Non-Tariff Income	10.35	10.35	10.35
2	Total	10.35	10.35	10.35

The Commission approves the Non-Tariff Income at Rs. 10.35 Crores for the FY 2018-19, as same as the approved by the Commission in the Tariff Order dated 29.03.2018.

6.16 Revenue from Existing Tariff

Revenue from existing tariffs approved by the Commission for the FY 2018-19 in the Tariff Order dated 29.03.2018, and estimated by the DPN and now approved by the Commission are furnished in the table below.

Table 6.18: Revenue from Sales approved by Commission for the FY 2018-19

(Rs. in Crores)				
Sl. No.	Category	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
1	Category 'A' Domestic	105.05	117.14	113.99
2	Category 'B' Industrial	38.42	42.41	41.83
3	Category 'C' Bulk	86.23	71.35	69.43
4	Category 'D' Commercial	75.51	68.01	64.22
5	Category 'E' PWW	4.12	8.27	6.97
6	Category 'F' Public Light	3.85	2.66	2.32
7	Category 'G' Agriculture	0.02	0.01	0.01
8	Single Point Metered Rural	45.24	45.59	44.36
9	Single Point Metered Urban	8.68	11.88	11.56
10	Total sales within State	367.11	367.32	354.69
11	Sales Outside State	-	-	-
12	Total Sales (13+14)	367.11	367.32	354.69

The Commission approves the revenue from the tariff at Rs. 354.69 for the FY 2018-19, against the review estimated of Rs. 367.32 Crores by DPN.

6.17 Aggregate Revenue Requirement (ARR)

The ARR for the FY 2018-19 approved by the Commission in its Tariff Order dated 29.03.2018, estimated by the DPN and now approved by the Commission are furnished in the table below.

Table 6.19: Aggregate Revenue Requirement approved by Commission for the FY 2018-19

(Rs. in Crores)				
Sl. No.	Category	Approved in Tariff Order dated 29.03.2018	Review Estimate	Now approved by the Commission
1	Fuel Cost	15.90	15.42	15.42
2	Power Purchase Cost	351.37	320.20	330.28
3	Employee Cost	107.62	116.80	107.62
4	A&G Expenses	3.28	2.43	2.43
5	R&M Expenses	6.05	31.75	25.40
6	Depreciation	93.91	93.91	93.91
7	Interest & Finance Charges	-	185.68	-
8	Interest on Working Capital	7.90	8.65	8.48
9	Provision for Bad Debts	-	-	-
10	Return on Equity	-	100.84	-
11	Total Revenue Requirement	586.03	875.69	583.54
12	Less: Non-Tariff Income	10.35	10.35	10.35
13	Net Revenue Requirement	575.68	865.33	573.19
14	Revenue from Sale of Power	367.11	367.32	354.69
15	Surplus/(Gap) during the year	(208.57)	(498.01)	(218.50)

Review for the FY 2018-19 indicates that the revenue gap has increased to Rs. 218.50 Crores as against at Rs. 208.57 Crores approved in the Tariff Order for the FY 2018-19.

As the utility is a Government Department, also fully covered under the budgetary support of the State Government, therefore, as such no pass through of the gap (loss) in the next tariff order is allowed.

7. ANALYSIS OF AGGREGATE REVENUE REQUIREMENT FOR THE FY 2019-20

7.1 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.

7.2 Consumer Categories

DPN serves about 2.87 lakhs consumers in their licensed area and the consumers are categorized as under.

Table 7.1: 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	Kutir 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.

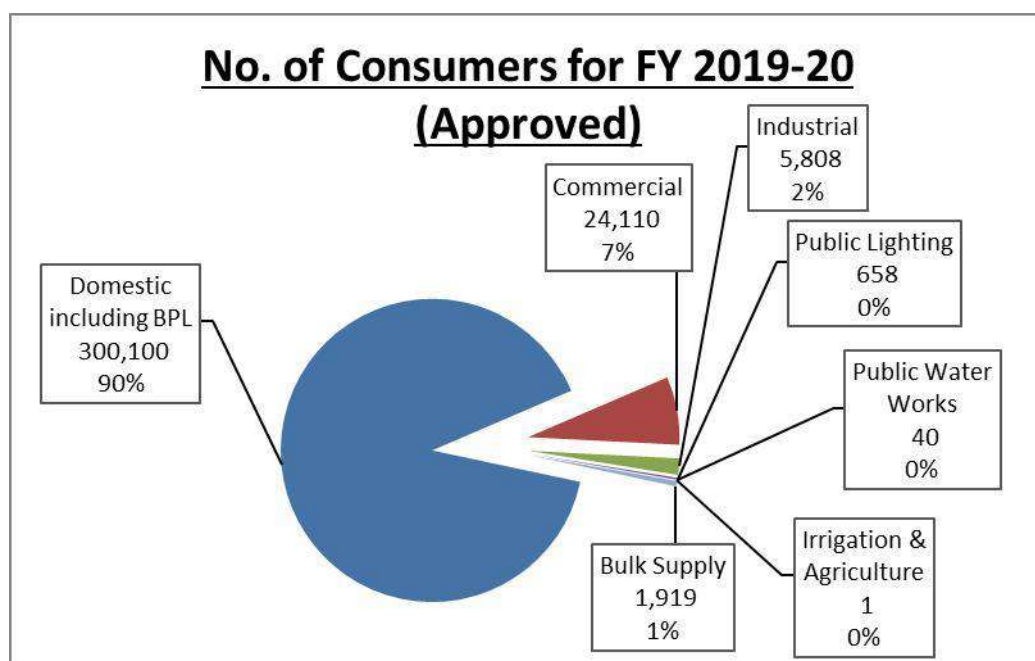
7.3 Growth of Consumers and Connected Load

As per the data given by the DPN, the Commission approves the No. of Consumers for the FY 2019-20 as given in the table below:

Table 7.2: Number of Consumers approved by Commission

(In No.)

Sl. No.	Category	FY 2019-20
1	Domestic including BPL	300,100
2	Commercial	24,110
3	Industrial	5,808
4	Public Lighting	658
5	Public Water Works	40
6	Irrigation & Agriculture	1
7	Bulk Supply	1,919
8	Outside State	-
9	Total	332,636



7.4 Category-wise Energy Sales

DPN has furnished category wise energy sales for the FY 2019-20, as given in the table below:

Table 7.3: Projected Energy Sales

(In MUs)

Sl. No.	Category	2019-20 (Projected)
1	Domestic including BPL	408.30
2	Commercial	114.09
3	Industrial	76.82
4	Public Lighting	24.33
5	Public Water Works	17.99
6	Irrigation & Agriculture	0.02
7	Bulk Supply	125.49
8	Outside State	29.52
9	Total	796.58

7.4.1 Analysis of Energy Sales Projections by DPN and the Commission's decision

Based on the actual sales during the FY 2012-13 to FY 2017-18, the sales growth rate is worked out as detailed in the table below:

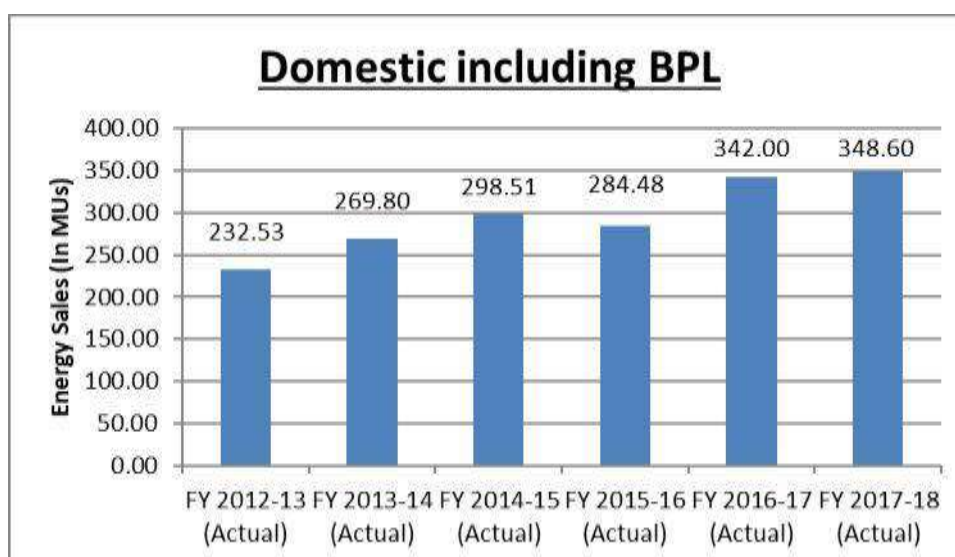
Table 7.4: Consumer Category-wise growth in Energy Sales

Sl. No.	Category	2012-13 (Actual)	2013-14 (Actual)	2014-15 (Actual)	2015-16 (Actual)	2016-17 (Actual)	2017-18 (Actual)	CAGR for 5 years from FY 2012-13 to FY 2017-18	CAGR for 3 years from FY 2014-15 to FY 2017-18	CAGR for 2 years from FY 2015-16 to FY 2017-18	CAGR for YOY from FY 2016-17 to FY 2017-18
		(In MUs)						(In %)			
1	Domestic including BPL	232.53	269.80	298.51	284.48	342.00	348.60	8.44	5.31	10.70	1.93
2	Commercial	39.87	52.99	64.68	82.64	82.58	84.88	16.31	9.48	1.35	2.79
3	Industrial	17.82	25.15	51.29	63.36	61.29	64.29	29.25	7.82	0.73	4.89
4	Public Lighting	5.27	4.90	9.48	11.00	14.60	15.80	24.56	18.56	19.85	8.22
5	Public Water Works	3.07	3.10	4.67	4.59	9.24	10.56	28.03	31.25	51.68	14.29
6	Irrigation & Agriculture	0.04	0.02	0.02	0.00	0.02	0.02	-12.94	0.00	0.00	0.00
7	Bulk Supply	51.48	64.90	81.52	102.84	100.10	102.20	14.70	7.83	-0.31	2.10
8	Total	350.08	420.86	510.17	548.90	609.83	626.35				

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 408.30 MUs for the FY 2019-20, while the actual sales during FY 2017-18 is 348.6 MUs & 1st Half of the FY 2018-19 is 168.72 MUs. The trend of the actual consumption in the category for the FY 2012-13 to FY 2017-18 is shown in the chart below:

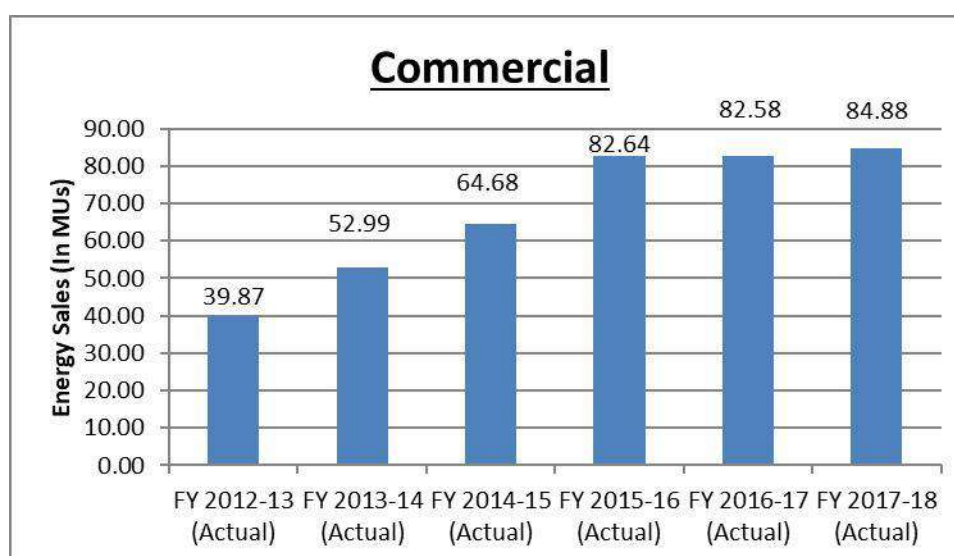


The five year growth rate is 8.44%, three year growth rate is 5.31%, two year growth rate is 10.70% and YoY growth rate is 1.93%. As the consumers are increasing year by year. 3 years growth rate per annum on the actuals sales during the FY 2017-18 is considered reasonable. Projection of sales during the FY 2019-20 with 3 year growth rate works out to 386.58 MUs.

The Commission approves the sales at 386.58 MUs for the FY 2019-20 for Domestic category.

Commercial

The DPN has projected energy sales for this category at 114.09 MUs for the FY 2019-20, while the actual sales during FY 2017-18 is 84.88 MUs & 1st Half of the FY 2018-19 is 45.95 MUs. The trend of the actual consumption in the category for the FY 2012-13 to FY 2017-18 is shown in the chart below:

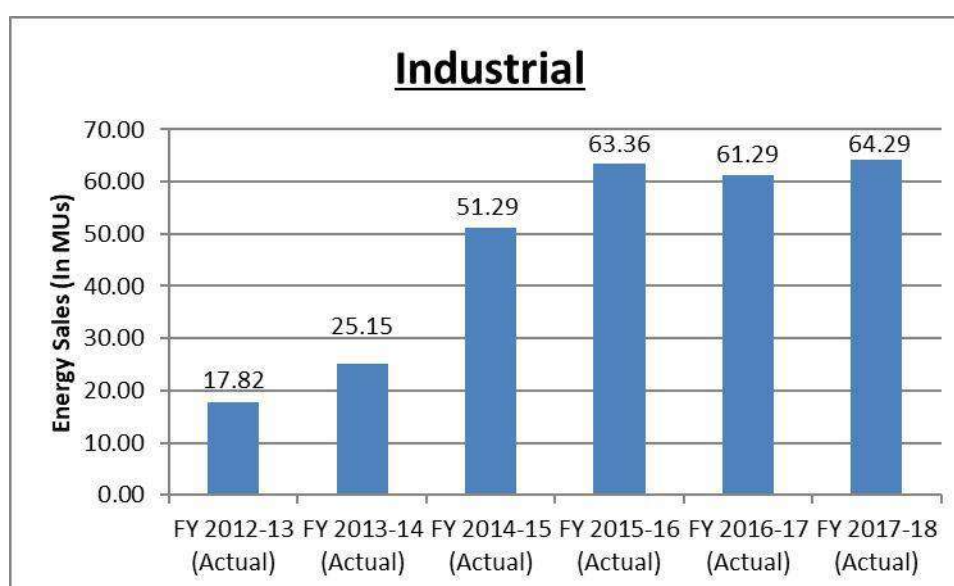


The five year growth rate is 16.31%, three year growth rate is 9.48%, two year growth rate is 1.35% and YoY growth rate is 2.79%. As the consumers are increasing year by year 3 years growth rate per annum on the actuals sales during the FY 2017-18 is considered reasonable. Projection of sales during the FY 2019-20 with 3 year growth rate works out to 101.74 MUs.

The Commission approves the sales at 101.74 MUs for the FY 2019-20 for Commercial category.

Industrial

The DPN has projected energy sales for this category at 76.82 MUs for the FY 2019-20, while the actual sales during FY 2017-18 is 64.29 MUs & 1st Half of the FY 2018-19 is 31.13 MUs. The trend of the actual consumption in the category for the FY 2012-13 to FY 2017-18 is shown in the chart below:

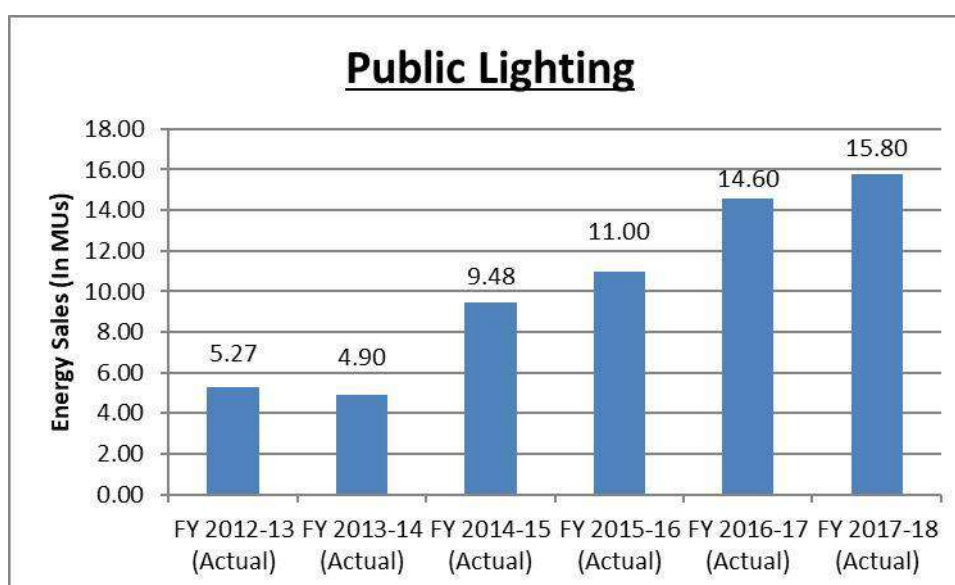


The five year growth rate is 29.25%, three year growth rate is 7.82%, two year growth rate is 0.73% and YoY growth rate is 4.89%. 3 years growth rate per annum on the actuals sales during the FY 2017-18 is considered reasonable. Projection of sales during the FY 2019-20 with 3 year growth rate works out to 74.74 MUs.

The Commission approves the sales at 74.74 MUs for the FY 2019-20 for Industrial category.

Public Lighting

The DPN has projected energy sales for this category at 24.33 MUs for the FY 2019-20, while the actual sales during FY 2017-18 is 15.80 MUs & 1st Half of the FY 2018-19 is 5.72 MUs. The trend of the actual consumption in the category for the FY 2012-13 to FY 2017-18 is shown in the chart below:

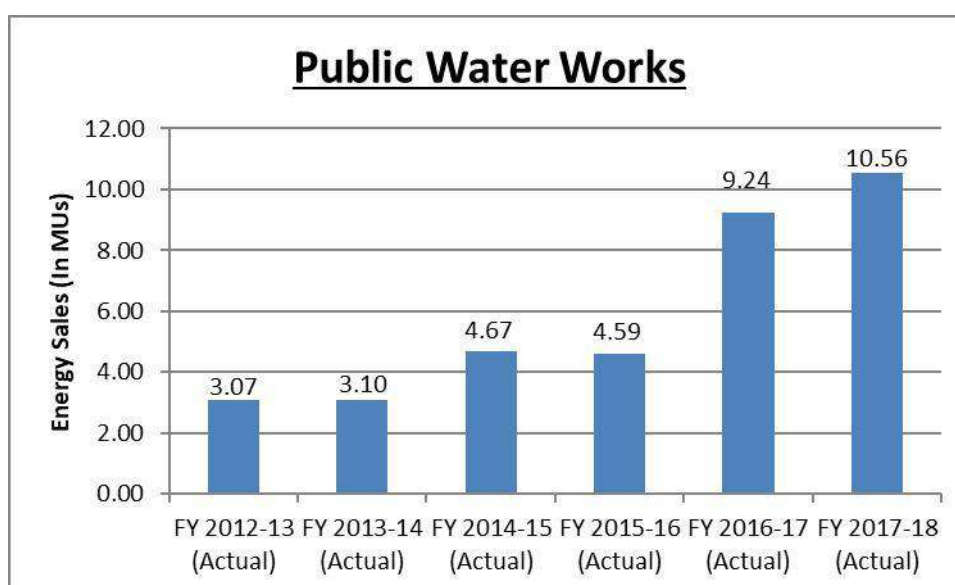


The five year growth rate is 24.56%, three year growth rate is 18.56%, two year growth rate is 19.85% and YoY growth rate is 8.22%. YOY growth rate per annum on the actuals sales during the FY 2017-18 is considered reasonable. Projection of sales during the FY 2019-20 with 3 year growth rate works out to 18.50 MUs.

The Commission approves the sales at 18.50 MUs for the FY 2019-20 for Public Lighting category.

Public Water Works

The DPN has projected energy sales for this category at 17.99 MUs for the FY 2019-20, while the actual sales during FY 2017-18 is 10.56 MUs & 1st Half of the FY 2018-19 is 3.64 MUs. The trend of the actual consumption in the category for the FY 2012-13 to FY 2017-18 is shown in the chart below:

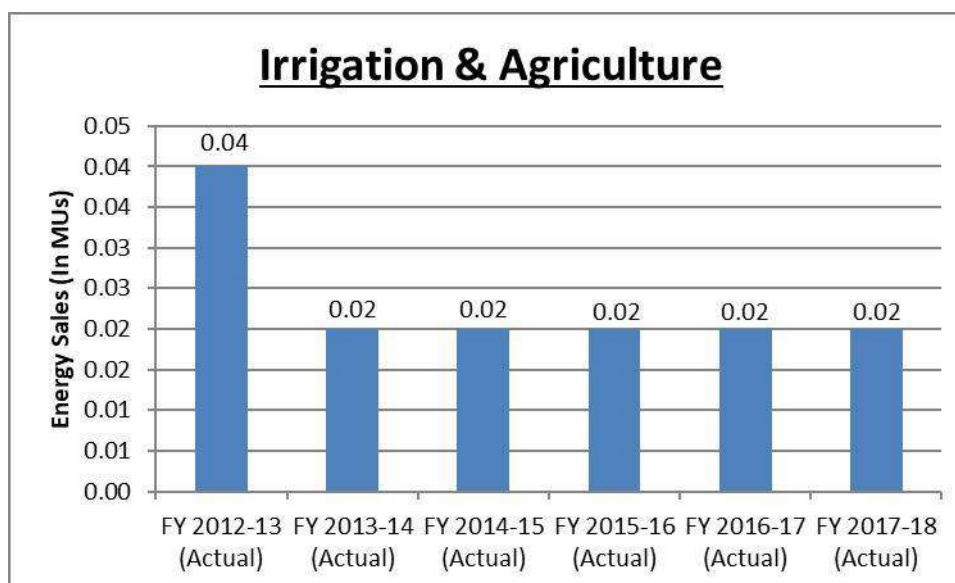


The five year growth rate is 28.03%, three year growth rate is 31.25%, two year growth rate is 51.68% and YoY growth rate is 14.29%. The growth rate may not sustain, accordingly 10% growth rate per annum on the actuals sales during the FY 2017-18 is considered reasonable. Projection of sales during the FY 2019-20 works out to 12.78 MUs.

The Commission approves the sales at 12.78 MUs for the FY 2019-20 for Public Water Works category.

Irrigation and Agriculture

The DPN has projected energy sales for this category at 0.02 MUs for the FY 2019-20, while the actual sales during FY 2017-18 is 0.02 MUs. The trend of the actual consumption in the category for the FY 2012-13 to FY 2017-18 is shown in the chart below:

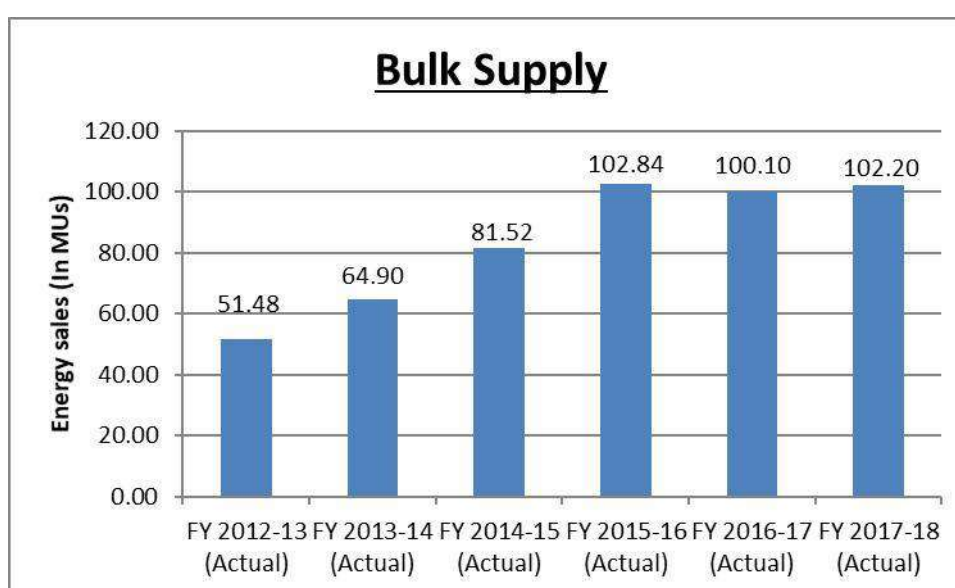


On the basis of the above data, the Commission has considered 0.02 MUs for the FY 2019-20 as proposed by the DPN.

The Commission approves the sales at 0.02 MUs for the FY 2019-20 for Irrigation and Agriculture category.

Bulk Supply

The DPN has projected energy sales for this category at 125.49 MUs for the FY 2019-20, while the actual sales during FY 2017-18 is 102.20 MUs & 1st Half of the FY 2018-19 is 55.67 MUs. The trend of the actual consumption in the category for the FY 2012-13 to FY 2017-18 is shown in the chart below:

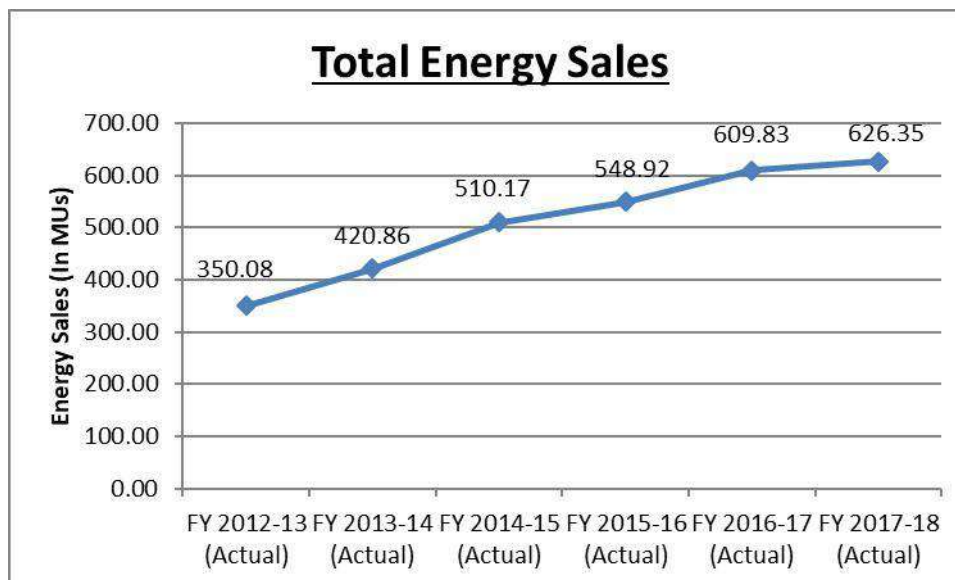


The five year growth rate is 14.70%, three year growth rate is 7.83%, two year growth rate is (-) 0.31% and YoY growth rate is 2.10%. 3 years growth rate per annum on the actuals sales during the FY 2017-18 is considered reasonable. Projection of sales during the FY 2019-20 with 3 year growth rate works out to 118.83 MUs.

The Commission approves the sales at 118.83 MUs for the FY 2019-20 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 2017-18 is shown in the chart below:



7.5 Category-Wise Energy Sales

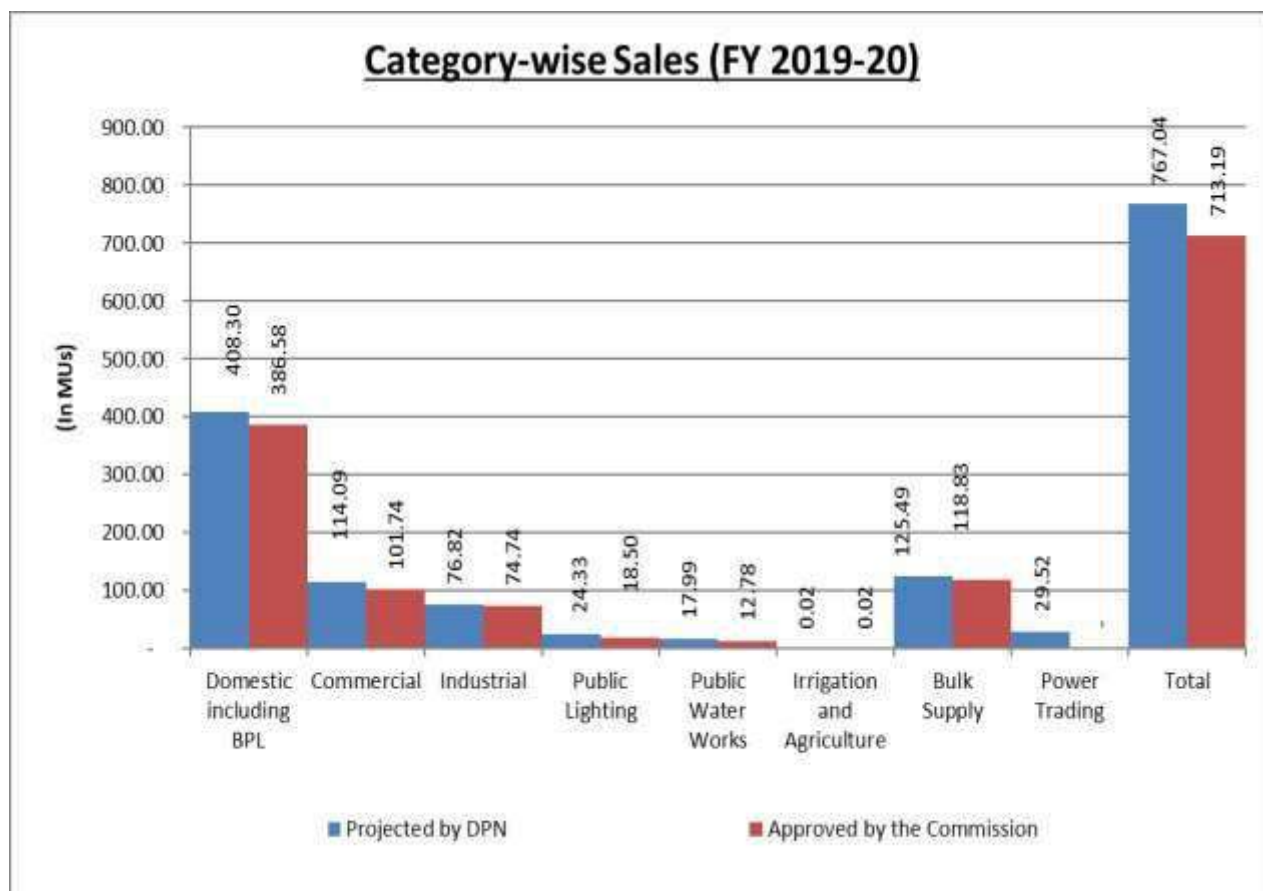
As discussed in para 7.4 supra category wise energy sales approved by the Commission for the FY 2019-20 are furnished in table below:

Table 7.5: Category-wise energy sales approved by the Commission

(In MUs)

Sl. No.	Category	Approved in Tariff Order dated 28.03.2017	Projected by DPN	Approved by the Commission
1	Domestic including BPL	316.28	408.30	386.58
2	Commercial	120.99	114.09	101.74
3	Industrial	110.81	76.82	74.74
4	Public Lighting	16.11	24.33	18.50
5	Public Water Works	7.85	17.99	12.78
6	Irrigation & Agriculture	0.05	0.02	0.02
7	Bulk Supply	150.57	125.49	118.83
8	Power Trading	-	29.52	-
9	Total	722.65	796.58	713.19

The below chart depicts the category-wise comparison of energy sales projected by DPN and approved by the Commission for the FY 2019-20:

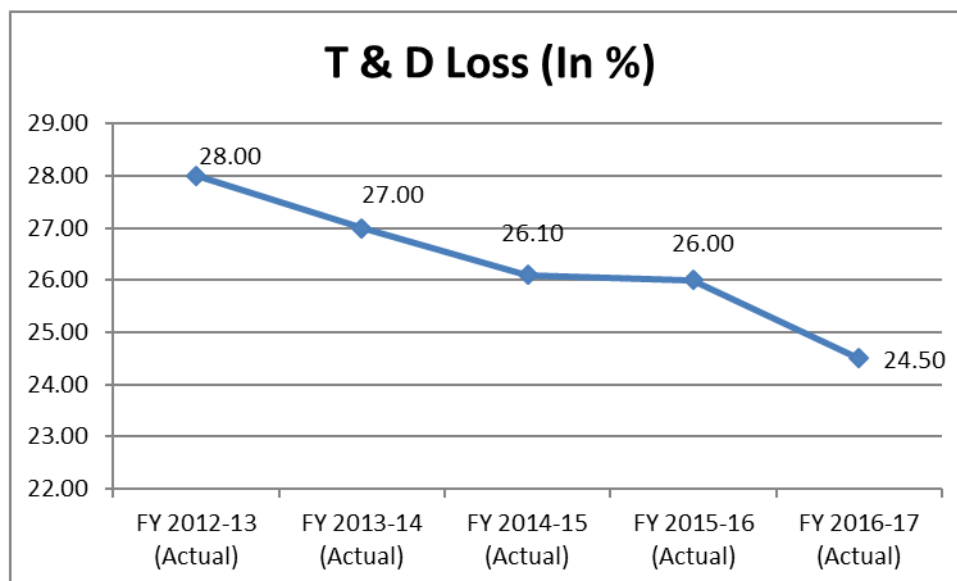


7.6 Transmission and Distribution Losses (T&D Losses)

DPN has projected the Distribution loss at 21.00% & Transmission loss at 3% and Total T&D losses at 24.00% for the FY 2019-20, 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 2016-17.



The DPN did not submitted the actual T&D Losses for the FY 2017-18. The distribution losses projected by DPN for the FY 2019-20 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 21.00% for the FY 2019-20.

The Commission accordingly approves Transmission Losses of 3% and Distribution Losses at 21.00% for the FY 2019-20.

7.7 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 2019-20 is as given below:

Table 7.6: Energy Requirement Projected by DPN

(In MUs)	
Particulars	2019-20 (Projected)
ENERGY REQUIREMENT	
Energy Sales within State	796.58
Distribution Losses %	21.00
Distribution Losses (MUs)	211.75
Total Energy Requirement	1,008.32

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 7.7: Energy Requirement approved by the Commission

Sl. No.	Particulars	Unit	FY 2019-20
1	Energy sales approved	MUs	713.19
2	Distribution Losses approved	%	21.00
3	Distribution Losses approved	MUs	189.58
4	Energy Requirement	MUs	902.77

7.8 Energy Availability**7.8.1 Own Generation**

The DPN is having 1 HEP with an installed capacity of 27.50 MW. The Commission in its Tariff Order dated 28.03.2017 had approved Own Generation for the DPN at 90.00 MUs for the FY 2019-20. Now, the EPDS has projected own generation was 98.40 MUs during the FY 2019-20, as detailed in the table below.

Table 7.8: Power Generation approved by Commission

(In MUs)				
Sl. No.	Particulars	Approved in Tariff Order dated 28.03.2017	Projected by DPN	Approved by the Commission
1	Power Generation	90.00	98.40	98.40
2	Net Generation	90.00	98.40	98.40

Accordingly, the Commission approves own generation (Net) at 98.40 MUs per annum for the FY 2019-20 from its own generating stations as projected by DPN.

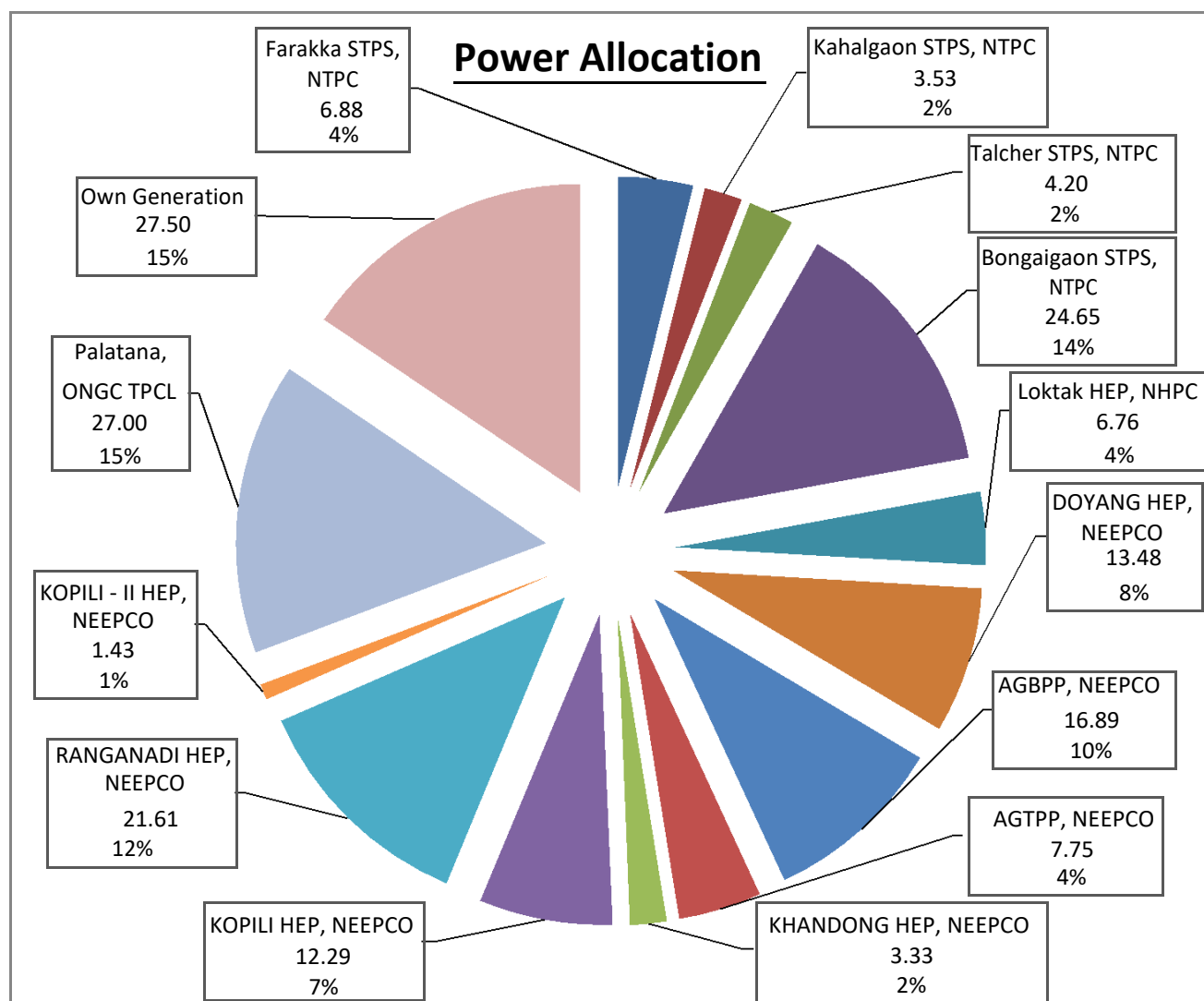
7.8.2 Power Purchase

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 7.9: 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	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

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



7.8.3 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.

7.8.4 Energy Drawals from CGS and Other Sources

The DPN projected energy drawal of about 958.55 MUs in the FY 2019-20, as detailed in Table below:

Table 7.10: Summary of Power Purchase projected by DPN

(In MUs)

Sl. No.	Source	Approved in Tariff Order dated 28.03.2017	Projected
A	Central Generating Stations		
I	NTPC		
1	FSTPS	45.94	40.79
2	KHTPS	28.59	23.52
3	TSTPS	32.05	29.19
4	BGTPP	45.74	69.64
	NTPC-Total	152.32	163.14
II	NHPC		
1	LOKTAK HEP	36.99	55.04
	NHPC-Total	36.99	55.04
III	NEEPCO		
1	DOYANG HEP	30.59	46.67
2	AGBPP	106.87	79.62
3	AGTPP	40.03	34.22
4	KHANDONG HEP	12.44	16.75
5	KOPILI HEP	45.91	63.34
6	RANGANADI HEP	77.35	73.94
7	KOPILI - II HEP	5.96	6.31
	NEEPCO - Total	319.15	320.85
IV	Other Stations/IPPs		
1	ONGCTPCL	136.84	131.09
2	GEPL	62.93	-
3	PTC	12.02	-
	Others-Total	211.79	131.09
B	UI	154.30	288.42
	Grand Total	874.54	958.55

Commission's Analysis:

The DPN had projected the power purchase including free energy at 958.55 MUs. Now the approved power quantity for the FY 2019-20 is provided in the Table below.

Table 7.11: Power Purchase approved by the Commission

(In MUs)

Sl. No.	Source	FY 2019-20
	Central Sector	
1	FSTPP, NTPC	40.79
2	KHSTPP, NTPC	23.52
3	TSTPP, NTPC	29.19
4	BGTPP, NTPC	69.64
5	LOKTAK HEP, NHPC	55.04
6	DOYANG HEP, NEEPCO	15.48
7	AGBPP, NEEPCO	79.62
8	AGTPP, NEEPCO	34.22
9	KHANDONG HEP, NEEPCO	16.75
10	KOPILI HEP, NEEPCO	63.34
11	RANGANADI HEP, NEEPCO	73.94
12	KOPILI - II HEP, NEEPCO	6.31
13	PALATANA, ONGCTPC,	131.09
	OTHER	
14	GEPL	0.00
15	PTC	0.00
16	UI / DEVIATION	182.05
17	FREE POWER	31.19
18	TOTAL	852.17

The Commission approves power purchase of 852.17 MUs for the FY 2019-20 including 31.19 MUs free power.

7.9 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 2019-20.

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

Table 7.12: Energy Balance approved by the Commission

(In MUs)

Sl. No.	Particulars	Approved in Tariff Order dated 28.03.2017	Projected by DPN	Approved by the Commission
A	Energy Requirement			
1	Energy Sales	722.65	796.58	713.19
2	Distribution loss %	21.00	21.00	21.00
3	Distribution loss	192.10	211.75	189.58
4	Energy Requirement	914.75	1,008.32	902.77
B	Energy Availability			
5	Own generation	90.00	98.40	98.40
6	Power from ER	106.58	93.50	93.50
7	ER Total losses %	2.26%	2.26%	2.26%
8	Regional Losses	2.41	2.11	2.11
9	Net Energy from ER (6-8)	104.17	91.39	91.39
10	Power from NER	613.67	576.63	576.62
11	Total power purchase (9+10)	717.84	668.02	668.01
12	NER Tr Loss %	2.66%	2.66%	2.66%
13	NER Tr Loss	19.09	15.34	17.77
14	Net power available (11-13)	698.75	652.68	650.24
15	UI/ Deviation	154.30	288.42	182.05
16	Total power available at state periphery (5+14+15)	943.04	1,039.51	930.69
17	Intra state Tr Loss @ 3%	28.29	31.19	27.92
18	Net power available for sale in Distribution(16-17)	914.75	1,008.32	902.77
19	Surplus (18-4)	0.00	0.00	0.00

7.10 Aggregate Revenue Requirement

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

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

7.11 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.

7.12 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 Likhimro HEP, the cost furnished by DPN for the FY 2019-20 is provided in Table below.

Table 7.13: Cost of Generation projected by DPN

Particulars	(Rs. in Crores)	
	Approved in Tariff Order dated 28.03.2017	Projected
Cost of Generation	16.81	16.96

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 Likhimro 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 Rs. 16.96 Crores for the FY 2019-20 as projected by DPN.

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

DPN has projected power purchase cost at Rs. 323.96 Crores for the FY 2019-20.

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 2019-20 is proposed to be met from own generation & power purchase from available sources. The DPN had projected of Rs. 323.96 Crores. 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 & approved in the MYT Order dated 28.03.2017 for the FY 2019-20 are furnished in table below.

Table 7.14: Power Purchase Cost projected by DPN

(Rs. in Crores)

Sl. No.	Source	Approved in Tariff Order dated 28.03.2017	Projected
1	NTPC		
	FSTPP	19.63	88.57
	KHSTPP	11.04	
	TSTPP	8.86	
	BGTPP	39.59	
2	NHPC		
	LOKTAK HEP	16.04	15.12
3	NEEPCO		
	DOYANG HEP	5.26	82.36
	AGBPP	50.49	
	AGTPP	22.34	
	KHANDONG HEP	2.89	
	KOPILI HEP	5.01	
	RANGANADI HEP	25.33	
	KOPILI - II HEP	1.41	
4	ONGCTPC		
	PALATANA	49.33	48.67
5	Other sources		
	GEPL	19.85	89.24
	PTC	4.68	
	UI Purchase	42.59	
6	Total Energy Purchase	324.34	323.96
7	Free Power	-	-
8	REC Purchase	0.80	-
9	Net Power Purchase Expenses	325.14	323.96

Commission Analysis:

As seen from the above, the DPN has claimed the power purchase cost at Rs. 323.96 Crores for the FY 2019-20. 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 2019-20. Accordingly, the power purchase cost for the FY 2019-20 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 7.15: 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	KOPILI HEP, NEEPCO	200.00	6.15%	12.29
11	RANGANADI HEP, NEEPCO	405.00	5.34%	21.61
12	KOPILI - 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 7.16: Power Purchase Cost approved by the Commission for FY 2019-20

Sl. No.	Source	Energy Received (MUs)	Unit Cost (Rs. / Kwh)	Total Cost (Rs. in Crores)
1	NTPC			
	FSTPP	40.79	4.27	17.42
	KHSTPP	23.52	3.86	9.08
	TSTPP	29.19	2.76	8.06
	BGTPP	69.64	8.65	60.24
2	NHPC			
	LOKTAK HEP	55.04	4.34	23.89
3	NEEPCO			
	DOYANG HEP	15.48	5.18	8.02
	AGBPP	79.62	4.72	37.58
	AGTPP	34.22	5.58	19.09
	KHANDONG HEP	16.75	2.32	3.89
	KOPILI HEP	63.34	1.09	6.90
	RANGANADI HEP	73.94	3.28	24.25
	KOPILI - II HEP	6.31	2.36	1.49
4	ONGCTPC			
	PALATANA	131.09	3.60	47.19
5	Other sources			
	GEPL			
	PTC			
	UI/ Deviation	182.05	2.76	50.25
6	Total Energy Purchase	820.98		317.34
7	Free Power	31.19		-
8	REC Purchase			5.50
9	Net Power Purchase Expenses	852.17		322.85

The Commission approves the power purchase cost at Rs. 322.85 Crores including REC Purchase cost of Rs. 5.50 Crores & UI/Deviation Purchase cost of Rs. 50.25 Crores for the FY 2019-20.

7.14 Transmission and Other Charges

The Transmission charges payable to PGCIL including SLDC Fees & Charges are estimated based on the quantum of power proposed for wheeling for the FY 2019-20 at Rs. 39.18 Crores. The Transmission & Other Charges furnished by DPN for the FY 2019-20 and approved in the MYT Order dated 28.03.2017 are provided in the Table below.

Table 7.17: Transmission and Other Charges projected by DPN

(Rs. in Crores)			
Sl. No.	Source	Approved in Tariff Order dated 28.03.2017	Projected
1	Transmission Charges	44.73	38.66
2	SLDC Fees and Charges	0.98	0.52
3	Total	45.71	39.18

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 Rs. 39.18 Crores for the FY 2019-20 as projected by DPN.

7.15 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.

7.15.1 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 Rs. 128.48 Crores for the FY 2019-20. The employee expenses as projected by DPN and approved by the Commission in the Tariff Order dated 28.03.2017 are provided in the table below.

Table 7.18: Employee Cost projected by DPN

(Rs. in Crores)		
Particulars	Approved in Tariff Order dated 28.03.2017	Projected
Employee Expenses	113.78	128.48

Commission's Analysis and Approval:

The Petitioner furnished the employee expenses at Rs. 128.48 Crores for the FY 2019-20. Further, the Commission directs DPN to furnish the details of Employee Cost at the time of Review & True-up.

Now, the Commission approves Employee Expenses at Rs. 113.78 Crores against Rs. 128.48 Crores projected by DPN for the FY 2019-20.

7.15.2 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 Rs. 2.67 Crores for the FY 2019-20. The A&G expenses as projected by DPN and approved by the Commission in the Tariff Order dated 28.03.2017 are provided in the table below.

Table 7.19: Administrative and General Expenses projected by DPN

(Rs. in Crores)		
Particulars	Approved in Tariff Order dated 28.03.2017	Projected
A & G Expenses	3.46	2.67

Commission's Analysis:

The Petitioner furnished A&G Expenses at Rs. 2.67 Crores for the FY 2019-20. Further, the Commission directs DPN to furnish the details of A&G Expenses at the time of Review & True-up.

The Commission approves A&G Expenses at Rs. 2.67 Crores for the FY 2019-20 as projected by DPN.

7.15.3 Repair and Maintenance Expenses

DPN has been undertaking various Repair 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 Rs. 34.92 Crores for the FY 2019-20. The R&M expenses as projected by DPN and approved by the Commission in the Tariff Order dated 28.03.2017 are provided in the table below.

Table 7.20: Repair and Maintenance Expenses projected by DPN

(Rs. in Crores)		
Particulars	Approved in Tariff Order dated 28.03.2017	Projected
R & M Expenses	6.39	34.92

Commission's Analysis:

The Petitioner furnished the Repair & Maintenance Expenses at Rs. 34.92 Crores for the FY 2019-20. The Commission calculated the Repair & Maintenance Expenses @ 5% hike on the approved cost of the FY 2018-19 & approved the same for the FY 2019-20. Further, the Commission directs DPN to furnish the details of A&G Expenses at the time of Review & True-up.

The Commission approves Repair & Maintenance Expenses at Rs. 26.67 Crores against Rs. 34.92 Crores projected by DPN for the FY 2019-20.

7.15.4 Summary of O&M Expenditure approved by the Commission

The summary O&M Expenditure approved by the Commission in the MYT Order dated 28.03.2017, projected by the DPN and now approved by the Commission for the FY 2019-20 are tabulated below:

Table 7.21: Operation & Maintenance Expenditure approved by Commission

(Rs. in Crores)				
Sl. No.	Particulars	Approved in Tariff Order dated 28.03.2017	Projected	Now approved by the Commission
1	Employee Expenses	113.78	128.48	113.78
2	Administrative & General Expenses	3.46	2.67	2.67
3	Repair & Maintenance Expenses	6.39	34.92	26.67
4	Total	123.63	166.07	143.12

7.16 Capital Expenditure & Capitalisation

DPN has undertaken significant capital expenditure during the FY 2019-20 and has plans to implement schemes for development of infrastructure during the FY 2019-20. 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 not projected any capital expenditure during the FY 2019-20. The DPN had not furnished the revised plan for capital expenditure during the FY 2019-20. 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 2019-20 are outlined in the table below:

Table 7.22: Capital Works in Progress

		(Rs. in Crores)
Sl. No.	Particulars	FY 2019-20
A	Opening Balance of CWIP	1,820.92
B	Fresh Investment during the year	-
C	Investment capitalised out of opening CWIP	906.90
D	Investment capitalised out of fresh investment	-
E	Total Capitalisation during the year (C+D)	906.90
F	Closing Balance of CWIP (A + B - C - D)	914.02

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 capitalisation of Rs. 906.90 Crores during the FY 2019-20 is approved.

7.17 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 31.03.2018. 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 7.23: Depreciation projected by DPN

(Rs. in Crores)		
Sl. No.	Particulars	FY 2019-20 (Projected)
A	Opening GFA	2,221.69
B	Additions during the year	906.90
C	Closing GFA	3,128.59
D	Total Depreciation	97.20

Commissions Analysis:

The DPN had not submitted the Fixed Asset Register as on 31.03.2018. The DPN has projected depreciation for the FY 2019-20 at Rs. 97.20 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 31.03.2019 with next filing of petition.

Now, the Commission approves Depreciation at Rs. 97.20 Crores for the FY 2019-20 as projected by DPN.

7.18 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. Repayment of the normative loan during the FY 2019-20 has been considered equivalent to the depreciation in line with the MYT Regulations. Since, there is no actual loan for DPN the interest at the SBI Bank rate of 13.45% as on April 1st, 2018 has been applied on the average normative debt in order to project the interest on normative loans for FY 2018-19. The detailed are furnished by DPN is provided in the table below.

Table 7.24: Interest on Loan furnished by DPN

(Rs. in Crores)

Sl. No.	Particulars	Approved in Tariff Order dated 28.03.2017	Projected
1	Opening Normative Loan	-	1,280.15
2	Add: Normative Loan during the year		634.83
3	Less: Normative repayment		97.20
4	Closing Normative Loan		1,817.78
5	Average Normative Loan		1,548.97
6	Rate of Interest		13.45%
7	Interest on Loan		208.34

Commission's Analysis:

The DPN has stated that the entire capital employed has been funded through infusion of funds by Government of Nagaland through budgetary support without any external borrowings. **As such, the Commission has not considered interest on loan for the FY 2019-20.**

7.19 Interest on Working Capital

The DPN has furnished the Interest on Working Capital for the FY 2019-20 in accordance with the Regulation 29.4 of The NERC (Multi Year Tariff) Regulations, 2016 at Rs. 9.41 Crores for the FY 2019-20. The Interest on working capital projected by the DPN and approved in the MYT Order dated 28.03.2017 are provided in table below:

Table 7.25: Interest on Working Capital projected by DPN

(Rs. in Crores)

Particulars	Approved in Tariff Order dated 28.03.2017	Projected
Interest on Working Capital	12.25	9.41

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 7.26: Interest on Working Capital approved by the Commission

(Rs. in Crores)		
Sl. No.	Particulars	FY 2019-20
A)	Receivables equivalent to 1 month of expected revenue from sale of electricity at prevailing rates	30.90
B)	Maintenance of spares at 1% of historical costs of fixed assets	31.29
C)	O&M Expenses for one month	11.93
D)	Amount held as Security Deposit in Cash	-
E)	Total Working capital ((A+B+C)-D)	74.11
F)	Rate of Interest @ SBAR of relevant year	13.45%
G)	Interest on Working Capital	9.97

The Commission approves the Interest on Working Capital at Rs. 9.97 Crores as against Rs. 9.41 Crores projected by DPN for the FY 2019-20.

7.20 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 true-up exercise.

In view of the above the Commission has not allowed Bad Debts for the FY 2019-20.

7.21 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 DPN has considered opening normative equity at 30% of GFA and the actual assets capitalized for the FY 2017-18, approved capitalisation for the FY 2018-19 and FY 2019-20 has been considered for arriving at the total normative equity for the year. Rate of return on equity is considered 15.50% as per provision 26 of the MYT regulations 2016.

In line of the above methodology, DPN has estimated of Return of Equity at Rs. 124.39 Crores for the FY 2019-20.

Further, the Commission analysed that 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.

7.22 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 2019-20 has been projected at Rs. 10.87 Crores as approved by the Commission in the MYT Order dated 28th March, 2017. The Non-Tariff Income projected by the department and approved in the MYT Order dated 28.03.2017 for the FY 2019-20 are provided in table below:

Table 7.27: Non-Tariff Income projected by DPN

(Rs. in Crores)		
Particulars	Approved in Tariff Order	Projected
Non-Tariff Income	10.87	10.87

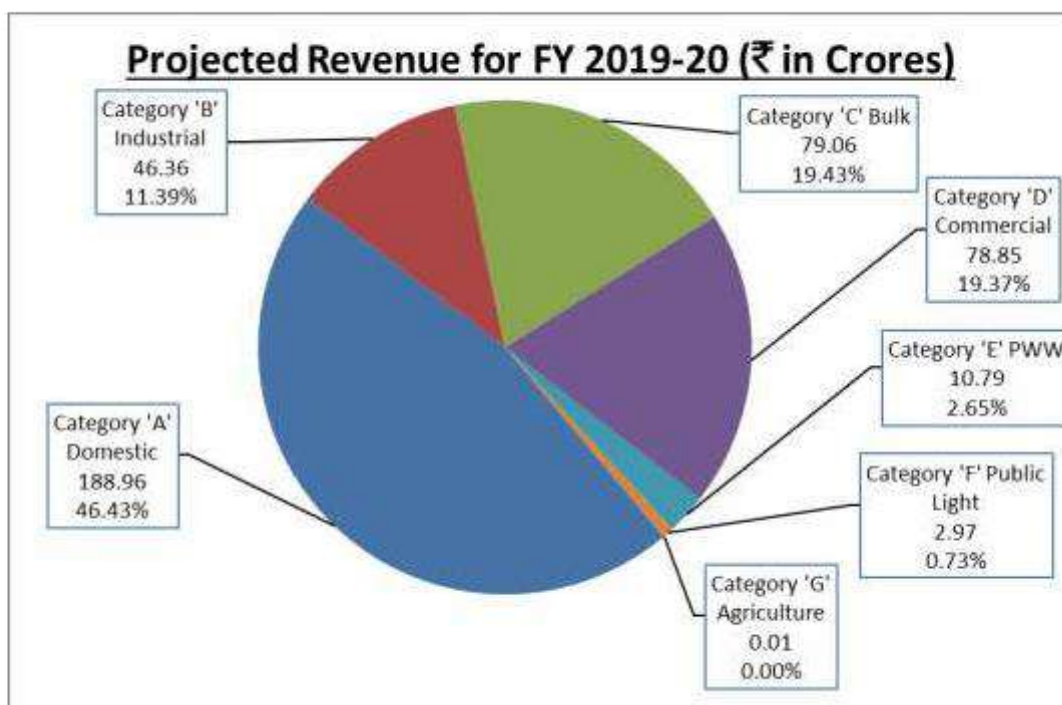
The Commission approves the Non-Tariff Income at Rs. 10.87 Crores for the FY 2019-20 as projected by DPN.

7.23 Revenue from Existing Tariff

The DPN has projected revenue from sale of energy with existing tariff at Rs. 407.01 Crores for the FY 2019-20.

Commissions Analysis:

Category wise revenue projected by DPN for the FY 2019-20 is provided in the chart below:



It is observed that the revenue from domestic category contributes about 46.43%, 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 713.19 MUs within the state for the FY 2019-20, the revenue approved at the existing Tariff is detailed in table below:

Table 7.28: Revenue from Existing Tariff approved by the Commission for FY 2019-20

Sl. No.	Particulars	Energy Sales (In MUs)	Average Rate (Rs./kWh)	Amount (Rs. in Crores)
1	Category 'A' Domestic	231.18	4.89	113.10
2	Category 'B' Industrial	74.74	5.76	43.04
3	Category 'C' Bulk	118.83	6.30	74.86
4	Category 'D' Commercial	101.74	6.86	69.84
5	Category 'E' PWW	12.78	6.00	7.67
6	Category 'F' Public Light	18.50	2.29	4.23
7	Category 'G' Agriculture	0.02	3.00	0.01
8	Category 'H' Temporary Connection	0.00	0.00	0.00
9	Category 'I' Inter-state	0.00	0.00	0.00
10	Kutir Jyoti (Point)	0.00	0.00	0.00
11	Single Point Metered Rural	135.31	3.60	48.71
12	Single Point Metered Urban	20.09	4.65	9.34
13	Total sales within State	713.19	5.20	370.80
14	Sales Outside State	0.00	0.00	0.00
15	Total Sales (13+14)	713.19	5.20	370.80

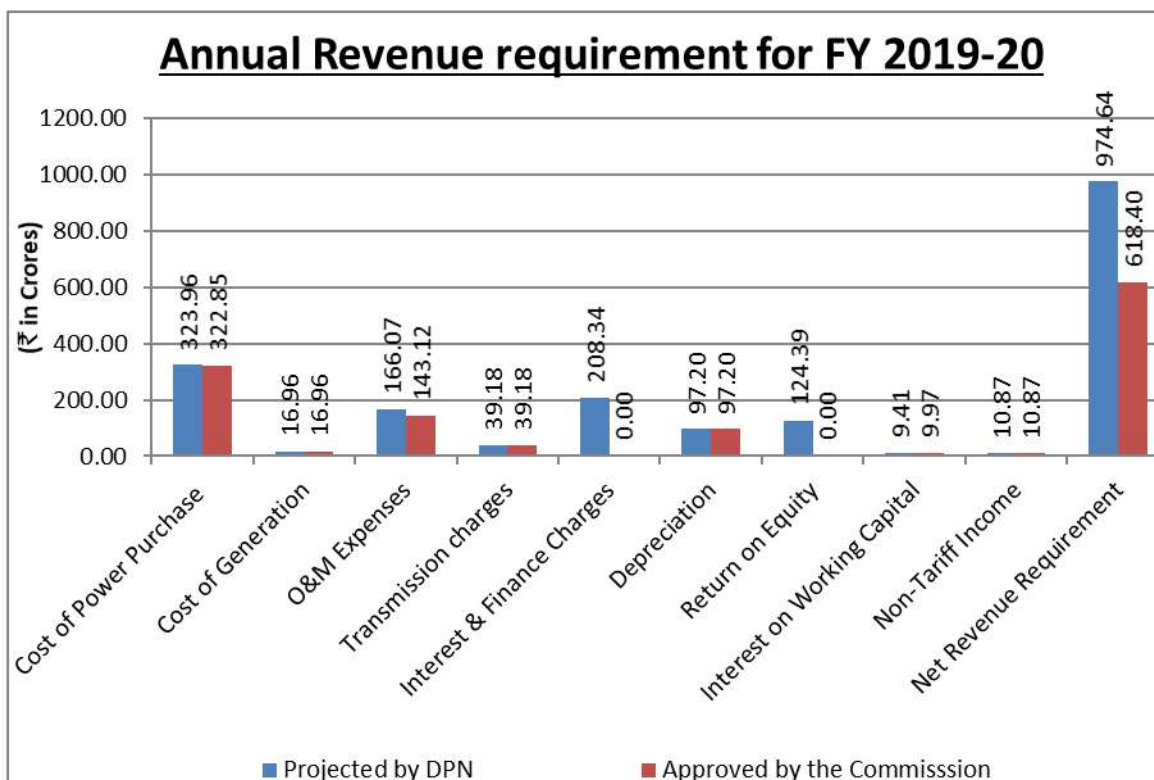
The Commission approves the revenue from the existing tariff at Rs. 370.80 Crores from sale of 713.19 MUs within the State at an average rate of at Rs. 5.20/kWh.

7.24 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 7.29: Aggregate Revenue Requirement approved by the Commission

(Rs. in Crores)				
Sl. No.	Particulars	Approved in Tariff Order dated 28.03.2017	Projected	Now approved by the Commission
1	Cost of Power Purchase	325.14	323.96	322.85
2	Cost of Generation	16.81	16.96	16.96
3	Cost of Fuel	-	-	-
4	Operation & Maintenance Expenses	123.63	166.07	143.12
5	Transmission charges	45.71	39.18	39.18
6	SLDC fees and charges	-	-	-
7	Intra- state Transmission Charges	-	-	-
8	Interest & Finance Charges	-	208.34	-
9	Depreciation	97.20	97.20	97.20
10	Interest on Working Capital	12.25	9.41	9.97
11	Return on Equity	-	124.39	-
12	Prior period expenses	-	-	-
13	Provision for Bad Debt	-	-	-
14	Total Revenue Requirement	620.74	985.51	629.27
15	Less: Non-Tariff Income	10.87	10.87	10.87
16	Less: Revenue from Sale of Power-Exchange	-	-	-
17	Net Revenue Requirement (14-15-16)	609.87	974.64	618.40



The Commission approves the Net Revenue Requirement of Rs. 618.40 Crores for the FY 2019-20.

7.25 Revenue Gap

Based on the approved Aggregate Revenue Requirement and revenue from existing tariffs at approved sales for the FY 2019-20, the resultant GAP is as shown in the table below.

Table 7.30: Revenue at Existing Tariff and Gap

(Rs. in Crores)		
Sl. No.	Particulars	FY 2019-20
1	Net Revenue Requirement	618.40
2	Revenue from Retail Sales at Existing Tariff	370.80
3	Net Gap (1-2)	247.59
4	Energy Sales within the state (In MUs)	713.19
5	Average cost (In Rs./kWh)	8.67
6	Average revenue realisation (In Rs./kWh)	5.20

7.26 Recovery of Revenue Gap for the FY 2019-20

As seen from para 7.25 above there is a revenue gap of Rs. 247.59 Crores which is about 40.04% of net ARR for the FY 2019-20.

In this Petition the DPN has submitted as below:

“The recovery of the above revenue gap through tariff hike shall lead to tariff shock and make electricity unaffordable for public. Accordingly, DPN proposes to partial recovery of Revenue Gap through tariff hike. The balance of the revenue gap shall be funded through the budgetary support of the Government of Nagaland.

In accordance with the above submission, DPN has proposed revision in retail tariff for various categories for FY 2019-20.

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

The power purchase cost is primary cost of supply and constitutes major proportion of Aggregate Revenue Requirement (ARR) of the department. Further, power purchase cost is directly proportional to the energy sale. Hence, recovery of power purchase cost is essential to enable the department to sustain & meet the rising power demand in the state.

Accordingly, DPN proposes to recover at-least the average cost of power purchase. Therefore, it is proposed to increase the tariff of lowest slab in all categories so as to recover the average cost of power per unit. The average cost of power purchase per unit based on the power purchase cost for the FY 2017-18 is Rs. 3.74. Further, The Hon’ble Commission approved Distribution loss for the FY 2019-20 is 21.00% which is added to actual average Cost of Power Purchase for FY 2017-18 of Rs. 3.74 and it comes to Rs. 4.53, which is used as the reference base for tariff determination.”

However, DPN proposed an average increase in tariff by 9.53% to bridge the gap partially.

The Commission considers it appropriate to revise the tariffs at an average of 10.59%, 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 Rs. 39.28 Crores as detailed in table below:

Table 7.31: Revenue from revised Tariff for FY 2019-20 approved by the Commission

Sl. No.	Particulars	Energy Sales (In MUs)	Average Rate (Rs./Kwh)	Amount (Rs. in Crores)
1	Category 'A' Domestic	231.18	5.41	125.18
2	Category 'B' Industrial	74.74	6.14	45.89
3	Category 'C' Bulk	118.83	6.30	74.86
4	Category 'D' Commercial	101.74	7.15	72.78
5	Category 'E' PWW	12.78	6.60	8.43
6	Category 'F' Public Light	18.50	2.29	4.23
7	Category 'G' Agriculture	0.02	3.10	0.01
8	Category 'H' Temporary Connection	0.00	0.00	0.00
9	Category 'I' Inter-state	0.00	0.00	0.00
10	Kutir Jyoti (Point)	0.00	0.00	0.00
11	Single Point Metered Rural	135.31	5.00	67.65
12	Single Point Metered Urban	20.09	5.50	11.05
13	Total sales within State	713.19	5.75	410.08
14	Sales Outside State	0.00	0.00	0.00
15	Total Sales (13+14)	713.19	5.75	410.08

With the revision of tariff, the DPN will generate additional revenue of Rs. 39.28 Crores. Thereby, the revenue gap is revised to Rs. 208.31 Crores (i.e. Rs. 247.59 Crores – Rs. 39.28 Crores), which the DPN shall meet from Government subsidy and by improving internal efficiency.

The Commission, accordingly, approves revenue from revised tariffs at Rs. 410.08 Crores with the energy sales of 713.19 MUs. Due to the approved tariff hike, the revenue gap has reduced to Rs. 208.31 Crores as against Rs. 247.59 Crores (approved in Para 5.25) for the FY 2019-20.

7.27 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, Rs. 208.31 Crores shall be met from Government subsidy.

8. TARIFF PRINCIPLES AND DESIGN

8.1 Background

- (a) The Commission in determining the revenue requirement of DPN for the FY 2019-20 and the retail tariff for the FY 2019-20 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 endeavoured 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 2019-20. This

guides the DPN for better performance by reduction of loss level, which will result in substantial reduction in average cost of supply.

- (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 Rs. 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 Rs. 2.40 per unit and that for any of the cross subsidizing categories should not go beyond Rs. 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 endeavours 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.

8.2 Tariff Proposed by the DPN and approved by the Commission

8.2.1 Tariff Categories

In the ARR and Tariff Petition of DPN for the FY 2019-20 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 Kutir Jyoti (Point)
- 11 Single Point Metered (Rural)
- 12 Single Point Metered (Urban)

8.2.2 Existing & Proposed Tariff

DPN in its tariff petition for the FY 2019-20 has proposed for revision of the existing retail tariffs to various categories of consumers to earn additional revenue of Rs. 38.78 Crores to meet the gap partially as shown below:

The DPN has proposed tariff revision with an average increase of 9.53% 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 2019-20 is tabulated below:

Table 8.1: Existing Tariff v/s Proposed Tariff for FY 2019-20

Sl. No.	Category of Consumers	Existing Rate (In Rs./kWh)	Proposed Rate (In Rs./kWh)
1	Category 'A' Domestic		
a)	Up to 30 kwh	3.65	4.50
b)	31 to 100 kwh	4.85	5.40
c)	101-250 kwh	5.95	6.00
d)	Above 250 kwh	6.95	7.00
2	Category 'B' Industrial		
a)	Up to 500 kwh	5.25	5.80
b)	501 to 5000 kwh	6.30	6.50
c)	Above 5000 kwh	7.20	7.20
3	Category 'C' Bulk	6.30	6.30
4	Category 'D' Commercial		
a)	Up to 60 kwh	6.70	7.00
b)	61 to 240 kwh	7.90	8.10
c)	Above 240 kwh	9.00	9.20
5	Category 'E' PWW	6.00	6.60
6	Category 'F' Public Light	* To be recovered from the consumers	* To be recovered from the consumers
7	Category 'G' Agriculture	3.00	4.70
8	Category 'H' Temporary Connection	DLF - Rs. 10.00 Others - Rs. 13.00	DLF - Rs. 11.00 Others - Rs. 14.00
9	Category 'I' Inter-state	5.60	6.00
10	Kutir Jyoti (Point)	Same as DLF	Same as DLF
11	Single Point Metered Rural	3.60	5.00
12	Single Point Metered Urban	4.65	5.50
*	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.

8.2.3 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 Rs. 247.59 Crores, the Commission considers to revise the tariff under Telescopic billing with an average increase of 10.59% as detailed below:

Table 8.2: Tariff approved by the Commission for FY 2019-20

Sl. No.	Category of Consumers	Approved Rate (In Rs./kWh)
1	Category 'A' Domestic	
a)	Up to 30 kwh	4.50
b)	31 to 100 kwh	5.40
c)	101-250 kwh	6.00
d)	Above 250 kwh	7.00
2	Category 'B' Industrial	
a)	Up to 500 kwh	5.80
b)	501 to 5000 kwh	6.45
c)	Above 5000 kwh	7.20
3	Category 'C' Bulk	6.30
4	Category 'D' Commercial	
a)	Up to 60 kwh	7.00
b)	61 to 240 kwh	8.10
c)	Above 240 kwh	9.15
5	Category 'E' PWW	6.60
6	Category 'F' Public Light	* To be recovered from the consumers
7	Category 'G' Agriculture	3.10
8	Category 'H' Temporary Connection	DLF - Rs. 11.00 Others - Rs. 14.00
9	Category 'I' Inter-state	6.00
10	Kutir Jyoti (Point)	Same as DLF
11	Single Point Metered Rural	5.00
12	Single Point Metered Urban	5.50
*	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.

8.2.4 Tariff for prepaid metered consumers approved by the Commission

The DPN has introducing prepaid metering as pilot scheme for selected sub-divisions. The scheme has improved the billing & collection efficiency of the billing function. In order encourage consumers to opt for the prepaid metering system, department proposes separate Tariff Schedule for the prepaid metered consumers. Under prepaid category, Consumers also pay 100% upfront in advance. The tariff for prepaid is therefore proposed at a simple fixed rate for a particular Category as an incentive. Accordingly, an in principle separate Tariff Schedule is proposed for the prepaid metered consumers by DPN for the FY 2019-20. The Tariff proposal for prepaid metered consumers by DPN and approves by the Commission for the FY 2019-20, as detailed below:

Table 8.3: Tariff for Prepaid Metered Consumers approved by Commission for FY 2019-20

Sl. No.	Category of Consumers	Proposed Rate (In Rs./kWh)	Approved Rate (In Rs./kWh)
1	Category 'A' Domestic		
	All Consumers	5.00	5.00
2	Category 'B' Industrial		
	All Consumers	5.80	5.80
3	Category 'C' Bulk		
	All Consumers	6.30	6.30
4	Category 'D' Commercial		
	All Consumers	7.00	7.40
5	Category 'H' Agriculture		
	All Consumers	4.70	3.10

Details are given in tariff schedule in the Appendix.

8.2.5 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.

8.2.6 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 01.04.2019 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.

By Order of the Commission.

Sd/-

(Er. IMLIKUMZUK AO)

Chairman-cum-Member

NERC

Place: Kohima.

Dated the 23rd April, 2019

9. DIRECTIVES

Background

While examining the information and data contained in the proposed Tariff petition for the FY 2019-20, 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.

Reply:

It is submitted that the Annual Accounts of the Department has been compiled up-to FY 2016-17. Copy of the same is attached. The Fixed Asset Register has been updated up-to - 31.03.2016. The Fixed Asset Register for the FY 2016-17 & FY 2017-18 is under compilation and shall be submitted along with the next Tariff Petition.

It is submitted that the Power Purchase accounting & reconciliation has been done up-to FY 2017-18. The report is being submitted separately.

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.

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.

Reply:

It is submitted that the DPN shall maintain the details like slab wise sales/revenue, function wise expenses and submit the same along with the next Tariff Petition.

Comments of the Commission:

The 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. DPN is directed to provide the same in next 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.

Reply:

The details of the steps taken & status of the same is being compiled and shall be submitted separately.

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 30.09.2019.

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 Jyoti	- 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 adapting 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.

Reply:

The status of defective & replacement thereof is being submitted separately.

Comments of the Commission:

DPN has not submitted the progress report till date. DPN is directed to submit the details by 30.09.2019.

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.

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 form FY 2017-18.

Comments of the Commission:

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

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.

Reply:

It is submitted that details capital expenditure for the FY 2017-18 stands submitted along with the petition. The details of capital expenditure for the FY 2018-19 shall be submitted shortly.

Comments of the Commission:

DPN is directed to submit the separate proposal for approval of works costing more than Rs. 5 Crores to the Commission.

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.

Reply:

It is submitted that DPN has not been able to compile the data relating to security deposits and shall complete the exercise. 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 30.09.2019.

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.

Reply:

It is submitted that DPN has not been able to do the assessment of dues along with aging analysis. The DPN shall take steps to comply with the directive. Hon'ble Commission may kindly allow time for the same.

Comments of the Commission:

The DPN has not complied with the direction. The commission reiterates its directive and directs to the DPN 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 charge 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 along with steps taken to bring down the same.

Reply:

The progress report on the steps taken to bring down the transformer failures is being submitted separately.

Comments of the Commission:

The DPN has not complied with the direction. The commission reiterates its directive and directs to the DPN to submit the details of transformer failures during the FY 2018-19 along with 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.

Reply:

It is submitted that the Accounts for the FY 2015-16 & FY 2016-17 has been compiled. However, the same is yet to be audited by AG. The DPN shall file the True-up petition after completion of Audit. Hon'ble Commission may kindly allow the same.

Comments of the Commission:

DPN is directed to get the Accounts & Fixed Asset Register updated and audited.

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.

Reply:

It is submitted that the Fixed Asset Register for the FY 2016-17 & FY 2017-18 is under compilation and same shall be submitted along with the next Tariff Petition. The Annual Accounts for the FY 2015-16 & FY 2016-17 has been compiled. Copy of the same is attached.

Comments of the Commission:

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

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.

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 Tariff 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.

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 30.06.2019 positively.

Directive 15: 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.

Reply:

It is submitted that DPN has not been able to do the physical verification of all consumer connections. Hon'ble Commission may allow more time for the same.

Comments of the Commission:

DPN shall complete the exercise by 30.09.2019 and report the compliance to the Commission.

Directive 16: 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.

Reply:

It is submitted that the exercise of review of Arrears from sale of power is being done by the department, however, identification & reconciliation of arrears shall take more time. Hon'ble Commission may kindly allow the same to be submitted along with the next Tariff Petition.

Comments of the Commission:

DPN is directed to conduct the exercise of review of Arrears from sale of power and report the status with the next Tariff Petition to the Commission.

Directive 17: 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.

Reply:

It is submitted that DPN shall initiate the exercise of Physical verification of stock from the FY 2019-20.

Comments of the Commission:

DPN is directed to submit the status by 30.09.2019 to the Commission.

Directive 18: 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.

Reply:

It is submitted that DPN has taken steps to create awareness and sensitise its employees on the need to be fully aware of various acts, rules & regulations, safety practices etc as directed by the Hon’ble Commission.

Comments of the Commission:

DPN is directed to submit the status by 30.09.2019 to the Commission.

Directive 19: 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.

Reply:

It is submitted that DPN is exploring possibilities of building up its Renewable Energy capacity.

Comments of the Commission:

DPN is directed to submit the status by 30.09.2019 to the Commission.

Directive 20: 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.

Reply:

It is submitted that DPN shall compile the details of the actual data for the 1st Half of the FY 2019-20 and submit the revised ARR from the FY 2019-20 along with the next Tariff Petition. Hon'ble Commission may allow the same.

Comments of the Commission:

The directive is fully complied.

10. WHEELING CHARGES

10.1 Wheeling Charges

The net ARR has been approved in chapter 7 is Rs. 618.40 Crores for the FY 2019-20. 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 10.1: 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

10.2 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 10.2: Segregation of Wire and Retail Supply Costs for FY 2019-20

(Rs. in Crores)				
Sl. No.	Particulars	Approved Total Cost	Wire Business	Retail Supply Business
1	Cost of Power Purchase	322.85	-	322.85
2	Cost of Generation	16.96	-	16.96
3	Employee Cost	113.78	68.27	45.51
4	Administration & General Expenses	2.67	1.34	1.34
5	Repair & Maintenance Expenses	26.67	24.00	2.67
6	Transmission charges	39.18	-	39.18
7	Depreciation	97.20	87.48	9.72
8	Interest on Working Capital	9.97	1.00	8.97
9	Total Revenue Requirement	629.27	182.08	447.19
10	Less: Non-Tariff Income	10.87	1.09	9.78
11	Net Revenue Requirement (9- 10)	618.40	181.00	437.41

10.3 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 10.3: Wheeling Tariff approved by the Commission

Sl. No.	Particulars	FY 2019-20
1	ARR for wheeling function approved by the Commission (Rs. in Crores)	181.00
2	Total sales within State - approved (In MUs)	713.19
3	Wheeling Tariff (Rs./kWh)	2.54

The Commission approves wheeling Tariff at Rs. 2.54/kWh for the FY 2019-20.

11. FUEL AND POWER PURCHASE COST ADJUSTMENT

11.1 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:

$$\text{FPPCA (Ps./kWh)} = \frac{Q_c(RC_2 - RC_1) + Q_0(RO_2 - RO_1) + Q_{pp}(R_{pp2} - R_{pp1}) + V_z + A}{(Q_{Pg1} + Q_{pp1} + Q_{pp2})} \times \left[1 - \frac{L}{100} \right] \times 100$$

Where,

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

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

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

R_{c2} = Weighted average base rate of coal supplied ex-power station coal yard for the adjustment period in Rs./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 (Rs./KL) approved by the Commission for the adjustment period.
- R_{o2} = Weighted average actual rate of oil ex-power station supplied (Rs./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 (Rs./kWh)
- R_{pp2} = Average rate of Power Purchase as approved by the Commission (Rs./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 (Rs.)
- 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 (Rs.)

If there are more than one power station owned by the Licensee Q_c, R_{c1}, R_{c2}, Q_o, R_{o1}, R_{o2}, Q_{pg} and Q_{pg1} 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 (Rs./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 Rs./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 13th Meeting of the State Advisory Committee (SAC)
Held on 08th March, 2019**

Venue : Conference Hall, Power Department Kohima, Nagaland.
Date : Friday, the 8th March, 2019

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

AGENDA NO: (i). Tariff Proposal for FY 2019-20, APR for FY 2018-19 and True-up for FY 2014-15:

The Power Department has submitted the revised ARR and Tariff Petition for the FY 2019-20 including True up for the year 2014-15 and Review for the FY 2018-19 for approval.

a. True-up for FY 2014-15:

The DPN submitted that the True up for FY 2014-15 were as per the audited accounts and there is an increased in the revenue gap as against the approved figure of Rs. 87.03 Crores in the Tariff Order for FY 2014-15 to Rs. 229.90 Crores.

The matter was discussed in detail and the committee advised the Commission to verify the actual audited accounts from the Department of Power and approve as deemed fit.

b. Review of ARR for FY 2018-19:

The Members verified the revised figures in the ARR for FY 2018-19 submitted by the DPN. The revenue gap as per ARR and Tariff for the FY 2018-19 was Rs. 498.02 Crores.

The DPN submitted that the revision in parameters was based on 6 months actual and balance 6 months on estimates. Due to revised figures in the ARR, the revenue gap for FY 2018-19 is shown to be increased. This revenue deficit has not been carried forward as the same has been funded as budgetary support from the Govt. of Nagaland.

The members after deliberation on the review of ARR for FY 2018-19, advised the Commission to further verify the necessary documents with the DPN and approve the revised figures as deemed fit.

c. Tariff Proposal for FY 2019-20

The Commission highlighted the DPN Tariff proposal for FY 2019-20 by referring existing tariff and the proposed tariff projected in the tariff petition and informed that some additional data & clarifications on the petition were sought from DPN which are still awaited.

The Committee Members examined the tariff proposal and deliberated upon in detail. The members are of the view that in spite of an increase in tariff every year, the DPN is unable to improve its revenue collection and high T&D losses. As such, an effective measures needs to be initiated by the DPN to improve power supply as well as Revenue collection in the State.

The DPN officials highlighted that, the tariff hike is inevitable due to increase in the power purchase. Further informed that in order to improve the revenue collection, the Department is in the process of installing 22,000 (twenty two thousand) Pre-paid Meters in Dimapur & Kohima under Integrated Power Development Scheme (IPDS) and the department has already introduced online payment of Bill through Tata Consultancy Services (TCS).

The Committee Members deliberated at length on the explanation furnished by the DPN and advised the Commission to determine the Tariff for FY 2019-20 after obtaining necessary clarifications/ documents from DPN.

The committee advised the DPN to take into consideration the followings suggestions towards improvement of Revenue collection and T&D losses:

1. Replacement of all defective Meter.
2. Revival of Anti Power Theft Mobile Squad (APTMS).
3. Replacement of overhead line to underground cable or Aerial Bundled Conductor (ABC) cables.
4. Involvement of Churches and Tribal Hohos for timely payment of electricity bill and use of electricity judiciously.

AGENDA NO: (ii). Tariff Proposal for setting up 60MW Coal Based Thermal Plant:

The Commission highlighted that M/s. Fitzroy Energy & Mineral Ltd, Dimapur with EPC Contractor has filed a Tariff Petition to the Commission for development of 60 MW coal based Thermal Plant at Tuli, Mokokchung. In this regard, certain additional data & clarifications on the petition were sought from M/s. Fitzroy Energy & Mineral Ltd, and replies are awaited. The projected average Tariff per unit is Rs 5.65/kwh which is observed to be on the higher side.

The Committee Members advised the Commission to invite all the stakeholders and general public while tariff is determined.

AGENDA NO: (iii): Promotion of Renewable Energy in Nagaland – A way forward.

a. Framing of Renewable Energy Policy.

The Members deliberated on the issue and advised the NRE department to pursue the matter with the State Govt. for early finalisation of the Renewable Policy which has been already submitted.

b. Setting up of Grid connected Rooftop System.

The Commission informed that, once the draft regulation for setting up of grid connected Rooftop Solar PV (RSPV) System is completed, the same will be sent to all the stakeholders for views & comments.

The DPN mentioned that the installation of RSPV in the State will be an additional work for the department as all the energy accounting will have to be done and maintained by the department.

The Members are of the view that the setting up of RSPV System would definitely improve the power sector and also encourage the private investors to invest in the state in this regard. Hence, advised the commission to finalize the regulations at the earliest.

AGENDA NO: (iv): Review of Minutes of the 12th SAC Meeting.

All the points discussed in the last 12th SAC meeting are at the government level and the Commission was advised to pursue with the Government for early implementation.

Concluding Remarks:

The Chairperson thanked the SAC Members present and the Departmental officers for the successful & fruitful discussions in the meeting concerning power sector in the state and requested to extend their support & cooperation in the years to come.

Sd/-

W. Y. YANTHAN

Member Secretary, SAC
Nagaland Electricity Regulatory
Commission (NERC), Kohima.

**LIST OF MEMBERS PRESENT IN THE 13th STATE ADVISORY COMMITTEE
HELD ON 8th MARCH, 2019**

Sl. No.	Name	Designation
1.	Er. Imlikumzuk Ao	Chairperson
2.	Mr. W.Y. Yanthan	Member Secretary
3.	Mr. Medoselhou Keretsu	SAC Member
4.	Mr. Jonas Yanthan	SAC Member
5.	Mr. C.R. Lotha, NCS (Retd)	SAC Member
6.	Mr. Bishnu Bhattacharjee	SAC Member
7.	Mr. Oisik Mishra	SAC Member
8.	Mr. T. Meren Paul	SAC Member
9.	Rev/Dr. Chingmak Kejong	SAC Member
10.	Er. Khose Sale	Chief Engineer (D&R), DPN
11.	Er. K.Yiese	Addl.Chief Engineer, DPN
12.	Er. Moa Aier	S.E (Rev), DPN
13.	Er. Wabangmeren Jamir	E.E (Rev), DPN
14.	Er. Kavito Chishi	Director, NRE
15.	Er. James Khala	Joint Director, NRE
16.	Mr. Chyian	Electrical Inspectorate.
17.	Mr. Limawapang Lkr	Dy. Director (Legal), NERC
18.	Er. Hekavi N Ayemi	Asst. Engineer (Tariff), NERC
19.	Mr. Shivito Wotsa	Accounts Officer, NERC

REVENUE FROM APPROVED/REVISED TARIFF FOR THE FY 2019-20

Sl. No.	Category	No. of Consumers	Energy Sales (In MUs)	Energy Charges (Rs. / kWh)	Revenue (Rs. in Crores)	Average Revenue (Rs. / kWh)
1	Category 'A' Domestic					
a)	Up to 30 kwh		65.51	4.50	29.48	
b)	31 to 100 kwh		113.62	5.40	61.35	
c)	101-250 kwh		20.93	6.00	12.56	
d)	Above 250 kwh		31.12	7.00	21.79	
	Total	170,973	231.18		125.18	5.41
2	Category 'B' Industrial					
a)	Up to 500 kwh		46.87	5.80	27.19	
b)	501 to 5000 kwh		18.14	6.45	11.70	
c)	Above 5000 kwh		9.72	7.20	7.00	
	Total	5,808	74.74		45.89	6.14
3	Category 'C' Bulk	1,919	118.83	6.30	74.86	6.30
4	Category 'D' Commercial					
a)	Up to 60 kwh		91.91	7.00	64.34	
b)	61 to 240 kwh		5.30	8.10	4.29	
c)	Above 240 kwh		4.53	9.15	4.14	
	Total	24,110	101.74		72.78	7.15
5	Category 'E' PWW	40	12.78	6.60	8.43	6.60
6	Category 'F' Public Light	658	18.50		4.23	2.29
7	Category 'G' Agriculture	1	0.02	3.10	0.01	3.10
8	Category 'H' Temporary Connection					
9	Category 'I' Inter-state					
10	Kutir Jyoti (Point)					
11	Single Point Metered Rural	118,577	135.31	5.00	67.65	5.00
12	Single Point Metered Urban	10,550	20.09	5.50	11.05	5.50
13	Outside State Sale					
14	Grand Total	332,636	713.19		410.08	5.75
<i>Calculation of Revenue from Public Light</i>						
a)	Domestic	300100 X 10 X 12			3.60	
b)	Commercial	24110 X 15 X 12			0.43	
c)	Industrial	5808 X 20 X 12			0.14	
d)	Bulk Supply	1919 X 25 X 12			0.06	
	Total				4.23	

APPENDIX-A**APPROVED TARIFF SCHEDULE FOR THE FY 2019-20**

Sl. No.	Category	Rs./kWh
A.	1 CATEGORY 'A' DOMESTIC	
	(a) up to 30 kwh	4.50
	(b) 31 to 100 kwh	5.40
	(c) 101 to 250 kwh	6.00
	(d) Above 250 kwh	7.00
	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	5.80
	(b) 501 to 5000 kwh	6.45
	(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	7.00
	(b) 61 to 240 kwh	8.10
	(c) Above 240 kwh	9.15
	Monthly minimum charges	Rs.200.00 pm/kw of contract demand or part thereof
	5 CATEGORY 'E' P.W.W.	6.60
	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	6.00
	8 CATEGORY 'H' AGRICULTURE	3.10
	Monthly minimum charges	Rs.75.00 pm/HP or part thereof
	9 CATEGORY 'I' TEMPORARY CONNECTION	DLF – 11.00 Others – 14.00
	10 Kutirr Jyoti(point)	Same as DLF
	11 SINGLE POINT METERED RURAL	5.00
	12 SINGLE POINT METERED URBAN	5.50

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

Domestic Rs. 10 per connection / month

Commercial Rs. 15 per connection / month

Industrial Rs. 20 per connection / month

Bulk Supply Rs. 25 per connection / month

B. TARIFF FOR PREPAID METERED CONSUMERS		Rs./kWh
1	Category 'A' Domestic – All Units	5.00
2	Category 'B' Industrial – All Units	5.80
3	Category 'C' Bulk – All Units	6.30
4	Category 'D' Commercial – All Units	7.40
5	Category 'H' Agriculture – All Units	3.10
<input type="checkbox"/> Meter Rent: Same as Postpaid		
C. OTHER CHARGES:		
(a)	Disconnection Charges	Rs.
	i. Single phase L.T.	150.00/connection
	ii. Three phase L.T.	250.00/ connection
	iii. H.T. consumers (11 KV above)	1500.00/ connection
(b)	Reconnection Charges	
	i. Single phase L.T.	150.00/ connection
	ii. Three phase L.T.	250.00/ connection
	iii. H.T. consumers (11 KV above)	1500.00/ connection
D. METER RENT		Rs. Per meter/month
i.	Single phase L.T.	20.00
ii.	Three phase L.T.(whole current)	50.00
iii.	Three phase L.T.(CT operated)	100.00
iv.	11 kv H.T.	500.00
v.	33 kv H.T.	750.00
vi.	66 kv EHV	900.00
vii.	132 kv EHV	1000.00
E. 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
F. 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
G. SURCHARGES (DELAYED PAYMENT)		Rs. 0.10/kwh pm or part thereof
H. BILLING PERIODICITY		Monthly
I. 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
	40. 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

Tariff Schedule for Prepaid Metered Consumers

Sl. No.	Category	Rs./kWh
1.	CATEGORY 'A' DOMESTIC	
	All units	5.00
2.	CATEGORY 'B' INDUSTRIAL	
	All units	5.80
3.	CATEGORY 'C' BULK	
	All units	6.30
4.	CATEGORY 'D' COMMERCIAL	
	All units	7.40
5.	CATEGORY 'H' AGRICULTURE	
	All units	3.10

- Meter Rent: Same as post-paid.