

Truing up for FY 2018-19,  
Review of FY 2019-20,  
ARR and Tariff Revision Proposal for FY 2020-21  
Main Text & Formats (Volume I)

Submitted to:

Joint Electricity Regulatory Commission  
Gurgaon

By

DNH Power Distribution Corporation Ltd.



December 2019

**BEFORE THE JOINT ELECTRICITY REGULATORY COMMISSION  
FOR THE STATE OF GOA& UNION TERRITORIES**

Filing No.....

Case No.....


IN THE MATTER OF:      Filing of Aggregate Revenue Requirement (ARR) for FY  
2020-21 under Section 61, 62 and 64 of the Electricity Act,  
2003

AND

IN THE MATTER OF      DNH Power Distribution Corporation Limited  
(hereinafter referred to as "DNHPDCL" or "The  
Petitioner" or "The Department")  
..... Petitioner

The Applicant respectfully submits as under: -

1. DNH Power Distribution Corporation Limited (DNHPDCL) is a statutory body engaged in the procurement of electricity and distribution in the Union Territory of Dadra & Nagar Haveli. Consequent to the enactment of the Electricity Act, 2003 (hereinafter referred to as the "Act"), the process of approval of proposed tariffs is vested with the State Commission. Based on the provisions of Section 61, 62 and 64 of the Act, DNHPDCL is filing the current Petition, in order to meet its financial requirements.
2. This is a Petition indicating the Truing up Petition for FY 2018-19, Review of FY 2019-20, Aggregate Revenue Requirement (ARR) and Tariff Proposal of DNHPDCL for the FY 2020-21 (Financial Year 2020-21).

  
Chief Engineer 6/12  
DNH Power Distribution Corporation Ltd.  
U.T. of Dadra & Nagar Haveli, Silvassa

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**Notes:**

**In this Petition:**

**All currency figures used in this Petition, unless specifically stated otherwise, are in Rs Crore and Million Units.**

**This petition contains the Main Text of the Petition, Formats and Annexure (Volume II)**





ACRONYM	DEFINITION
A&G Expenses	Administrative & General Expenses
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
Ckt. Km / ckm	Circuit Kilometres
EA 2003	Electricity Act 2003
G,T and D	Generation, Transmission and Distribution
GFA	Gross Fixed Assets
GoI	Government of India
IPPs	Independent Power Producers
JERC	Joint Electricity Regulatory Commission
DNHPDCL	DNH Power Distribution Corporation Limited
MU	Million Units
MYT	Multi-Year Tariff
O&M	Operations and Maintenance
PGCIL	Power Grid Corporation of India Limited
R&M Expenses	Repair & Maintenance Expenses
RoE	Return on Equity
T&D	Transmission and Distribution
S/S	Sub Station



## Chapter 1: Introduction

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### 1.1 DNHPDCL Profile

DNH Power Distribution Corporation Limited (DNHPDCL) has been incorporated from the erstwhile Electricity Department of Dadra & Nagar Haveli (ED-DNH) and started its operation from April 1, 2013. The Ministry of Power (MoP) had advised to corporatize the ED-DNH. The Ministry of Home Affairs vide letter no. U-3034/59/2010-CPD dated 29<sup>th</sup> September 2011 has conveyed approval to corporatize ED-DNH. Subsequently, the MoP vide letter no. 36/1/2010-R&R dated 29<sup>th</sup> February 2012 has conveyed its “No Objection” for the Corporatization of ED-DNH.

The Administrator of Dadra and Nagar Haveli after satisfying the necessity to Corporatize has incorporated the “DNH Power Distribution Corporation Limited” with the Registrar of Companies, Gujarat under the Companies Act, 1956 on 13<sup>th</sup> July 2012.

The Administrator of Dadra and Nagar Haveli in exercise of powers conferred vide Notification No. F No U-11030/2/2003-UTL dated 22<sup>nd</sup> June 2004, by Ministry of Home Affairs and under section 131,133 and 134 of the Electricity Act, 2003 has prepared the “Dadra & Nagar Haveli Electricity Reforms Transfer Scheme 2013” (hereinafter referred as the “Scheme”). This Scheme has provided the transfer of assets, liabilities, rights, functions, obligations, proceedings and personnel of distribution and associated divisions of ED-DNH to DNHPDCL. The functions and duties of DNHPDCL as mentioned in the Scheme document are as follows:

- Laying and operating of such electric line, sub-station and electrical plant that is primarily maintained for the purpose of distributing electricity in the area of supply of DNHPDCL, notwithstanding that such line, sub-station or electrical plant are high pressure cables or overhead lines or associated with such high pressure cables or overhead lines; or used incidentally for the purpose of transmitting electricity for others, in accordance with Electricity Act. 2003 or the Rules framed there under.



- Arranging, in-coordination with the Generating Company(ies) operating in or outside the State, for the supply of electricity required within the State and for the distribution of the same in the most economical and efficient manner;
- Supplying electricity, as soon as practicable to any person requiring such supply, within its competency to do so under the said Act;
- Preparing and carrying out schemes for distribution and generally for promoting the use of electricity within the State.

The present distribution system of DNHPDCL consists of 36.88 circuit km of 220 kV double circuit (D/C) lines, 279.90 km of 66 kV D/C lines, 833.70 circuit km of 11 kV lines along with 1102 distribution transformers.

At present, the UT of Dadra & Nagar Haveli gets power from 400/220 kV Substation of PGCIL Vapi, 400/200 kV Kala Substation of PGCIL (DNH).

The power demand is primarily dependent on the HT and LT industrial consumers contributing approximately 97% of the total sales. Considering the increase in demand from large industries, the demand is likely to increase around 6400 MUs by the end of FY 2019-20. In view of the power requirements, DNHPDCL had proposed a number of schemes to be implemented during the coming years for strengthening and augmentation of the transmission and distribution system in the territory.

DNHPDCL has already signed power purchase agreements (PPAs) with NTPC for allocation of power from Barh Super Thermal Power Project (BSTPP). DNHPDCL has also shown its interest for allocation of 50 MW power from the Ultra Mega Power Projects from Ministry of Power.

DNHPDCL has total sub-transmission capacity of 1000 MVA, including 520 MVA in Kharadpada and 420 MVA Khadoli sub-stations. Total installed capacity at 66/11 kV sub-stations are 782 MVA. DNHPDCL is continuously striving for increasing its distribution capacity on account of increasing electricity demand from the HT/EHT consumers.



## 1.2 Multi Year Tariff Distribution Tariff Regulations, 2018

DNHPDCL's tariff determination is now governed by "Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018, hereinafter referred to as "MYT Regulations". The MYT Regulations, 2018 provide a framework for calculating tariffs on a cost-plus basis initially for a period of three years and allow the licensee to recover operational expenses including depreciation, interest on working capital and debt, and return on equity amongst others. The MYT Regulations, 2018 segregate the items impacting tariffs into controllable and uncontrollable factors. Items that are uncontrollable are passed through to the consumers. Further, the MYT Regulations, 2018 identifies the uncontrollable and controllable parameters as follows:

### 1.2.1 Uncontrollable Parameters include

- 1 Force Majeure events;
- 2 Change in Law, judicial pronouncements and Orders of the Central Government, State Government or Commission;
- 3 Variation in the number or mix of Consumers or quantities of electricity supplied to Consumers;
- 4 Transmission loss;
- 5 Variation in the cost of power purchase due to variation in the rate of power purchase from approved sources, subject to clauses in the power purchase agreement or arrangement approved by the Commission;
- 6 Variation in fuel cost;
- 7 Change in power purchase mix;
- 8 Inflation;
- 9 Transmission Charges for a Distribution Licensee;
- 10 Variation in market interest rates for long-term loans;
- 11 Employee expenses limited to one time payment owing requirements of a pay commission and terminal liability of employees;
- 12 Taxes and Statutory levies;
- 13 Taxes on income;



14 Income from the realisation of bad debts written off:

### 1.2.2 Controllable Parameters include

- 1 Variations in capitalisation on account of time and/or cost overruns/ efficiencies in the implementation of a capital expenditure project not attributable to an approved change in scope of such project, change in statutory levies or force majeure events;
- 2 Variation in Interest and Finance Charges, Return on Equity, and Depreciation on account of variation in capitalisation, as specified in clause (a) above;
- 3 Variations in technical and commercial losses of Distribution Licensee;
- 4 Availability of transmission system;
- 5 Variations in performance parameters;
- 6 Failure to meet the standards specified in the Joint Electricity Regulatory Commission for the State of Goa & UTs (Standard of Performance for Distribution Licensees) Regulation, 2015, as amended from time to time;
- 7 Variations in labour productivity;
- 8 Variation in O&M Expenses, except to the extent of inflation;
- 9 Bad debts written off;

### 1.3 Contents of this Petition

This Petition covers the truing up of FY 2018-19, review for FY 19-20 and the basis, assumptions and projections of individual elements constituting the determination of ARR for the FY 2020-21. The Joint Electricity Regulatory Commission (JERC) for the State of Goa and Union Territories had issued the first Tariff Order for Electricity Department of Dadra & Nagar Haveli (DNHPDCL) for the FY 10-11 on 1<sup>st</sup> November, 2010 and subsequently the second and third Tariff Orders for FY 11-12 and FY 12-13 were issued on 13<sup>th</sup> September, 2011 and 31<sup>st</sup> July, 2012. The Hon'ble Commission had issued the fourth, fifth, sixth, seventh, eighth, ninth and tenth Tariff Orders on 25<sup>th</sup> March 2013, 5<sup>th</sup> May, 2014, 1<sup>st</sup> April, 2015, 7<sup>th</sup> April, 2016, 9<sup>th</sup> June, 2017, 30<sup>th</sup> January, 2018 and 20<sup>th</sup> May, 2019 for the FY 2013-14, FY 2014-15, FY 2015-16, MYT Control Period FY 2016-17 to FY 2018-19, FY 2017-18, FY 2018-19 and the MYT Control Period FY 2019-20 to FY 2021-22 respectively. The Commission in its



last Tariff Order for the FY 2019-20 has approved the ARR for the FY 2019-20 based on the actual cost for FY 17-18 and estimated expenses for FY 18-19.



## Chapter 2: True up for FY 2018-19

### 2.1 Principles for True up for FY 2018-19

As per The Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Multi Year Distribution Tariff) Regulations, 2014, the Hon'ble Commission shall undertake the True Up of licensee for FY 2018-19 based on the comparison of the actual performance of the past year with the approved estimates for such year.

In line with the provisions of JERC MYT Regulations, DNHPDCL is filing for True Up for the year FY 2018-19. Information provided in the True Up for FY 2018-19 is based on the Annual Audited Accounts and principles adopted by the Hon'ble Commission in its previous orders on Interest on Term Loan, Return on Equity, Interest on Working Capital and Depreciation. This actual performance has been compared with the approved parameters as per the order dated 30<sup>th</sup> January, 2018 and the revised parameters in the Tariff Order dated 20<sup>th</sup> May, 2019 for the FY 18-19.

Accordingly, revised Aggregate Revenue Requirement, revenue and gap for FY 2018-19 are given in the following sections of this chapter.

### 2.2 Energy Sales for FY 2018-19

The actual energy sale for FY 2018-19 has been shown below along with approved values by Hon'ble Commission vide Tariff Order 30<sup>th</sup> January, 2018 and the revised sales approved in the Tariff Order dated 20<sup>th</sup> May, 2019. The actual energy sales for FY 2018-19 are as under:

Table 1: Category wise sales for FY 2018-19

Particulars	(MU)		
	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
Domestic	128.34	128.80	128.60
LIG/ Kutir Jyoti	0.00	0.00	0.00
Commercial	34.11	35.16	34.20

Particulars	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
Agriculture	7.13	7.44	7.23
LT Industry	220.02	214.93	216.07
HT/EHT Industry	5532.29	5629.52	5,670.85
Public Lighting	9.44	6.11	5.80
Public Water Works	6.22	6.46	6.24
Temp. Supply	3.24	3.58	3.43
<b>Total Sales</b>	<b>5,940.79</b>	<b>6,032.00</b>	<b>6,072.42</b>

It can be observed that the actual sales for FY 18-19 is higher than the sales approved by the Commission vide its Tariff order dated 20<sup>th</sup> May, 2019. The marginal variation is mainly due to increase sales to the HT category consumer by 41.33 MUs. The variation in sales of electricity to the consumers is attributed as uncontrollable factor. Therefore, DNPDCCL requests the Hon'ble Commission for the truing up of actual sales as shown in the Table above.

### 2.3 Distribution Losses for FY 2018-19

DNHPDCL has been making all efforts to contain the distribution losses. Consequent to the efforts, the distribution losses in DNHPDCL area is one of the lowest in the country.

The Hon'ble Commission vide its Tariff Orders dated 20<sup>th</sup> May, 2019 had approved the distribution loss at 4.70%. Against that the actual distribution losses in FY 2018-19 were 3.93%. The following Table shows the comparison of actual distribution losses of the DNHPDCL against that approved by the Hon'ble Commission vide its Tariff Orders dated 30<sup>th</sup> January, 2018 and 20<sup>th</sup> May, 2019.

**Table 2: Distribution Loss for the FY 2018-19**

Particulars	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	(%) FY 18-19 Actual
Distribution Loss	4.70%	4.70%	3.93%

The DNHPDCL requests the Hon'ble Commission to approve the actual T&D losses for FY 18-19.





## 2.4 Energy Requirement and Energy Balance

Based on the actual energy sales and the transmission & distribution loss units, the actual energy requirement for DNHPDCL has been furnished below. The energy requirement has been met through various sources as described in the subsequent section.

**Table 3: Energy Requirement and Energy Balance for FY 2018-19**

Particulars	(MU)	
	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
Sales	6,032.00	6,072.42
Open Access Sales	0.00	0.00
Less: Energy Savings	0.00	0.00
<b>Total Sales</b>	<b>6,032.00</b>	<b>6,072.42</b>
Add: Losses	297.49	248.21
<b>T&amp;D Losses</b>	<b>4.70%</b>	<b>3.93%</b>
<b>Energy Required at Periphery</b>	<b>6329.49</b>	<b>6320.63</b>
Add: Sales to common pool consumer	1.28	0.00
Add: Sales through IEX	0.00	86.34
Less: Own Generation	5.23	5.38
Total energy requirement at state periphery	6325.54	6401.59
Less: Energy Purchased through UI at Periphery	217.02	238.50
Less: Purchase from Renewable Sources	0.00	0.00
Less: Open Access Purchase	0.00	0.00
Less: Purchase from Power Exchange	178.62	294.41
<b>Total Energy Required at Periphery</b>	<b>5,929.90</b>	<b>5,868.67</b>
Transmission loss	227.18	259.59
Transmission loss(%)	3.69%	4.24%
<b>Total Energy to be purchased</b>	<b>6,157.08</b>	<b>6,128.26</b>
Total Energy requirement from tied up sources + UI at generator end +renewable sources	6,557.95	6,747.51
Total Energy requirement in UT including Open Access	6,557.95	6,747.51

The actual energy recorded at the periphery of DNHPDCL was 6320.63 MUs (including own generation) during FY 2018-19. Accordingly, the actual transmission losses stood at 259.59 MUs during the FY 2018-19. A copy of the monthly report of the energy recorded at DNHPDCL periphery is being enclosed along with this petition as **Annexure I**.

## 2.5 Power Purchase Cost

DNHPDCL sources power from Central Generating Stations like Korba, Vindychal, Kahalgaon, Kawas, Sipat, Tarapur and Kakrapar atomic power

stations of NPCIL etc. Besides, DNHPDCL also drew power from EMCO Energy Limited. The power procured during FY 18-19 as against that approved by the Hon'ble Commission is provided in the table below.

**Table 4: Power Purchase Cost for FY 2018-19**

Particulars	MUs		Cost	
	FY 18-19	FY 18-19	FY 18-19	FY 18-19
	Approved	Actual	Approved	Actual
Power Purchase	6,557.96	6,747.51	2,881.22	2,948.20
RPO Cost				34.87
Carrying Cost on Power Purchase				1.24
<b>Total</b>				<b>2984.31</b>

The Hon'ble Commission had approved a power purchase cost of Rs. 2881.22 Crore in the last Tariff Order whereas the actual power purchase cost was Rs. 2984.31 Crore.

In the Annual Audited Accounts submitted to the Hon'ble Commission as **Annexure II** of this petition the power purchase cost has been given as Rs. 3008.74 Crore. Further, the RPO obligation is Rs. 60.54 Crore. Hence, the actual power purchase cost excluding the RPO obligation provisioning comes to Rs. 2948.20 Crore. An amount of Rs. 34.87 Crore has been incurred in purchase of renewable certificates (note 17 of the Annual Audited Accounts). Also, Rs. 1.24 Crore given under the finance charges has been included in the power purchase cost as the same pertains to carrying cost levied by the generators on power purchase bills due to revision/true up methodology approved by the CERC. Hence, the total power purchase cost is Rs. 2,984.31 Crores (i.e. Rs. 2,948.20 Crore +Rs. 34.87 Crore +Rs. 1.24 Crore).

The DNHPDCL purchased 238.50 MU during FY 2018-19 through UI at the cost of Rs. 64.58 Crore to meet the energy shortfall during the year at a very effective cost of Rs. 2.71 per unit, which is very competitive considering the approved per unit cost of Rs. 4.39/unit for the FY 2018-19. The DNHPDCL also requests the JERC to allow the UI purchase during FY 18-19 without any penalty as the DNHPDCL has already incurred that amount and the total UI amount paid is included in the power purchase cost for FY 18-19.



Further, power purchase cost is approximately the same in spite of increase in quantum of power procurement due to increased sales. There is no abnormal variation. This clearly establishes that DNHPDCL is making its best efforts to procure power at cheaper rate by scheduling the power from cheaper sources by reviewing the daily power requirement and making efforts to procure power through UI as per permissible norms instead of procuring costlier power from other sources.

The DNHPDCL, requests the Hon'ble Commission to approve the actual power purchase cost for FY 18-19 without any deduction.

## **2.6 Operation and Maintenance Expenses**

Operations and Maintenance (O&M) Expenses of the company consists of the following elements:

- Employee Expenses
- Repairs and Maintenance Costs
- Administrative and General Expenses

Employee expenses comprise of salaries, dearness allowance, bonus, terminal benefits in the form of pension & gratuity, leave encashment and staff welfare expenses.

Repairs and Maintenance Expenses go towards systematic and planned maintenance, the day to day maintenance of the distribution network of the DNHPDCL and form an integral part of the company's efforts towards reliable and 24X7 power supply as also in the reduction of losses in the system. This further includes stores and spares used for maintenance activity and licensing fees paid to JERC.

Administration expenses mainly comprise of audit expenses, printing and stationary, advertisements, telephone and communication expenses, legal and professional charges, fees and subscription, conveyance and travelling allowances and other miscellaneous office expenses.

The Hon'ble Commission had approved the O&M cost at Rs. 28.87 Crore and Rs. 28.87 Crore respectively vide Tariff 30<sup>th</sup> January, 2018 and 20<sup>th</sup> May, 2019



respectively. The actual and O&M expenses approved by the Hon'ble Commission are given in the table below:

**Table 5: O&M Expenses for FY 2018-19**

Particulars	(Rs. Crore)		
	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
Employee Cost	13.21	13.21	11.54
R&M	9.82	9.82	17.48
A&G	5.84	5.84	3.90
<b>O&amp;M Expenses</b>	<b>28.87</b>	<b>28.87</b>	<b>32.92</b>

During FY 2018-19, DNHPDCL incurred actual O&M expense of Rs. 32.92 Crore which included Employee cost of Rs. 11.54 Crore, Repair & Maintenance charges of Rs. 17.48 Crore and Administration & General Expenses of Rs. 3.90 Crore.

#### **Analysis of O&M Expenses**

The actual R&M expenses for FY 2017-18 were Rs. 17.48 crore as against the approved cost of Rs. 9.82 crore. The R&M expenses have increase substantially as the DNHPDCL has started the operation and maintenance of lines, cables and transformers on the planned and systematic way by making time schedule of maintenance. This has contributed in the reduction of T&D losses by 77 basis points as compared to the approved T&D losses (the approved T&D loss was 4.70% and the actual T&D losses are 3.93%). In terms of rupees the resultant saving comes to Rs. 22.86 Crores (i.e. 51.59 MUs @ Rs. 4.40/unit). Further, the DNHPDCL has also taken all measures to maintain the assets required to supply quality power to the consumers including safety measures. As the said maintenance approach is resulting in reduction in T&D losses, hence, the increase in R&M expenses may be allowed as pass through in the ARR for the FY 2018-19.

The other two factors i.e. employee cost and A&G expenses is less than the cost approved by the Hon'ble Commission. Hence, the same may also be approved by the Hon'ble Commission in the truing up for the FY 2018-19.



## 2.7 Capital Expenditure and Capitalization

The actual capital expenditure incurred by DNHPDCL during the FY 18-19 was Rs. 19.40 Crore, as against nil capitalization approved by the Hon'ble Commission in its Tariff Order dated 30th January, 2018 and 20th May, 2019. The capital expenditure incurred and capitalization for FY 2018-19 against that approved by the Hon'ble Commission is as shown below:

**Table 6: Capital Expenditure and Capitalization for FY 2018-19**

(Rs. Crore)

Particulars	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
Capital Expenditure	60.00	60.00	104.85
Capitalisation	0.00	0.00	19.40

The DNHPDCL, therefore, requests the Hon'ble Commission to approve the capital expenditure and capitalization for FY 18-19.

## 2.8 Depreciation

The depreciation has been worked out after applying the Depreciation rates as per the JERC (Multi Year Distribution Tariff) Regulations, 2014.

For computation of depreciation, DNHPDCL has considered the opening balance of the GFA for FY 18-19 and subsequently added the assets capitalized in FY 17-18.

Accordingly, the depreciation so arrived and approved depreciation for FY 18-19 are as shown below:

**Table 7: Depreciation for FY 2018-19**

(Rs. Crore)

Particulars	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
Opening GFA	434.59	432.95	432.96
Addition during the year	0.00	0.00	19.40
Closing GFA	434.59	432.95	452.36
Average GFA	434.59	432.95	442.66



Particulars	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
Depreciation during the year	22.70	22.66	14.73

The opening GFA as per Annual Accounts FY 2018-19 is Rs. 461.71 crore which also includes assets pertaining to solar plants amounting to Rs. 28.75 crore. Accordingly, opening GFA of Rs. 432.96 crore excluding the solar plants has been considered. The addition during the year is Rs. 19.40 crore. Accordingly, the closing GFA considered above amounting to Rs. 452.36 crore is excluding the solar plant value of Rs. 28.75 crore. The DNHPDCL, requests the Hon'ble Commission to approve the actual depreciation of Rs. 14.73 Crores excluding depreciation on solar plants for FY 18-19 without any deduction.

## 2.9 Interest and Finance Charges

For assessing interest on Loans in FY 18-19, DNHPDCL has considered the Opening Balance of Loans for FY 18-19 as approved by the Hon'ble Commission in its Tariff Order dated 20<sup>th</sup> May, 2019 for the Review of the ARR for FY 18-19. The normative loan addition in FY 18-19 has been computed as 70% of the capitalization for FY 18-19 which works out to Rs. 13.58 Crore. The capitalization for FY 18-19 was Rs. 19.40 Crore as per the annual audited accounts for FY 18-19.

The repayment of loans has been considered equal to the depreciation during the FY 2018-19. Further the rate of interest has been considered as equal to the SBI PLR of 13.45% as on 1<sup>st</sup> April, 2018.

The total Interest & Financial charges for FY 2018-19 computed by DNHPDCL as against approved by the Hon'ble Commission is as shown below:

**Table 8: Interest on Loan for FY 2018-19**

Particulars	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	(Rs. Crore) FY 18-19 Actual
Opening Loan	30.39	35.10	35.10
Loan for additional Capex (70:30)	0.00	0.00	13.58

Particulars	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
debt-equity)			
Loan Repayment	22.70	22.66	14.73
Closing Loan	7.69	12.44	33.94
Interest Cost on Avg. Loans	2.55	3.20	4.64

The DNHPDCL, requests the Hon'ble Commission to approve the interest on loan computed for FY 18-19.

## 2.10 Interest on Working Capital

The interest on working capital has been calculated based on the normative principles outlined by the Hon'ble Commission in the JERC (Multi Year Distribution Tariff) Regulations, 2014.

The working capital requirement for the Control Period has been computed considering the following parameters:

- Receivables of two months of billing
- Less power purchase cost of one month
- Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit
- Inventory for two months based on annual requirement for previous year

DNHPDCL has computed interest on working capital at 8.70% (SBI base rate as on 1<sup>st</sup> April, 2018). The interest on working capital for FY 18-19 as per applicable regulation against approved by the Hon'ble Commission is as shown below:

Table 9: Interest on Working Capital for FY 2018-19

Particulars	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	(Rs. Crore) FY 18-19 Actual
Receivables of two months of billing	433.53	488.15	504.63



Particulars	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
Less power purchase cost of one month	213.58	240.10	245.79
Inventory for two months based on annual requirement for previous year	0.61	0.94	1.51
<b>Total Working Capital requirement</b>	<b>220.56</b>	<b>248.99</b>	<b>260.35</b>
<b>Security Deposit</b>	<b>32.96</b>	<b>39.19</b>	<b>53.08</b>
<b>Net Working Capital required after deduction of Security Deposit</b>	<b>187.60</b>	<b>209.80</b>	<b>207.27</b>
<b>Interest on Working Capital</b>	<b>16.23</b>	<b>18.25</b>	<b>18.03</b>

The DNHPDCL, requests the Hon'ble Commission to approve the interested on working capital computed for FY 18-19.

## 2.11 Return on Equity

As per clause 27 of MYT regulation 2014, the return on equity shall be computed on 30% of the capital base or actual equity, which over is lower. The actual equity as on 31.03.2018 is Rs. 516.73 Crores as per the Annual Audited Accounts of the FY 2018-19. Whereas, the 30 percent of the capital base is Rs. 129.89 crore (i.e. 30% of opening GFA). Accordingly, the 30% of the capital base being lower has been considered as opening equity. Accordingly, DNHPDCL has computed the Return on Equity at 16% post tax return in equity.

The return on equity as computed for FY 2018-19 is as shown below:

**Table 10: Return on Equity for FY 2018-19**

Particulars	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	(Rs. Crore) FY 18-19 Actual
Opening Equity	91.25	94.26	129.89
Addition in Equity on account of new capitalization (70:30 debt-equity)	0.00	0.00	5.82
Post tax equity	91.25	94.26	135.71
Average Equity	91.25	94.26	132.80
<b>Return on Capital Base</b>	<b>14.60</b>	<b>15.08</b>	<b>21.25</b>





The DNHPDCL, requests the Hon'ble Commission to approve the return on equity computed for FY 18-19.

### **Additional ROE for the FY 2016-17 and FY 2018-19**

Regulation 27 of MYT Regulations, 2014 provide as follows:

- a) The Return on equity shall be computed on 30% of the capital base or actual equity, whichever is lower:  
Provided that assets funded by consumer contribution, capital subsidies/grants and corresponding depreciation shall not form part of the capital base. Actual equity infused in the Distribution Licensee as per book value shall be considered as perpetual and shall be used for computation in this Regulation.
- b) The return on the equity invested in working capital shall be allowed from the date of start of commercial operation.
- c) 16% post-tax return on equity shall be considered irrespective of whether the Distribution Licensee has claimed return on equity in the ARR Petition"

As given above the MYT Regulations allow the utility to claim ROE on 30% of the capital base or the actual equity whichever is lower. However, in the true up petition of FY 2016-17 and FY 2017-18 the Hon'ble Commission has allowed ROE on the basis of paid up equity share capital whereas the Regulation specifically provides that ROE should be allowed on the basis of equity and not on the basis of paid up equity capital. In this regard it is also worth mentioning that Regulation specifically states that ROE should be allowed irrespective of whether the Distribution Licensee has claimed return on equity in the ARR Petition. Hence, the DNHPDCL is claiming additional ROE for the FY 2016-17 and FY 2017-18 as detailed in the table given below:

**Table 11: Additional ROE for FY 2016-17 and FY 2017-18**

Particulars	(Rs. Crore)	
	FY 17-18	FY 16-17
Closing Equity as on 31st March (a)	129.89	125.80
Approved Equity for the year (b)	4.09	10.17
Opening Equity as on 1st April (c=a-b)	125.80	115.63
Average Equity	127.85	120.72
ROE as per Regulation	20.46	19.31
ROE approved in TO	14.75	13.61
<b>Differential ROE claimed</b>	<b>5.71</b>	<b>5.70</b>

The DNHPDCL, requests the Hon'ble Commission to approve the additional ROE amounting to Rs. 11.41 Crores for the FY 2016-17 and FY 2017-18.



## 2.12 Income Tax

As per the JERC (Multi Year Distribution Tariff) Regulations, 2014, *"Income Tax, if any, on the Licenced business of the Distribution Licensee shall be treated as expense and shall be recoverable from consumers through tariff."* The DNHPDCL did not pay any income tax during the FY 2018-19. Hence, the income tax liability for the FY 2018-19 is nil.

Table 12: Income Tax for FY 2018-19

Particulars	(Rs. Crore)		
	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
Income Tax	0.00	0.00	0.00

## 2.13 Interest on Security Deposit

In terms of the section 47 (4) of the Electricity Act, 2003 *'the distribution licensee is required to pay interest on security deposit collected from consumers equivalent to bank rate or more as may be specified by the Commission.* The DNHPDCL paid the interest on security deposit of Rs. 2.70 Crore to its consumers during the FY 2018-19. The opening security deposit for the FY 2018-19 was Rs. 38.69 Crore and the closing security deposit was Rs. 53.08 Crore.

Table 13: Interest on Security Deposit for FY 2018-19

Particulars	(Rs. Crore)		
	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
Interest on Security Deposit	2.06	2.45	2.70

The DNHPDCL, requests the Hon'ble Commission to approve the interest on security deposit for FY 18-19 as given in the table above.

## 2.14 Non-Tariff Income

The actual Non-Tariff Income of DNHPDCL for FY 18-19 was Rs. 49.78 Crore. The Hon'ble Commission had approved non-tariff income of Rs. 48.79 Crore and Rs. 42.85 Crore in the Tariff Orders dated 30th January, 2018 and 20<sup>th</sup> May, 2019 respectively. The details are as shown in the Table below:

Table 14: Non-Tariff Income for FY 2018-19

Particulars	(Rs. Crore)		
	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
<b>Non tariff Income</b>	<b>48.79</b>	<b>42.85</b>	<b>49.78</b>
Interest Income			22.68
Delayed Payment Charges from consumers			19.75
Tender Fees			0.03
Provision Written Back			1.13
Sale of Scrap			1.11
Miscellaneous Income			5.08

## 2.15 Annual Revenue Requirement for the FY 2018-19

Based on above expenses, the Table below summarizes Aggregate Revenue Requirement for FY 18-19 for DNHPDCL in comparison with values approved by the Hon'ble Commission in the last two Tariff Orders:

Table 15: Annual Revenue Requirement for FY 2018-19

Particulars	(Rs. Crore)		
	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
Power Purchase Cost	2,562.98	2,881.22	2,949.44
Actual amount paid for REC	0.00	0.00	34.87
O&M Expense	28.87	28.87	32.92
Depreciation	22.70	22.66	14.73
Interest Cost on Long-term Capital Loans	2.55	3.20	4.64
Interest on Working Capital Loans	16.23	18.25	18.03
Return on Equity	14.60	15.08	21.25
Additional ROE for previous year	0.00	0.00	11.41
Provision for Bad Debt	0.00	0.00	0.00
Interest on security deposit	2.06	2.45	2.70
Income Tax	0.00	0.00	0.00
<b>Total</b>	<b>2,649.99</b>	<b>2,971.73</b>	<b>3,090.00</b>

Particulars	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
<b>Less:</b>			
Non-Tariff Income	48.79	42.85	49.78
<b>Annual Revenue Requirement</b>	<b>2,601.20</b>	<b>2,928.88</b>	<b>3,040.21</b>

DNHPDCL requests the Hon'ble Commission to kindly approve the ARR submitted hereinabove.

## 2.16 Revenue for FY 2018-19

During the FY 18-19, DNHPDCL's actual revenue from retail sales amounted to Rs. 3027.77 Crore as against Rs. 2281.19 Crore and Rs. 2879.69 Crore as approved by the Hon'ble Commission vide its Tariff Order dated 30<sup>th</sup> January, 2018 and 20<sup>th</sup> May, 2019 respectively.

Table 16: Revenue for FY 2018-19

Particulars	(Rs. Crore)		
	FY 18-19 Approved (30th January, 2018)	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
Revenue from sale of power	2,281.19	2,879.69	3027.77
<b>Total revenue</b>	<b>2281.19</b>	<b>2879.69</b>	<b>3027.77</b>

## 2.17 Revenue (Gap)/Surplus for FY 2018-19

The Hon'ble Commission in Order dated 30<sup>th</sup> January, 2018 has approved a total Aggregate Revenue Requirement of Rs. 2601.20 Crore for FY 18-19. Further, the Commission has computed the revised ARR in the Tariff Order dated 20<sup>th</sup> May, 2019 of Rs. 2928.88 Crore. DNHPDCL has arrived at the trued-up Aggregate Revenue Requirement for FY 18-19 of Rs. 3040.21 Crore.

This revised Aggregate Revenue Requirement is compared against the revised income under various heads including revenue with existing tariff of Rs. 3027.77 Crore. Accordingly, total revenue gap of DNHPDCL for FY 18-19 is computed at Rs. 12.45 Crore as depicted in the Table below:

**Table 17: Revenue Gap/Surplus for FY 2018-19**

Particulars	(Rs. Crore)	
	FY 18-19 Approved (20 May, 2019)	FY 18-19 Actual
Annual Revenue Requirement	2928.88	3,040.21
Revenue from sale of power	2,879.69	3,027.77
Revenue (Gap)/Surplus	(49.19)	(12.45)
Previous Years' (Gap)/Surplus Carried Over	96.77	96.77
Holding Cost	5.77	0.00
Net Revenue (Gap)/surplus	53.35	84.32

DNHPDCL requests the Hon'ble Commission to consider the revenue gap of Rs. 12.45 Crore for FY 18-19 arrived as part of truing up process.



### Chapter 3: Review of FY 2019-20

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The review of aggregate revenue requirement for FY 19-20 is based on quantum of energy sales, energy loss as well as various cost elements like power purchase cost, O&M expenses, interest cost and depreciation etc. This has been done based on actual data for six months and revised estimates for the remaining six months of FY 19-20. DNHPDCL analysis in respect of items given below is discussed in the following paras:

- a. Category wise Energy Sales & Revenues at existing tariffs;
- b. T&D Losses;
- c. Energy Requirement;
- d. Determination of Aggregate Revenue Requirement (ARR) by forecasting the following costs, other income & returns:
  - i. Power Purchase Cost
  - ii. Employee Cost
  - iii. Repairs & Maintenance Cost
  - iv. Admin & General Cost
  - v. Capital Investment Plan
  - vi. Interest Cost
  - vii. Interest on Working Capital
  - viii. Depreciation
  - ix. Provision for bad & doubtful debts
  - x. Return on Equity
  - xi. Income Tax
  - xii. Non-Tariff Income
- e. Determination of Gap between Revenue & Costs, Additional Revenue through the proposed Tariff Revision and the arrangements to cover the revenue gap.



### 3.1 Energy Sales

Based on the actual retail sales to various consumers, DNHPDCL has estimated the total retail energy sold for FY 19-20 as shown in the Table below:

**Table 18: Category wise sales for FY 19-20 (Revised Estimate)**

Particulars	(MU)	
	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Domestic	136.04	153.11
LIG/ Kutir Jyoti	0.00	0.00
Commercial	35.40	38.38
Agriculture	7.32	5.58
LT Industry	215.89	221.66
HT/EHT Industry	5882.61	5971.71
Public Lighting	8.51	3.40
Public Water Works	7.72	5.15
Temp. Supply	3.39	3.59
<b>Total Sales</b>	<b>6,296.88</b>	<b>6,402.60</b>

As can be seen, DNHPDCL's overall energy sales are significantly dependent upon HT/EHT Industries to the extent of around 94%. The sales proposed by DNHPDCL is based upon the actual power sold by the Corporation during the first six months of FY 2019-20. The DNHPDCL requests the Hon'ble Commission to approve the category wise sales estimated for the FY 2019-20.

### 3.2 Distribution loss for FY 19-20

DNHPDCL has considered the distribution losses of 3.90% for FY 19-20 as against 4.30% approved by the Hon'ble Commission in its last Tariff Order.

**Table 19: Distribution losses for FY 19-20**

Particulars	(%)	
	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Distribution Loss	4.30%	3.90%

It is requested to please approve the distribution loss for the FY 2019-20 as submitted in the table given above.



### 3.3 Energy Requirement of the System

The following Table depicts the energy requirement of the DNHPDCL for FY 19-20.

**Table 20: Energy Requirement of the System**

Particulars	(MU)	
	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Sales	6,296.88	6,402.60
Open Access Sales	0.00	0.00
Less: Energy Savings	0.00	0.00
<b>Total Sales</b>	<b>6,296.88</b>	<b>6,402.60</b>
Add: Losses	282.93	259.83
<b>T&amp;D Losses</b>	<b>4.30%</b>	<b>3.90%</b>
<b>Energy Required at Periphery</b>	<b>6,579.81</b>	<b>6,662.43</b>
Add: Sales to common pool consumer	0.00	0.15
Add: Sales through IEX	0.00	0.00
Less: Own Generation	5.23	5.38
Total energy requirement at state periphery	6,574.58	6,657.21
Less: Energy Purchased through UI at Periphery	0.00	13.31
Less: Purchase from Renewable Sources	175.20	43.80
Less: Open Access Purchase	0.00	0.00
Less: Purchase from Power Exchange	0.00	603.54
<b>Total Energy Required at Periphery</b>	<b>6,399.38</b>	<b>5,996.56</b>
Transmission loss	243.12	227.81
Transmission loss (%)	3.66%	3.66%
<b>Total Energy to be purchased</b>	<b>6,642.50</b>	<b>6,224.37</b>
Total Energy requirement from tied up sources & UI at generator end	6,822.93	6,890.40
Total Energy requirement in UT including Open Access	6,822.93	6,890.40

### 3.4 Energy Availability and power purchase cost

Dadra & Nagar Haveli has no generating stations of its own and relies on the firm and infirm allocation of power from Central Generating Stations like Korba, Vindhyachal, Kahalgaon, Kawas, Sipat, Tarapur, Kakrapar etc. to meet its energy requirement.

The DNHPDCL for the purpose of estimation of the power availability during FY 19-20 has considered the following sources of power:

- NTPC Western Region Generating Stations





- NTPC Eastern Region Generating Stations
- NSPCL (NTPC-SAIL Power Company Ltd)
- Nuclear Power Corporation of India Limited
- Private Sector Power Generating Companies
- Renewable energy sources – Solar and Non-Solar
- Other market sources

The Petitioner has allocation from Western as well as Eastern region from coal, gas and nuclear power stations. However, for meeting the supply-demand gap during the peak hours, the Petitioner has relied on energy exchange and over-drawal from the Grid (UI).

For projecting of the energy availability for FY 19-20, six months actual power purchase has been considered. For projection of remaining six months of power purchase for FY 19-20, firm and infirm allocation from various generating stations has been considered as per the allocation specified in the notification no's. WRPC/Comml-I/6/Alloc/2019/11859 dated:- 26/09/2019 of Western Regional Power Committee. Detailed methodology for projecting the power availability to the Petitioner from various sources is summarized below.

**Table 21: Energy Allocation from Central Generating Stations**

Name of the plant	(MW)		
	Weighted average Infirm allocation	Weighted Average Firm allocation	Weighted average total allocation
KSTPP	53.64	0.00	<b>53.64</b>
KSTPS -3	16.62	2.20	<b>18.82</b>
VSTPP-I	38.41	5.00	<b>43.41</b>
VSTPP-II	29.07	4.00	<b>33.07</b>
VSTPP- III	29.07	6.00	<b>35.07</b>
VSTPP- IV	33.25	5.55	<b>38.80</b>
KAWAS	56.23	25.00	<b>81.23</b>
GGPP	56.73	2.00	<b>58.73</b>
Sipat - I	65.83	9.00	<b>74.83</b>
Sipat - II	27.68	4.00	<b>31.68</b>
KHSTPP - II	3.50	0.00	<b>3.50</b>
Mauda I (MSTPS)	37.59	5.55	<b>43.14</b>
VSTPP-V	16.62	5.55	<b>22.17</b>



Name of the plant	Weighted average Infirm allocation	Weighted Average Firm allocation	Weighted average total allocation
Mauda II	43.89	8.60	52.49
Solapur	43.89	21.57	65.46
Gadarwara	26.60	10.42	37.02
NPCIL - KAPS	11.86	2.00	13.86
NPCIL - TAPP 3&4	38.65	7.00	45.65
<b>Total</b>	<b>629.13</b>	<b>123.44</b>	<b>752.57</b>
NSPCL Bhilai		100	100.00
EMCO Energy Ltd. (GMR Group)		200.00	200.00

Additionally DNHPDCL has considered allocation of 30 MW from Kharagaon generation station for the period October, 2019 to March, 2020. Letter received from Ministry of Power, Government of India is being attached with this petition as **Annexure III**.

Based on the actual power purchase cost of the first six months of FY 19-20 and the remaining six months projection, the revised estimated power purchase cost for FY 19-20 is presented in the following Table:

**Table 22: Revised estimated Power Purchase cost for FY 19-20**

(Rs. Crore)

Source	Units Purchased	Fixed Charges	Variable Charges	Arrears	Other Charges	Credit/Debit for URS	All Charges Total	Per Unit Cost
<b>NTPC Stations</b>								
KSTPS	392.49	26.84	57.03	0.00	0.10		83.96	2.14
KSTPS 3	127.11	16.70	17.87	0.00	(0.09)		34.48	2.71
VSTPP-I	311.90	27.26	56.78	0.00	1.29		85.32	2.74
VSTPP-II	221.53	15.60	38.37	0.00	0.94		54.91	2.48
VSTPP- III	265.00	26.57	47.25	0.00	0.94		74.76	2.82
VSTPP- IV	278.59	43.81	47.79	0.00	1.47		93.07	3.34
KGPP	234.60	50.29	66.23	0.00	0.63		117.16	4.99
GGPP	48.29	45.97	14.09	0.00	0.67		60.73	12.57
Sipat-I	512.77	64.53	74.66	0.00	2.15		141.34	2.76
Sipat-II	232.69	28.27	35.36	0.00	0.39		64.02	2.75
Mauda	191.76	43.39	60.87	0.00	1.96		106.23	5.54
VSTPS-V	166.59	26.40	30.30	0.00	0.58		57.29	3.44
Mauda 2	240.51	55.78	76.38	0.00	8.20		140.36	5.84
Solapur	184.50	80.30	64.03	0.00	0.13		144.46	7.83

Source	Units Purchased	Fixed Charges	Variable Charges	Arrears	Other Charges	Credit/Debit for URS	All Charges Total	Per Unit Cost
LARA	100.25	19.55	24.36	0.00	0.00		43.91	4.38
Gadarwara	137.00	43.02	50.24	0.00	0.33		93.60	6.83
Kharagaon	100.25	19.55	24.36	0.00	0.00		43.91	4.38
KHSTPP-II	21.34	2.31	4.53	0.00	(0.09)		6.75	3.16
<b>Subtotal - NTPC</b>	<b>3767.16</b>	<b>636.14</b>	<b>790.51</b>	<b>0.00</b>	<b>19.61</b>	<b>-0.04</b>	<b>1446.21</b>	<b>3.84</b>
<b>NSPCL - Bhilai</b>	<b>632.22</b>	<b>116.90</b>	<b>219.62</b>	<b>0.00</b>	<b>-1.02</b>	<b>0.00</b>	<b>335.50</b>	<b>5.31</b>
<b>NSPCL - Rourkela</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>0.00</b>	<b>0.00</b>
<b>NPCIL</b>								
KAPS	83.59	0.00	20.87	0.00	0.00		20.87	2.50
TAPS	313.73	0.00	93.93	0.00	0.00		93.93	2.99
<b>Subtotal</b>	<b>397.32</b>	<b>0.00</b>	<b>114.80</b>	<b>0.00</b>	<b>0.00</b>		<b>114.80</b>	<b>2.89</b>
<b>Others</b>								
EMCO Energy Ltd. (GMR Group)	1427.67	432.34	332.11	0.00	(0.00)		764.45	5.35
<b>Subtotal</b>	<b>1427.67</b>	<b>432.34</b>	<b>332.11</b>	<b>0.00</b>	<b>0.00</b>		<b>764.45</b>	<b>5.35</b>
<b>Power purchase from Other Sources</b>								
Indian E. Exchange/Bilateral	603.54	0.00	201.93	0.00	0.00		201.93	3.35
UI	13.31	0.00	7.38	0.00	0.00		7.38	5.54
Solar	5.38	0.00	0.00	0.00	0.00		0.00	0.00
Non Solar	43.80	0.00	11.34	0.00	0.00		11.34	2.59
Solar REC	0.00	0.00	59.11	0.00	0.00		59.11	0.00
Non Solar REC	0.00	0.00	39.16	0.00	0.00		39.16	0.00
Solar (SECI)	0.00	0.00	0.00	0.00	0.00		0.00	0.00
Wind (SECI)	0.00	0.00	0.00	0.00	0.00		0.00	0.00
<b>Subtotal</b>	<b>666.02</b>	<b>0.00</b>	<b>318.91</b>	<b>0.00</b>	<b>0.00</b>		<b>318.91</b>	<b>4.79</b>
<b>Rebate</b>								
<b>Total Power Purchase</b>	<b>6890.40</b>	<b>1185.38</b>	<b>1775.95</b>	<b>0.00</b>	<b>18.59</b>		<b>2979.87</b>	<b>4.32</b>
External Losses								
<b>Availability at ED-DNH Periphery</b>	<b>6890.40</b>	<b>1185.38</b>	<b>1775.95</b>	<b>0.00</b>	<b>18.59</b>		<b>2979.87</b>	<b>4.32</b>
PGCIL CHARGES							394.95	
POSOCO							0.50	
WRPC							0.00	
Reactive charges							0.00	
MSTCL							0.00	
Intra-state transmission charges							42.66	
<b>Grand Total of Charges</b>	<b>6890.40</b>	<b>1185.38</b>	<b>1775.95</b>	<b>0.00</b>	<b>18.59</b>		<b>3417.98</b>	<b>4.96</b>
<b>GMR - Change in Law</b>							50.02	

Source	Units Purchased	Fixed Charges	Variable Charges	Arrears	Other Charges	Credit/Debit for URS	All Charges Total	Per Unit Cost
<b>Grand Total of All Charges</b>							<b>3468.00</b>	

Per unit variable cost, fixed cost and other charges have been considered at the same level as actual from April to September 2019.

Power purchase arrear for the remaining six months has been considered as nil as DNHPDCL has no prior information of arrear bills from the generators and transmission companies.

The Government of India, Ministry of Power has allocated 2% (38 MW) power to DNHPDCL on a long term basis from RGPPL. The DNHPDCL had also executed PPA with RGPPL. RGPPL had previously shut down the generating station on account of minimum technical load requirement as the main beneficiary i.e. Maharashtra was not scheduling the power. Accordingly, DNHPDCL has not considered any power purchase from RGPPL.

As per the revised RPO targets the DNHPDCL has to purchase 300.92 MUs of solar energy and 435.38 MUs of non-solar energy during the FY 2019-20. The DNHPDCL will fulfil the RPO target through generation of 5.38 MUs of solar power and procurement of 43.80 MUs of non solar energy from SECI during the FY 2019-20. Rest of the RPO shall be fulfilled by purchase of Renewable energy certificates.

The DNHPDCL is receiving change in law claim bills allowed by CERC from GMR. An amount of Rs. 50.02 Crore has been considered during the FY 2019-20 to arrive at the net power purchase cost for FY 2019-20.

Further, the DNHPDCL would like to submit to the Hon'ble Commission that the POC charges being received from PGCIL have increased substantially and the Corporation has received bills amounting to Rs. 183.70 Crores during the first six months of FY 2019-20 each subsequently quarter it is increasing by more than 10%. Accordingly, the DNHPDCL has projected the POC charges for the FY 2019-20 at Rs. 394.95 Crores.



### 3.5 Operation & Maintenance Costs

The approved and revised estimated O&M cost for FY 19-20 is shown in the following Table:

**Table 23: O&M Expense for FY 19-20**

Particulars	(Rs. Cr.)	
	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Employee Cost	14.51	14.51
R&M	8.81	13.02
A&G	6.96	6.96
<b>O&amp;M Expenses</b>	<b>30.28</b>	<b>34.49</b>

The DNHPDCL has kept the employee cost and the A&G expenses at the same level as approved by the Hon'ble Commission for the review of the O&M expenses for the FY 2019-20. However, the R&M expenses have been estimated based on the methodology given in the MYT Regulations, 2018. The R&M expenses have increased substantially because of planned O&M activities resulting in reduction of T&D losses and the actual R&M expenses for the FY 2018-19 were Rs. 17.48 Crore.

The DNHPDCL requests the Hon'ble Commission to approve the O&M expenses as submitted above for the FY 2019-20.

### 3.6 Capital Expenditure Plan

DNHPDCL has considered the capital expenditure and capitalization at the same level as approved by the Hon'ble Commission for the FY 2019-20 in its Tariff Order dated 20<sup>th</sup> May, 2019. The DNHPDCL requests the Hon'ble Commission to approve the capital expenditure against the scheme as submitted herewith.

A summary of the capital expenditure and capitalization for FY 19-20 vis-à-vis approved by the Commission is summarized in Table below:



**Table 24: Capital Expenditure & Capitalization for FY 19-20**

Particulars	(Rs. Cr.)	
	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Capital Expenditure	128.20	128.20
Capitalisation	5.70	5.70

**3.7 Gross Fixed Assets**

The Commission in its last Tariff Order has approved the opening GFA, addition of assets and closing GFA for FY 19-20 at Rs. 432.95 Crore, Rs. 5.70 Crore and Rs. 438.65 Crore respectively.

DNHPDCL had Opening Gross Fixed Assets (GFA) of Rs. 432.96 Crore in FY 18-19. DNHPDCL has further added assets worth Rs. 19.40 Crore during FY 18-19. The closing GFA by the end of FY 18-19 stands at Rs. 452.36 Crore.

Based on the capital expenditure and capitalization estimated above, assets amounting to Rs. 5.70 Crore have been estimated to be capitalized during FY 19-20.

A summary of the Opening and Closing GFA and capitalization for FY 19-20 vis-à-vis approved by the Commission has been summarized in Table below:

**Table 25: Opening and Closing GFA for FY 19-20**

Particulars	(Rs. Cr.)		
	Opening GFA	Additions during the Year	Closing GFA
FY 2019-20 (Approved)	432.95	5.70	438.65
FY 2019-20 (RE)	452.36	5.70	458.06

**3.8 Depreciation**

Depreciation is charged on the basis of straight-line method, on the Gross Fixed Assets in use at the beginning of the year and addition in assets during the financial year. The depreciation is based on the original cost of the Gross Fixed Assets.



DNHPDCL has applied the following depreciation rates as specified in the MYT regulations, 2018.

**Table 26: Depreciation rate**

Asset Category	Depreciation Rate %
Plant & Machinery	3.60%
Buildings	1.80%
Vehicles	9.50%
Furniture & Fixtures	6.00%
Computers & Others	6.00%
Land	0.00%
Software-Intangible Assets	16.00%

Depreciation for the FY 19-20 is determined by applying aforesaid category-wise assets depreciation rates on the opening balance of Gross Fixed assets and average of the addition during the year projected for FY 19-20. The Table below summarizes the asset-wise depreciation vis-à-vis approved by the Commission and computed by DNHPDCL:

**Table 27: Depreciation for FY 19-20**

Particulars	(Rs. Cr.)	
	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Opening GFA	432.95	452.36
Addition during the year	5.70	5.70
Closing GFA	438.65	458.06
Average GFA	435.80	455.21
Depreciation during the year	16.87	17.83

### 3.9 Interest & Financial Costs

#### 3.9.1 Interest on Long-term / Capital Loans

Assets capitalized during the FY 2019-20 have been considered based on normative debt-equity ratio of 70:30 as per the as per the JERC (Multi Year Distribution Tariff) Regulations, 2018.



Interest rate of 9.55% has been considered for computation of interest cost for long-term loans which is similar to the 1 year SBI MCLR plus 100 basis points. The normative interest on long-term/capital loans against approved by the Commission in the Tariff Order dated 20<sup>th</sup> May, 2019 as against the revised estimates is shown in the Table below:

**Table 28: Interest on Long-term/Capital Loans for FY 19-20**

Particulars	(Rs. Cr.)	
	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
<b>Opening Loan</b>	12.44	33.94
Loan for additional Capex (70:30 debt-equity)	3.99	3.99
Loan Repayment	16.87	17.83
<b>Closing Loan</b>	0.00	20.11
<b>Interest Cost on Avg. Loans</b>	<b>0.59</b>	<b>2.58</b>

DNHPDCL requests the Hon'ble Commission to approve the interest cost on long-term loans as projected above.

### 3.9.2 Interest on Working Capital Borrowings

DNHPDCL has computed the Interest on Working Capital for the Control Period based on normative basis as per the JERC (Multi Year Distribution Tariff) Regulations, 2018.

The working capital requirement for the FY 2019-20 has been computed considering the following parameters:

- a. O&M expense for one month
- b. Maintenance spares at 40% of R&M for one month
- c. Receivables for 2 months
- d. Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt

A rate of interest of 10.55% has been considered on the working capital requirement, being the 1 year SBI MCLR plus 200 basis points. This is in line with the JERC (Multi Year Distribution Tariff) Regulations, 2018 which states



that “The rate of interest on working capital shall be equal one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1) Year period, as may be applicable as on 1st April of the Financial Year in which the Petition is filed plus 200 basis points.”

The normative interest on working capital for FY 19-20 considering the above methodology is summarized in the Table below:

**Table 29: Interest on Working Capital for FY 19-20**

Particulars	(Rs. Cr.)	
	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
O&M expense for one month	2.52	2.87
Maintenance spares at 40% of R&M for one month	0.29	0.43
Receivables for 2 months	517.64	564.33
<b>Total</b>	<b>520.45</b>	<b>567.63</b>
Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	39.19	53.08
<b>Net Working Capital required after deduction of Security Deposit</b>	<b>481.26</b>	<b>514.55</b>
<b>Interest on Working Capital</b>	<b>48.85</b>	<b>54.29</b>

### 3.10 Return on Equity

As per the JERC (Multi Year Distribution Tariff) Regulations, 2018, DNHPDCL is entitled for a Return on Equity (RoE).

The Regulation 27.2 and 27.3 of the MYT Regulations, 2018 stipulates the following:

“27.2 The return on equity for the Distribution Wires Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use at post-tax rate of return on equity specified in the prevalent CERC Tariff Regulations for transmission system.

27.3 The return on equity for the Retail Supply Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use, at the rate of sixteen (16) per cent per annum.”

The DNHPDCL has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the

MYT Regulations, 2018 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Commission has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a rate of 16% for the Retail Supply Business. The equity component has been determined in accordance with the Regulation 26 of the MYT Regulations, 2018. The following table provides the Return on Equity approved for the FY 2019-20.

**Table 30: Return on Equity for FY 19-20**

(Rs. Cr.)

Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Opening Equity	94.26	135.71
Additions on account of new capitalisation	1.71	1.71
Closing Equity	95.97	137.42
Average Equity	5.12	136.56
Equity for wire business (90%)	85.61	122.91
Equity for Retail Supply Business (10%)	9.51	13.66
Return on Equity for Wire Business (%)	15.50%	15.50%
Return on Equity for Retail Supply Business (%)	16.00%	16.00%
Return on Equity for Wire Business	13.27	19.05
Return on Equity for Retail Supply Business	1.52	2.19
<b>Return on Equity</b>	<b>14.79</b>	<b>21.24</b>

The DNHPDCL, requests the Hon'ble Commission to approve the return on equity computed for FY 19-20.

### 3.11 Interest on consumer security deposit

The Hon'ble Commission in its last Tariff Order has approved Rs. 2.45 Crore as interest payable on consumer security deposits. DNHPDCL has made a provision to pay Rs. 2.70 Crore as interest on consumer security deposits in FY 19-20. The details of the same have been given in the table below:

**Table 31: Interest on Consumer Security Deposit for FY 19-20**

(Rs. Cr.)

Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
<b>Interest on Security Deposit</b>	<b>2.45</b>	<b>2.70</b>



The DNHPDCL, requests the Hon'ble Commission to approve the interest on consumer deposit computed for FY 19-20.

### 3.12 Income Tax

The MYT Regulations, 2018 provide for the provision of income tax. DNHPDCL has not made any provision towards tax on income for the FY 2019-20. If the DNHPDCL pays income tax during the FY 2019-20, details of the same shall be submitted to the Hon'ble Commission at the time of truing up.

**Table 32: Income Tax for FY 2019-20**

Particulars	(Rs. Cr.)	
	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
<b>Income Tax</b>	<b>0.00</b>	<b>0.00</b>

### 3.13 Non-Tariff & Other Income

The non-tariff income for FY 19-20 has been estimated by considering elements like sale of scrap, reactive income, STOA application fees, supervision charges etc. However, one time income like provision written back has not been considered to estimate the non-tariff income for FY 2019-20. Details of the non-tariff income is provided in table below:

**Table 33: Non-tariff Income for FY 19-20**

Particulars	(Rs. Cr.)	
	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
<b>Non tariff Income</b>	<b>44.99</b>	<b>5.12</b>

Under the applicable MYT Regulations, the interest earned on equity or ROE which remains in the business as other investment should not be considered as non-tariff income. Further, the delayed payment charges should not be considered as non-tariff income. Hence, the non-tariff income for FY 2019-20 has been estimated on the line of requirement of applicable MYT Regulation on the basis of Annual Audited Account of FY 2018-19.



The DNHPDCL requests the Hon'ble Commission to approve the non-tariff income as submitted for the FY 2019-20.

### 3.14 Aggregate Revenue Requirement

The following Table summarizes DNHPDCL's Aggregate Revenue Requirement for FY 19-20 against approved by the Hon'ble Commission in the Tariff Order dated 20<sup>th</sup> May, 2019.

**Table 34: Aggregate Revenue Requirement for FY 19-20**

Particulars	(Rs. Cr.)	
	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Power Purchase Cost	3,037.02	3,468.00
O&M Expense	30.28	34.49
Depreciation	16.87	17.83
Interest Cost on Long-term Capital Loans	0.59	2.58
Interest on Working Capital Loans	48.85	54.29
Return on Equity	14.79	21.24
Provision for Bad Debt	0.00	0.00
Interest on security deposit	2.45	2.70
Income Tax	0.00	0.00
Total	3,150.85	3,601.11
<b>Less:</b>		
Non-Tariff Income	44.99	5.12
<b>Annual Revenue Requirement</b>	<b>3,105.86</b>	<b>3,596.00</b>

### 3.15 Revenue from Existing Tariff

Revenue from sale of power for FY 19-20 is determined based on the energy sales estimated and category wise tariff prevalent in the UT of Dadra & Nagar Haveli.

Revenue from sale of power at existing tariff is estimated to be Rs. 3385.95 Crore in FY 19-20, as shown in the following Table. The estimated revenue for FY 19-20 is based on the six month actual revenue at the exiting tariff. The revenue for remaining six months of FY 19-20 has been computed based on the retail tariff notified by the Commission in the Tariff Order for the FY 2019-20 dated 20<sup>th</sup> May, 2019 and 24<sup>th</sup> September, 2019. The total revenue estimated for the FY 2019-20 includes the actual FPPCA billed during the first six months.

Further, the DNHPDCL has also estimated the FPPCA to be billed to the consumers during the third and fourth quarter of FY 2019-20 at Rs. 0.66 per unit to arrive at the total revenue during the FY 2019-20.

The Table below summarizes the revenue from sale of power at existing tariff for FY 19-20:

**Table 35: Revenue from Sale of Power at Existing Tariff for FY 19-20**

Particulars	(Rs. Cr.)	
	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Revenue from sale of power	2,970.56	2,969.37
Revenue from Surplus Power Sale	0.00	0.03
Revenue from Regulatory Surcharge	0.00	42.74
Revenue from FPPCA	0.00	373.82
<b>Total revenue</b>	<b>2970.56</b>	<b>3385.95</b>

### 3.16 Coverage of Revenue Gap

Revenue from sale of power within DNHPDCL is determined in the previous Table.

The following Table summarizes the Revenue gap at existing tariff at Rs. 210.04 Crore for FY 19-20.

**Table 36: Revenue Gap/Surplus for FY 19-20**

Particulars	(Rs. Cr.)	
	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Annual Revenue Requirement	3105.86	3596.00
Revenue from sale of power	2970.56	2969.37
Revenue from Surplus Power Sale	0.00	0.03
Revenue from Regulatory Surcharge	0.00	42.74
Revenue from FPPCA	0.00	373.82
Revenue (Gap)/surplus	(135.30)	(210.04)
Previous Years' (Gap)/Surplus Carried Over	53.35	84.32
Holding Cost	(1.36)	0.00
Net Revenue (Gap)/surplus	(83.31)	(125.72)

The total revenue gap at the end of FY 2019-20 by taking into account the surplus arrived at after truing up of FY 2018-19 is Rs. 125.72 Crore. The Hon'ble Commission is requested to approve the same as part of the review of FY 2019-20.



## Chapter 4: ARR for the FY 2020-21

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DNHPDCL is submitting its ARR for the FY 2020-21 broadly on the basis of the principles outlined in MYT Tariff Regulations notified by JERC. DNHPDCL has considered the past trends and taken cognizance of other internal and external developments to estimate the likely performance for the FY 2020-21.

The following sections explain in detail the basis and forecasts of the following elements for the FY 2020-21:

- a. Category wise Energy Sales & Revenues at existing tariffs;
- b. T&D Losses;
- c. Energy Requirement;
- d. Determination of Aggregate Revenue Requirement (ARR) by forecasting the following costs, other income & returns:
  - i. Power Purchase Cost
  - ii. Employee Cost
  - iii. Repairs & Maintenance Cost
  - iv. Admin & General Cost
  - v. Capital Investment Plan
  - vi. Interest Cost
  - vii. Interest on Working Capital
  - viii. Depreciation
  - ix. Provision for bad & doubtful debts
  - x. Return on Equity
  - xi. Income Tax
  - xii. Non-Tariff Income
- e. Determination of Gap between Revenue & Costs, Additional Revenue through the proposed Tariff Revision and the arrangements to cover the revenue gap; and
- f. Tariff revision proposal for FY 20-21 to meet the Revenue Gap.



#### 4.1 Load Growth

The Table given below summarizes the growth in sanctioned load over the past 6 years.

**Table 37: Past Years' Load Growth**

Consumer Category	(kVA)					
	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19
	Actual	Actual	Actual	Actual	Actual	Actual
Domestic	85,016.98	106,147.80	93,886.64	96,077.52	101,282.64	105,192.00
LIG/ Kutir Jyoti	1,150.00	1,422.00	1,343.30	1,477.10	1,486.25	1,585.00
Commercial	28,234.26	35,543.17	24,488.24	25,751.93	26,690.54	27,865.00
Agriculture	4,330.84	5,217.49	5,479.20	5,590.32	5,778.89	5,935.00
LT Industry	87,090.53	106,349.80	109,910.05	113,066.56	115,920.90	119,051.00
HT/EHT Industry	1,081,678.00	1,126,669.00	1,146,822.00	1,143,066.00	1,157,756.00	1,177,554.00
Public Lighting	1,593.69	2,232.64	2,346.00	2,536.05	2,706.48	2,886.00
Public Water Works	0.00	1,979.55	2,257.12	2,443.62	2,885.62	3,272.00
Temp. Supply	2,523.81	3,661.54	2,358.59	2,358.78	2,536.66	2,537.00
<b>Total</b>	<b>1,291,618.11</b>	<b>1,389,222.99</b>	<b>1,388,891.14</b>	<b>1,392,367.88</b>	<b>1,417,043.98</b>	<b>1,445,877.00</b>

The projected load for the FY 2019-20 and the FY 2020-21 has been given in the table below:

**Table 38: Projected load growth for FY 2019-20 and FY 2020-21**

Consumer Category	(kVA)	
	FY 19-20	FY 20-21
	RE	Projected
Domestic	109253.00	113470.00
LIG/ Kutir Jyoti	1690.00	1801.00
Commercial	29091.00	30371.00
Agriculture	6095.00	6260.00
LT Industry	122265.00	125566.00
HT/EHT Industry	1197690.00	1218170.00
Public Lighting	3077.00	3281.00
Public Water Works	3710.00	4207.00
Temp. Supply	2537.00	2537.00
<b>Total</b>	<b>1475408.00</b>	<b>1505663.00</b>

The same is in line with the Connected load approved by the Hon'ble Commission for the various categories for the FY 2019-20 and FY 2020-21 in the Business Plan dated 5<sup>th</sup> November, 2018. The Hon'ble Commission is requested to approve the connected load submitted for the FY 2019-20 and FY 2020-21.



## 4.2 Consumer Growth

The Table 39 below summarizes the category wise growth in consumers over the past 6 years.

**Table 39: Past Years' Consumer Growth**

Consumer Category	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19
	Actual	Actual	Actual	Actual	Actual	Actual
Domestic	37,294	38,970	40,773	42,835	45,205	47,402
LIG	14,097	14,223	13,443	14,603	14,879	15,089
Commercial	7,070	6,986	7,306	7,586	7,809	7,980
Agriculture	1,125	1,179	1,211	1,263	1,313	1,366
LT Industry	1,912	2,001	2,038	2,063	2,064	2,077
HT/EHT Industry	872	887	889	895	918	930
Public Lighting	274	310	324	350	374	398
Public Water Works	0	307	340	358	398	434
Temp. Supply	251.0	319.0	334	347	379	379
<b>Total</b>	<b>62,895</b>	<b>65,182</b>	<b>66,658</b>	<b>70,300</b>	<b>73,339</b>	<b>76,055</b>

The projected consumer growth for the FY 2019-20 and FY 2020-21 has been given in the table below:

**Table 40: Projected consumer growth during FY 2019-20 and FY 2020-21**

Consumers (Nos.)	FY 19-20	FY 20-21
	RE	Projected
Domestic	49,706	52,121
LIGH	15,302	15,517
Commercial	8,155	8,333
Agriculture	1,421	1,479
LT Industry	2,091	2,104
HT/EHT Industry	943	955
Public Lighting	424	451
Public Water Works	473	516
Temp. Supply	379	379
<b>Total</b>	<b>78,894</b>	<b>81,855</b>

The same is in line with the no. of consumers approved by the Hon'ble Commission vide its Order for the Business Plan dated 5<sup>th</sup> November, 2018. The Hon'ble Commission is requested to approve the no. of consumers submitted for the FY 2019-20 and FY 2020-21.





### 4.3 Energy Sales

The following table summarizes category wise actual energy sales from FY 13-14 to FY 18-19 for all the consumer segments. As can be seen, DNHPDCL's overall energy sales are significantly dependent upon HT/EHT Industries to the extent of around 94%.

**Table 41: Category wise sales from FY 2013-14 to FY 2018-19**

Consumer Category	(MU)					
	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19
	Actual	Actual	Actual	Actual	Actual	Actual
Domestic	80.64	93.13	101.52	104.46	116.91	128.60
Commercial	29.79	27.05	28.78	30.36	32.72	34.20
Agriculture	4.40	4.31	5.77	6.20	6.50	7.23
LT Industry	176.52	187.51	200.86	211.70	208.24	216.07
HT/EHT Industry	4661.27	4,840.64	4,421.50	3,384.17	5,295.13	5,670.85
Public Lighting	5.89	7.76	7.46	8.27	7.97	5.80
Public Water Works	0.00	3.23	3.56	4.55	5.45	6.24
Temp. Supply	2.01	2.60	2.95	3.20	3.39	3.43
<b>Total Sales</b>	<b>4,960.53</b>	<b>5,166.23</b>	<b>4,772.40</b>	<b>3,752.91</b>	<b>5,676.30</b>	<b>6,072.42</b>

The DNHPDCL is of the view that the factors affecting the actual consumption of electricity are numerous and often beyond the control of the utility including factors such as Government Policy, economic climate, weather conditions and force majeure events like natural disasters, etc. DNHPDCL, therefore for projecting the category-wise consumption for the FY 2019-20 and FY 2020-21 has considered the past growth trends in each of the consumer category including growth trend in number of consumers and connected load.

The energy sales for the FY 2020-21 have been determined based on CAGR for past years and actual energy sales in various consumer categories. Since the energy sales in each category depends upon a number of factors like growth in economy, climate, Government policies, etc, normalization in sales has been undertaken in order to remove any wide fluctuations.

The following Table summarizes category wise projected energy sales for the FY 2020-21 for DNHPDCL. As can be observed, the overall energy sales in UT



of Dadra & Nagar Haveli are significantly dependent upon LT and HT/EHT industrial consumption.

The DHPDCL submits to the Hon'ble Commission to approve the energy sales forecasted herein.

**Table 42: Projected Category wise Energy Sales for FY 2020-21**

Particulars	(MU)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Domestic	146.74	168.09
LIG/ Kutir Jyoti	0.00	0.00
Commercial	36.83	39.45
Agriculture	7.77	6.02
LT Industry	219.82	232.65
HT/EHT Industry	6074.97	6248.10
Public Lighting	8.80	3.55
Public Water Works	9.20	5.41
Temp. Supply	3.39	3.63
<b>Total Sales</b>	<b>6,507.52</b>	<b>6,706.90</b>

It is requested to approve the energy sales projected for the FY 2020-21.

#### 4.4 Distribution Loss Reduction

The DNHPDCL has achieved a significant reduction in transmission & distribution losses. The DNHPDCL would like to submit that the system improvement works executed every year under the plan schemes as well as planned maintenance activities of systems has resulted in the reduction of T & D losses.

DNHPDCL has achieved Distribution loss level of 3.93% for the FY 2018-19 as against the target of 4.70% given by the Hon'ble Commission in the Tariff Order for the FY 2018-19. Further, the Hon'ble Commission had set a T&D loss level target of 4.20% for the FY 2020-21 in the Tariff Order dated 20<sup>th</sup> May, 2019. The DNHPDCL proposes to reduce the T&D losses to 3.85% for FY 20-21. Reduction of Distribution loss will involve significant amount of capital expenditure and it is DNHPDCL's endeavour to bring the Distribution loss level further down in the subsequent years. The projected distribution loss for the FY 2020-21 is as given in the table below:

**Table 43: Proposed Distribution Losses**

Particulars	FY 20-21	FY 20-21
	Approved (20th May, 2019)	Projected
Distribution Loss	4.20%	3.85%

The DNHPDCL requests the Hon'ble Commission to approve the Distribution loss as projected for the FY 2020-21.

#### 4.5 Energy Requirement of the System

Based on the proposed loss levels and projected energy requirement and availability within the state, the Energy Balance is presented in the following table:

**Table 44: Energy Requirement of the System during the FY 2020-21**

Particulars	(MU)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Sales	6,507.52	6,706.90
Open Access Sales	0.00	0.00
Less: Energy Savings	0.00	0.00
<b>Total Sales</b>	6,507.52	6,706.90
Add: Losses	285.30	268.56
<b>T&amp;D Losses</b>	4.20%	3.85%
<b>Energy Required at Periphery</b>	6,792.82	6,975.46
Add: Sales to common pool consumer	0.00	(0.35)
Add: Sales through IEX	0.00	-
Less: Own Generation	5.23	5.38
<b>Total energy requirement at state periphery</b>	6787.59	6969.73
Less: Energy Purchased through UI at Periphery	0.00	0.00
Less: Energy Purchased through Renewable Sources	1927.20	1927.20
Less: Open Access Purchase	0.00	0.00
Less: Purchase from Power Exchange	0.00	0.00
<b>Total Energy Required at Periphery</b>	4,860.39	5,042.53
Transmission loss	184.65	191.57
Transmission loss(%)	3.66%	3.66%
<b>Total Energy to be purchased</b>	5,045.04	5,234.09
Total Energy requirement from tied up sources & UI at generator end	6,977.47	7,166.67

Particulars	FY 20-21	FY 20-21
	Approved (20th May, 2019)	Projected
Total Energy requirement in UT including Open Access	6,977.47	7,166.67

#### 4.6 Energy Availability

Dadra & Nagar Haveli has no generating stations of its own and relies on the firm and infirm allocation of power from Central Generating Stations like Korba, Vindhyachal, Kahalgaon, Kawas, Sipat, Tarapur, Kakrapar etc. to meet its energy requirement.

The DNHPDCL for the purpose of estimation of the power availability during the MYT Control Period has considered the following sources of power:

- NTPC Western Region Generating Stations
- NTPC Eastern Region Generating Stations
- NSPCL (NTPC-SAIL Power Company Ltd)
- Nuclear Power Corporation of India Limited
- Private Sector Power Generating Companies
- Renewable energy sources – Solar and Non-Solar
- Other market sources

The Petitioner has allocation from Western as well as Eastern region from coal, gas and nuclear power stations. However, for meeting the supply-demand gap during the peak hours, the Petitioner has relied on over-drawal from the Grid (UI).

For projecting of the energy availability for the FY 2019-20 and FY 2020-21, energy availability, firm and infirm allocation from various generating stations has been considered. Detailed methodology for projecting the power availability to the Petitioner from various sources is summarized below.



#### 4.7 Power Purchase

Dadra & Nagar Haveli has firm and infirm allocated share in Central Sector Generating Stations (CSGS) of NTPC, Nuclear Power Corporation of India Ltd (NPCIL), and NTPC Sail Power Company Ltd (NSPCL).

The power availability for the FY 2019-20 and FY 2020-21 has been estimated based on the revised allocation issued by the Western Region Power Committee (WRPC) vide no's. WRPC/Comm-I/6/Alloc/2019/11859 dated 26/09/2019. The energy allocation from various generating stations is summarized in table below:

**Table 45: Energy Allocation from Central Generating Stations**

Name of the plant	(MW)		
	Weighted average Infirm allocation	Weighted Average Firm allocation	Weighted average total allocation
KSTPP	53.64	0.00	53.64
KSTPS -3	16.62	2.20	18.82
VSTPP-I	38.41	5.00	43.41
VSTPP-II	29.07	4.00	33.07
VSTPP- III	29.07	6.00	35.07
VSTPP- IV	33.25	5.55	38.80
KAWAS	56.23	25.00	81.23
GGPP	56.73	2.00	58.73
Sipat - I	65.83	9.00	74.83
Sipat - II	27.68	4.00	31.68
KHSTPP - II	3.50	0.00	3.50
Mauda I (MSTPS)	37.59	5.55	43.14
VSTPP-V	16.62	5.55	22.17
Mauda II	43.89	8.60	52.49
Solapur	43.89	21.57	65.46
Gadarwara	26.60	10.42	37.02
NPCIL - KAPS	11.86	2.00	13.86
NPCIL - TAPP 3&4	38.65	7.00	45.65
<b>Total</b>	<b>629.13</b>	<b>123.44</b>	<b>752.57</b>
NSPCL Bhilai		100	100.00
EMCO Energy Ltd. (GMR Group)		200.00	200.00



During the FY 2020-21 the DNHPDCL will start getting power from Kharagaon generating station. A capacity of 30 MW has been allocated to DNHPDCL from Kharagaon. The same has been considered for the FY 2020-21.


It is expected that DNHPDCL will not be getting any power from Ratnagiri during the FY 2020-21 and therefore no power purchase from the plant has been considered.

Power purchase quantum from the NTPC stations for the FY 2020-21 has been calculated based on the installed capacity of each plant and by applying the PLF approved by the Hon'ble Commission vide. Order for the Business Plan dated 5<sup>th</sup> November, 2018.

Auxiliary consumption of 7.75% and 2.5% has been considered for coal and gas based generating stations, respectively.

Additionally, the DNHPDCL is procuring power from EMCO Energy Limited (GMR) power plant in Maharashtra. DNHPDCL had signed a seven year PPA with EMCO Energy Limited (GMR) and the same will come to an end by June, 2020. Hence, power purchase from EMCO has been considered for the period April 2020 to June 2020 for the FY 2020-21. For projection of power purchase from EMCO, DNHPDCL has considered 90% PLF and 7.75% auxiliary consumption.

The DNHPDCL is in the process to sign long term PPA with the Solar Energy Corporation of India (SECI) for receiving Round The Clock (RTC) power from the FY 2020-21. The DNHPDCL will be signing the PPA for procuring 200 MW power from SECI which shall comprise of solar and wind energy. This will also help the DNHPDCL in meeting its RPO obligation during the FY 2020-21. Additionally, DNHPDCL will be getting 50 MW of wind energy from SECI from FY 2019-20 for which the agreement has already been signed. Further, the DNHPDCL has already installed 4.585 MW of solar plants in its territory for generation of solar energy out of which 4.1 MW is ground mounted and 485 KW is solar rooftop. A summary of the RPO obligation to be met by the DNHPDCL during the FY 2019-20 and FY 2020-21 has been given in the table below:



**Table 46: Summary of RPO for the FY 2019-20 and FY 2020-21**

Description	FY 2019-20	FY 2020-21
<b>Sales within State (MU)</b>	<b>6,402.60</b>	<b>6,706.90</b>
<b>RPO obligation (%)</b>	<b>11.50%</b>	<b>14.10%</b>
Solar	4.70%	6.10%
Non-Solar	6.80%	8.00%
<b>RPO obligation for the year (MU)</b>	<b>736.30</b>	<b>945.67</b>
Solar	300.92	409.12
Non-Solar	435.38	536.55
<b>RPO Compliance (Procurement and own generation)</b>	<b>1932.58</b>	<b>1932.58</b>
Solar	5.38	881.38
Non-Solar	43.80	1051.20
<b>RPO Compliance (REC certificate purchase)</b>	<b>687.12</b>	<b>0.00</b>
Solar	295.54	0.00
Non-Solar	391.58	0.00

For computing the power availability at the periphery, 3.66% external transmission losses have been applied on the gross power purchase for the FY 2019-20 and FY 2020-21.

Table 47 below depicts the station wise power purchase for FY 2019-20 and FY 2020-21.

**Table 47: Power Purchase for the FY 2019-20 and FY 2020-21**

Source	(MU)	
	FY 2019-20	FY 2020-21
<b>NTPC Stations</b>		
KSTPS	392.49	385.75
KSTPS 3	127.11	136.90
VSTPP-I	311.90	301.71
VSTPP-II	221.53	227.17
VSTPP- III	265.00	243.74
VSTPP- IV	278.59	269.63
KGPP	234.60	277.51
GGPP	48.29	210.69
Sipat-I	512.77	544.25
Sipat-II	232.69	230.41
Mauda	191.76	167.34
VSTPS-V	166.59	154.10
Mauda 2	240.51	203.59

Source	FY 2019-20	FY 2020-21
Solapur	184.50	17.37
LARA	100.25	203.28
Gadarwara	137.00	0.00
Kharagaon	100.25	203.28
KHSTPP-II	21.34	22.06
<b>Subtotal - NTPC</b>	<b>3767.16</b>	<b>3798.76</b>
<b>NSPCL - Bhilai</b>	<b>632.22</b>	<b>703.06</b>
<b>NPCIL</b>		
KAPS	83.59	79.13
TAPS	313.73	289.49
<b>Subtotal</b>	<b>397.32</b>	<b>368.62</b>
<b>Others</b>		
EMCO Energy Ltd. (GMR Group)	1427.67	363.65
<b>Subtotal</b>	<b>1427.67</b>	<b>363.65</b>
<b>Power purchase from Other Sources</b>		
Indian E. Exchange/Bilateral	603.54	0.00
UI	13.31	0.00
Solar	5.38	5.38
Non Solar	43.80	175.20
Solar REC	0.00	0.00
Non Solar REC	0.00	0.00
Solar (SECI)	0.00	876.00
Wind (SECI)	0.00	876.00
<b>Subtotal</b>	<b>666.02</b>	<b>1932.58</b>
<b>Rebate</b>		
<b>Total Power Purchase</b>	<b>6890.40</b>	<b>7166.67</b>
External Losses		
<b>Availability at ED-DNH Periphery</b>	<b>6890.40</b>	<b>7166.67</b>

The Petitioner requests the Commission to approve the Power Purchase quantum estimated in the Table above.

#### 4.8 Energy Requirement & Availability

Based on the data on estimated & projected sales and power purchase, an Energy Balance has been prepared to assess the T&D losses during the FY 2020-21.





**Table 48: Energy Balance**

Particulars	(MU)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Sales	6,507.52	6,706.90
Open Access Sales	0.00	0.00
Less: Energy Savings	0.00	0.00
<b>Total Sales</b>	<b>6,507.52</b>	<b>6,706.90</b>
Add: Losses	<b>285.30</b>	<b>268.56</b>
<b>T&amp;D Losses</b>	<b>4.20%</b>	<b>3.85%</b>
<b>Energy Required at Periphery</b>	<b>6,792.82</b>	<b>6,975.46</b>
Add: Sales to common pool consumer	0.00	(0.35)
Add: Sales through IEX	0.00	-
Less: Own Generation	5.23	5.38
<b>Total energy requirement at state periphery</b>	<b>6787.59</b>	<b>6969.73</b>
Less: Energy Purchased through UI at Periphery	0.00	0.00
Less: Energy Purchased through Renewable Sources	1927.20	1927.20
Less: Open Access Purchase	0.00	0.00
Less: Purchase from Power Exchange	0.00	0.00
<b>Total Energy Required at Periphery</b>	<b>4,860.39</b>	<b>5,042.53</b>
Transmission loss	184.65	191.57
Transmission loss (%)	3.66%	3.66%
<b>Total Energy to be purchased</b>	<b>5,045.04</b>	<b>5,234.09</b>
Total Energy requirement from tied up sources & UI at generator end	6,977.47	7,166.67
Total Energy requirement in UT including Open Access	6,977.47	7,166.67

#### 4.9 Power Purchase Cost

The cost of purchase from the central generating stations for the FY 2020-21 is estimated based on the following assumptions:

1. Fixed cost for the FY 2020-21 has been projected at the same level as estimated for various stations for the FY 2019-20.
2. Variable cost for each NTPC generating stations for the FY 2020-21 has been projected considering the actual the variable cost incurred during the first six months of FY 2019-20 for various stations.
3. For nuclear plants i.e. KAPP and TAPP single part tariff, the actual average variable cost per unit for the first six months of FY 2019-20



has been considered for projecting the power purchase cost for the FY 2020-21.

4. For NTPC-SAIL Bhilai unit 1 & 2, the fixed has been projected at the same level as estimated for the FY 2019-20 and for projecting the variable cost the actual average variable cost per unit for the first six months of FY 2019-20 has been taken into consideration.
5. For power purchase from renewable energy sources, for the FY 2020-21, the DNHPDCL has outsourced the maintenance cost of the solar plants to BHEL. For the purchase of RTC power from SECI a rate of Rs. 4.70 per unit has been considered for projecting the cost during the FY 2020-21. For the purchase of 50 MW wind power a rate of Rs. 2.59 per unit has been considered for the FY 2020-21. The Total Power Purchase cost from various sources for the FY 2020-21 is summarized in Table below:

**Table 49: Projected Power Purchase Cost for the FY 2020-21**

(Rs. Crore)

Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	All Charges Total	Per Unit Cost
<b>NTPC Stations</b>						
KSTPS	385.75	26.84	56.05	0.00	82.88	2.15
KSTPS 3	136.90	16.70	19.24	0.00	35.95	2.63
VSTPP-I	301.71	27.26	54.92	0.00	82.18	2.72
VSTPP-II	227.17	15.60	39.35	0.00	54.95	2.42
VSTPP- III	243.74	26.57	43.46	0.00	70.03	2.87
VSTPP- IV	269.63	43.81	46.25	0.00	90.07	3.34
KGPP	277.51	50.29	78.35	0.00	128.65	4.64
GGPP	210.69	45.97	61.48	0.00	107.44	5.10
Sipat-I	544.25	64.53	79.25	0.00	143.77	2.64
Sipat-II	230.41	28.27	35.01	0.00	63.28	2.75
Mauda	167.34	43.39	53.12	0.00	96.51	5.77
VSTPS-V	154.10	26.40	28.03	0.00	54.43	3.53
Mauda 2	203.59	55.78	64.66	0.00	120.43	5.92
Solapur	17.37	80.30	6.03	0.00	86.33	49.70
LARA	203.28	39.64	49.40	0.00	89.03	4.38
Gadarwara	0.00	51.63	0.00	0.00	51.63	0.00
Kharagaon	203.28	39.64	49.40	0.00	89.03	4.38

Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	All Charges Total	Per Unit Cost
KHSTPP-II	22.06	2.31	4.69	0.00	6.99	3.17
<b>Subtotal - NTPC</b>	<b>3798.76</b>	<b>684.92</b>	<b>768.67</b>	<b>0.00</b>	<b>1453.60</b>	<b>3.83</b>
<b>NSPCL - Bhilai</b>	<b>703.06</b>	<b>116.90</b>	<b>244.22</b>	<b>0.00</b>	<b>361.12</b>	<b>5.14</b>
<b>NSPCL - Rourkela</b>					<b>0.00</b>	<b>0.00</b>
<b>NPCIL</b>						
KAPS	79.13	0.00	19.76	0.00	19.76	2.50
TAPS	289.49	0.00	86.67	0.00	86.67	2.99
<b>Subtotal</b>	<b>368.62</b>	<b>0.00</b>	<b>106.43</b>	<b>0.00</b>	<b>106.43</b>	<b>2.89</b>
<b>Others</b>						
EMCO Energy Ltd. (GMR Group)	363.65	108.09	84.59	0.00	192.68	5.30
<b>Subtotal</b>	<b>363.65</b>	<b>108.09</b>	<b>84.59</b>	<b>0.00</b>	<b>192.68</b>	<b>5.30</b>
<b>Power purchase from Other Sources</b>						
Indian E. Exchange/Bilateral	0.00	0.00	0.00	0.00	0.00	0.00
UI	0.00	0.00	0.00	0.00	0.00	0.00
Solar	5.38	0.00	0.00	0.00	0.00	0.00
Non Solar	175.20	0.00	45.38	0.00	45.38	2.59
Solar REC	0.00	0.00	0.00	0.00	0.00	0.00
Non Solar REC	0.00	0.00	0.00	0.00	0.00	0.00
Solar (SECI)	876.00	0.00	432.74	0.00	432.74	4.94
Wind (SECI)	876.00	0.00	432.74	0.00	432.74	4.94
<b>Subtotal</b>	<b>1932.58</b>	<b>0.00</b>	<b>910.86</b>	<b>0.00</b>	<b>910.86</b>	<b>4.71</b>
<b>Rebate</b>						
<b>Total Power Purchase</b>	<b>7166.67</b>	<b>909.91</b>	<b>2114.78</b>	<b>0.00</b>	<b>3024.69</b>	<b>4.22</b>
External Losses						
<b>Availability at ED-DNH Periphery</b>	<b>7166.67</b>	<b>909.91</b>	<b>2114.78</b>	<b>0.00</b>	<b>3024.69</b>	<b>4.22</b>

#### 4.10 Transmission and Other Charges

Transmission charges payable to PGCIL are based on the total capacity allocation in the transmission network. DNHPDCL has a mix of firm and infirm capacity allocation from various Central Generating Stations which is revised by the Ministry of Power at regular intervals. Therefore, considering the changing capacity allocation, DNHPDCL has estimated the transmission charges. For the FY 2020-21 the transmission charges payable to the ED-DNH (Transmission Division) have also been considered by the DNHPDCL.



Further, the DNHPDCL would like to submit to the Hon'ble Commission that the POC charges being received from PGCIL have increased substantially and the Corporation has received bills amounting to Rs. 183.70 Crores during the first six months of FY 2019-20. Accordingly, the DNHPDCL has projected the POC charges for the FY 2020-21 at Rs. 414.70 Crores. PGCIL transmission charges for the FY 2020-21 have been projected by considering the average monthly bill being received from PGCIL.

Further an amount of Rs. 13.76 Crore has been considered for change in law claim allowed by CERC for GMR to arrive at the power purchase cost for FY 2020-21.

The transmission charges along with the total power purchase cost for the FY 2020-21 has been given in the table below:

**Table 50: Total Power Purchase Cost for the FY 2020-21**

Source	(Rs. Crore) All Charges Total
<b>Total Power Purchase Cost</b>	<b>3024.69</b>
PGCIL CHARGES	414.70
POSOCO	0.52
WRPC	0.00
Reactive charges	0.00
MSTCL	0.00
Intra-state transmission charges	44.79
<b>Grand Total of Charges</b>	<b>3484.70</b>
<b>GMR - Change in Law</b>	13.76
<b>Grand Total of All Charges</b>	<b>3498.46</b>

#### 4.11 Operation & Maintenance Costs

Operation and Maintenance expenses comprise of the following heads:

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



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

Summary of the past five year operation and maintenance expense is summarized in table below:

**Table 51: Operation & Maintenance Expense**

(Rs. Crore)	
Year	O&M Expense
	Actual
FY 2014-15	20.80
FY 2015-16	21.02
FY 2016-17	23.68
FY 2017-18	32.89
FY 2018-19	32.92

The total O&M expense for FY 18-19 was Rs. 32.92 Crore as compared with FY 17-18 wherein the total O&M expense were Rs. 32.89 Crore.

The methodology adopted by DNHPDCL for projecting the values of each component of the O&M expense for the FY 2020-21 has been explained in following section.

#### **4.11.1 Employee Expense**

The Employee expense estimated by the Petitioner comprise of all costs related to employees like basic salary, dearness allowances, performance incentive, medical cost, leave travel allowances etc.



The DNHPDCL has kept the employee cost at the same level as approved by the Hon'ble Commission for the FY 2020-21 in its Tariff Order dated 20<sup>th</sup> May, 2019.

Total employee cost of DNHPDCL for the FY 2020-21 is as given in the table below:

**Table 52: Projected Employee Expense for the FY 2020-21**

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Employee Cost	16.60	16.60

DNHPDCL would like to pray to the Hon'ble Commission that salaries/employee cost increase should be considered as uncontrollable factor specially factors like DA/Basic. Therefore, DNHPDCL requests the Hon'ble Commission to approve the employee costs as projected in the foregoing table.

#### 4.11.2 Repairs & Maintenance Expense

Repairs and maintenance expense comprise of expenses incurred by the Petitioner with regard to maintenance and upkeep of the transmission and distribution system. Adequate R&M activities help in reduction of transmission and distribution losses and breakdowns in the system.

The actual R&M expense for FY 18-19 for DNHPDCL was Rs. 17.48 Crore. For FY 2019-20, DNHPDCL has considered the R&M expense of Rs. 13.18 Crore.

As per the JERC Tariff Regulations the R&M expenses shall be calculated as percentage (as per the norm defined) of Opening Gross Fixed Assets for the year governed by following formula:

$$R\&M_n = K \times GFAn-1 \times (WPI \text{ inflation})$$

where:

R&M<sub>n</sub> – Repair and Maintenance expenses of the Distribution Licensee for the nth Year;

GFAn-1 – Gross Fixed Asset of the transmission Licensee for the n-1th Year;

'K' is a constant (expressed in %). Value of K for each Year of the Control Period shall be determined by the Commission in the Multi Year Tariff Order

based on Licensee's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;

GFA : Gross Fixed Assets at the beginning of the Financial Year

Inflation Index is CPI : WPI :: 60 : 40

WPI inflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three (3) Years before the base Year;

For projecting the R&M expense for the MYT Control Period, the DNHPDCL has considered the WPI inflation as 2.97%. Total repair & maintenance cost of DNHPDCL for the FY 2020-21 is summarized in the table below:

**Table 53: Repairs & Maintenance Expense**

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
R&M	8.92	13.18

DNHPDCL requests the Commission to approve the R&M expense without any disallowances as the same is necessary for proper maintenance and strengthening of the system, quality of supply and reduction in T&D losses in the region in order to ensure consumer satisfaction.

#### **4.11.3 Administration & General Expense**

Administrative and General (A&G) expense comprise of various sub-heads including the following:

- Telephone, postage & telegrams charges;
- Travel and conveyance expenses;
- Consultancy and regulatory fees; and
- Consumer indexing fee

The actual A&G expense for FY 18-19 was Rs. 3.90 Crore. Further, DNHPDCL has estimated the A&G expense of Rs. 7.26 Crore for FY 19-20.



The DNHPDCL has kept the A&G expenses at the same level as approved by the Hon'ble Commission for the FY 2020-21 in its Tariff Order dated 20<sup>th</sup> May, 2019.

The A&G expenses projected for the FY 2020-21 have been given in the table below:

**Table 54: A&G Expense**

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
A&G	7.26	7.26

The Regulatory & Consultancy expenses for the FY 2020-21 has been projected as per the existing agreements, contracts with the consultants and the best estimates for the future regulatory and consultancy works.

DNHPDCL, therefore, requests the Hon'ble Commission to approve the A&G expenses projected for the FY 2020-21.

#### 4.11.4 Total Operation and Maintenance Expense

Based on the employee, R&M and A&G expenses projected above, the total O&M expenditure for the FY 2020-21 is summarized in table below. The Hon'ble Commission is requested to approve the total O&M expense as projected by DNHPDCL.

**Table 55: Total O&M Expense for the FY 2020-21**

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Employee Cost	16.60	16.60
R&M	8.92	13.18
A&G	7.26	7.26
O&M Expenses	32.78	37.04





#### 4.12 Capital Expenditure Plan

As has been discussed above, the DNHPDCL is engaged in the procurement, and distribution of electricity to the various consumer categories in the Union Territory of Dadra and Nagar Haveli. Apart from the upcoming solar plants, it does not have its own power generation station and completely rely on the Central Sector Generating Stations (CSGS) in Western Region to meet its energy demand.

The scheme wise capital expenditure plan for the FY 2020-21 is given in the table below:

**Table 56: Capital Expenditure for the FY 2020-21**

Sr.No.	Name of Scheme	(Rs. Crore)	
		Proposed Expenditure	
		2019-20	2020-21
	<b>Ongoing Scheme</b>		
1	Under ground cabling with establishment of 66/11 KV substation in SMC area, Silvassa town	79.00	0.00
	<b>New Scheme</b>		
1	A scheme for Establishment of new 66/11 KV Sub Station at village Sayali with associated 66 KV underground line	10.00	9.44
2	A scheme for augmentation of 66/11 KV Kharadpada substation by adding 20 MVA Transformer	3.57	0.00
3	A scheme for Replacement of ACSR Panther conductor by High Capacity TACSR conductor of 66 KV Kharadpada - Athal substation	2.13	0.00
4	Scheme for integrated solution for various business processes such as billing finance HR and projects. (ERP SOFTWARE)	2.50	0.75
5	New 66 kV line from 220/66 kV Wagchipa Sub station	21.00	0.00
6	Smart Metering Projects	10.00	20.00
7	<b>Total</b>	<b>128.20</b>	<b>30.19</b>

The capital expenditure proposed is in line with the capital expenditure approved by the Hon'ble Commission for the FY 2019-20 and FY 2020-21 in the Business Plan dated 5<sup>th</sup> November, 2018.



The DNHPDCL requests the Hon'ble Commission to approve the capital expenditure against the scheme as submitted herewith.

A summary of the capital expenditure and capitalization for the FY 2019-20 and FY 2020-21 is summarized in Table below:

**Table 57: Capital Expenditure & Capitalization for the FY 2019-20 and FY 2020-21**

Sr.No.	Name of Scheme	(Rs. Crore)	
		Proposed Expenditure	
		2019-20	2020-21
		(RE)	(Projected)
1	Capital Expenditure	128.20	30.19
2	Capitalization	5.70	182.69

The DNHPDCL requests the Hon'ble Commission to approve the capital expenditure and capitalization as projected above.

#### 4.13 Gross Fixed Assets

DNHPDCL had Rs. 432.96 Crore of Opening Gross Fixed Assets (GFA) in FY 18-19. Assets amounting to Rs. 19.40 Crore have been added to the GFA during the FY 2018-19.

Assets amounting to Rs. 5.70 Crore have been estimated to be added in the GFA during FY 19-20.

Similarly, based on the capital expenditure plan as detailed above, Rs. 182.69 Crore is proposed to be capitalized during the FY 2020-21.

A summary of the Opening and Closing GFA and capitalization has been summarized in table below:

**Table 58: Opening and Closing GFA for the FY 2020-21**

Particulars	Opening GFA	Additions during the Year	(Rs. Crore)
			Closing GFA
FY 2020-21 (Approved)	438.65	182.69	621.34
FY 2020-21 (Projected)	458.06	182.69	640.75

The DNHPDCL requests the Hon'ble Commission to approve the GFA as projected above.

#### 4.14 Depreciation

Depreciation is charged on the basis of straight-line method, on the Gross Fixed Assets in use at the beginning of the year and addition in assets during the financial year. The depreciation is based on the original cost of the Gross Fixed Assets.

DNHPDCL has applied the depreciation rates as specified in the MYT Regulations, 2018. However, depreciation rates pertaining to the vehicles and software-intangible assets have not been clarified in the MYT Regulations, hence depreciation rates as provided in the earlier Regulations have been adopted to work out the depreciation.

Depreciation for the FY 2020-21 is determined by applying aforesaid category-wise assets depreciation rates on the opening balance of Gross Fixed assets and average of the addition during the FY 2020-21. The DNHPDCL would like to submit to the Hon'ble Commission that it has computed the depreciation based on the closing value of GFA for FY 2019-20 and the estimated capitalization for the FY 2020-21.

**Table 59: Depreciation**

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Opening GFA	438.65	458.06
Addition during the year	182.69	182.69
Closing GFA	621.34	640.75
Average GFA	530.00	549.41
Depreciation during the year	20.52	21.22

#### 4.15 Interest & Financial Costs

##### 4.15.1 Interest on Long-term / Capital Loans



Assets capitalized during the FY 2020-21 have been considered based on normative debt-equity ratio of 70:30 as per the as per the MYT Regulations, 2018.

Interest rate of 9.55% has been considered for computation of interest cost for long-term loans which is similar to the prevailing 1 year SBI MCLR plus 100 basis points. Details of the loan amounts and interest cost computed for the FY 2020-21 is summarized in Table below:

**Table 60: Total Interest on Long-term Loans**

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Opening Loan	0.00	20.11
Loan for additional Capex (70:30 debt-equity)	127.88	127.88
Loan Repayment	20.52	21.22
Closing Loan	53.68	126.77
Interest Cost on Avg. Loans	5.13	7.01

Therefore, DNHPDCL requests the Hon'ble Commission to approve the interest cost on long-term loans as projected above.

#### 4.15.2 Interest on Working Capital Borrowings

DNHPDCL has computed the Interest on Working Capital for the MYT Control Period based on normative basis as per the MYT Regulations, 2018.

The working capital requirement for the FY 2020-21 has been computed considering the following parameters:

- a. O&M Expenses for one (1) month; plus
- b. Maintenance spares at 40% of repair and maintenance expenses for one (1) month; plus
- c. Receivables equivalent to two (2) months of the expected revenue from Consumers at the prevailing tariff;  
Less
- d. Amount, if any, held as security deposits under 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:



A rate of interest of 10.55% has been considered on the working capital requirement, being the 1 year SBI MCLR plus 200 basis points as on 1<sup>st</sup> April of the year. This is in line with the MYT Regulations, 2018 which states that “The rate of interest on working capital shall be equal one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1) Year period, as may be applicable as on 1<sup>st</sup> April of the Financial Year in which the Petition is filed plus 200 basis points.” The normative interest on working capital for the FY 2020-21 considering the above methodology is summarized in the Table below:

**Table 61: Interest on Working Capital for the FY 2020-21**

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
O&M expense for one month	2.73	3.09
Maintenance spares at 40% of R&M for one month	0.30	0.44
Receivables for 2 months	536.61	528.66
<b>Total</b>	<b>539.64</b>	<b>532.18</b>
Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	39.19	53.08
<b>Net Working Capital required after deduction of Security Deposit</b>	<b>500.45</b>	<b>479.10</b>
<b>Interest on Working Capital</b>	<b>50.80</b>	<b>50.54</b>

Therefore, DNHPDCL requests the Hon’ble Commission to approve the interest cost on working capital as projected above.

#### **4.16 Return on Equity**

As per the MYT Regulations, 2018 DNHPDCL is entitled for a Return on Equity (RoE).

The Regulation 27.2 and 27.3 of the MYT Regulations, 2018 stipulates the following:

“27.2 The return on equity for the Distribution Wires Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use at post-tax rate of return on equity specified in the prevalent CERC Tariff Regulations for transmission system.



27.3 The return on equity for the Retail Supply Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use, at the rate of sixteen (16) per cent per annum."

The DNHPDCL has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the MYT Regulations, 2018 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Commission has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a rate of 16% for the Retail Supply Business. The equity component has been determined in accordance with Regulation 26 of the MYT Regulations. The following table provides the Return on Equity approved for the FY 2020-21:

**Table 62: Return on Equity for the FY 2020-21**

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Opening Equity	95.97	137.42
Additions on account of new capitalisation	54.81	54.81
Closing Equity	150.78	192.23
Average Equity	123.38	164.82
Equity for wire business (90%)	111.04	148.34
Equity for Retail Supply Business (10%)	12.34	16.48
Return on Equity for Wire Business (%)	15.50%	15.50%
Return on Equity for Retail Supply Business (%)	16.00%	16.00%
Return on Equity for Wire Business	17.21	22.99
Return on Equity for Retail Supply Business	1.97	2.64
Return on Equity	19.18	25.63

Therefore, DNHPDCL requests the Hon'ble Commission to approve the return on equity capital as projected above.

#### **4.17 Interest on consumer security deposits**

DNHPDCL has made a provision to pay Rs. 2.70 Crore as interest on consumer security deposits during the FY 2020-21. The details of interest on consumer security deposit is given in the table below:

**Table 63: Interest on Consumer Security Deposit for the FY 2020-21**

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Interest on Security Deposit	2.45	2.70

Therefore, DNHPDCL requests the Hon'ble Commission to approve the interest on consumer security deposit as projected above.

#### **4.18 Income Tax**

The MYT Regulations, 2018 provide for the provision of income tax. DNHPDCL has not made any provision towards tax on income for the FY 2020-21. If the DNHPDCL pays income tax during the FY 2020-21, details of the same shall be submitted to the Hon'ble Commission at the time of truing up.

**Table 64: Income Tax for the FY 2020-21**

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Income Tax	0.00	0.00

#### **4.19 Non-Tariff & Other Income**

Non-tariff income includes meter rent/service line rentals, recovery for theft of power/malpractices, miscellaneous charges from consumers. Other income includes Interest on Staff loans & advances, Interest on advances to suppliers/contractors, and Miscellaneous receipts.

The non-tariff income for the FY 2020-21 has been estimated at the same level as determined for the FY 2019-20 by considering elements like sale of scrap, reactive income, STOA application fees, supervision charges etc. Details of the non-tariff income is provided in table below:

Details of the non-tariff income is provided in table below:



**Table 65: Non-tariff Income for the FY 2020-21**

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
<b>Non tariff Income</b>	<b>47.24</b>	<b>5.12</b>

#### 4.20 Aggregate Revenue Requirement

The following Table summarizes DNHPDCL's Aggregate Revenue Requirement for the FY 2020-21.

**Table 66: Aggregate Revenue Requirement for the FY 2020-21**

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Power Purchase Cost	3,136.03	3,498.46
O&M Expense	32.78	37.04
Depreciation	20.52	21.22
Interest Cost on Long-term Capital Loans	5.13	7.01
Interest on Working Capital Loans	50.80	50.54
Return on Equity	19.18	25.63
Provision for Bad Debt	0.00	0.00
Interest on security deposit	2.45	2.70
Income Tax	0.00	0.00
<b>Total</b>	<b>3,266.89</b>	<b>3,642.61</b>
<b>Less:</b>		
Non-Tariff Income	47.24	5.12
<b>Annual Revenue Requirement</b>	<b>3,219.65</b>	<b>3,637.49</b>

#### 4.21 Revenue at Existing Tariff

Revenue from sale of power for the FY 2020-21 is determined based on the energy sales estimated and category wise tariff prevalent in the UT of Dadra & Nagar Haveli as per the tariff notified by the Hon'ble Commission in the Tariff Order for the FY 2019-20 dated 20<sup>th</sup> May, 2019.

The table below summarizes the revenue from sale of power at existing tariff for the FY 2020-21:





**Table 67: Revenue from Sale of Power at Existing Tariff for the FY 2020-21**

(Rs. Crore)

Revenue @ Existing Tariff	FY 20-21 Projected
Domestic	37.65
Commercial	14.67
Agriculture	0.48
LT Industry	100.83
HT/EHT Industry	3013.77
Public Lighting	1.35
Public Water Works	2.42
Temp. Supply	0.84
<b>Total</b>	<b>3172.01</b>
Revenue from surplus power	(0.07)
<b>Total Revenue</b>	<b>3171.94</b>

**4.22 Coverage of Revenue Gap**

Revenue from sale of power with-in the UT (category-wise) is determined in Table 67.

Table 68 summarizes the ARR for DNHPDCL for FY 2018-19, FY 2019-20 and FY 2020-21 along with the revenue and the resulting revenue (gap)/surplus. The cumulative gap for the three years is Rs. 591.27 Crore as given in the table below.

**Table 68: Revenue Gap for FY 20-21**

(Rs. Crore)

Sr. No.	Particulars	2018-19 Actual	2019-20 Revised Estimates	2020-21 Projected
1	<b>Total ARR</b>	3,040.21	3,596.00	3,637.49
2	Revenue @ Existing Tariff	3,027.77	3,385.92	3,172.01
3	Revenue from Surplus Power Sale	0.00	0.03	(0.07)
4	<b>Total Revenue(2+3)</b>	3,027.77	3,385.95	3,171.94
5	<b>Revenue (Gap) /Surplus(4-1)</b>	(12.45)	(210.04)	(465.55)
	<b>Covered By</b>			
6	Previous Years' (Gap)/Surplus Carried Over	96.77	84.32	(125.72)
7	<b>Total (Gap)/Surplus (5+6)</b>	<b>84.32</b>	(125.72)	(591.27)
8	Addl Revenue @ Proposed Tariff	0.00	0.00	533.94
9	<b>Net(Gap)/Surplus (7+8)</b>	<b>84.32</b>	(125.72)	(57.33)

#### 4.23 Average Cost of Supply

The following Table summarizes Average Cost of supply and total average realization at the existing tariff approved by the Hon'ble Commission.

**Table 69: Average Cost of Supply & Revenue Realization**

Average Realization & Cost of Supply	2018-19	2019-20	2020-21
(Rs/Unit)	Actual	Revised Estimates	Projected
Average Cost of Supply of DNHPDCL	4.94	5.62	5.42
Average Realization	4.92	5.29	4.73
Revenue (Gap)/surplus at Existing Tariff	(0.02)	(0.33)	(0.69)
Net Revenue (Gap)/Surplus(Includes gap of previous year)	0.14	(0.20)	(0.88)
Additional revenue through Proposed Tariff	0.00	-	0.80
Net Revenue (Gap)/Surplus	0.14	(0.20)	(0.09)

#### 4.24 Tariff Proposal for FY 2020-21

As there is a cumulative gap of Rs. 591.27 Crore for FY 2018-19, FY 2019-20 and FY 2020-21 the DNHPDCL proposes to recover the revenue gap through tariff hike for the FY 2020-21.

Table below summarizes the existing and proposed tariff structure for various consumer categories for FY 2020-21.

**Table 70: Proposed Tariff Structure for FY 2020-21**

S.N o.	Category/Consumption Slab	Existing FY 2019-20		Proposed FY 2020-21	
		Energy Charges (Rs/Kwh)	Fixed Charges	Energy Charges (Rs/Kwh)	Fixed Charges
1	LT-D/Domestic				
	Ist 50 Units	1.30	5.00 Rs./Con/Month	1.30	5.00 Rs./Con/Month
	51 to 200 Units	2.00	5.00 Rs./Con/Month	2.00	5.00 Rs./Con/Month
	201 to 400 Units	2.50	5.00 Rs./Con/Month	2.50	5.00 Rs./Con/Month
	Beyond 401 Units	3.10	5.00	3.60	5.00

S.N o.	Category/Consumption Slab	Existing FY 2019-20		Proposed FY 2020-21	
		Energy Charges (Rs/Kwh)	Fixed Charges	Energy Charges (Rs/Kwh)	Fixed Charges
			Rs./Con/Month		Rs./Con/Month
	LIGH		10.00 Rs./conn/month		10.00 Rs./conn/month
2	<b>LT-C/Commercial</b>				
	1st 100 Units	2.80	5.00 Rs./Con/Month	2.80	5.00 Rs./Con/Month
	Beyond 100 Units	3.90	5.00 Rs./Con/Month	4.40	5.00 Rs./Con/Month
3	<b>LT- Ag/ Agriculture</b>				
	Upto 10 HP per unit	0.70		0.70	
	Beyond 10 HP per unit	1.00		1.00	
4	<b>LTP Industrial</b>				
	Upto 20 HP Connected Load	3.95	10.00 Rs./HP/month	4.80/kVA H	10.00 Rs./HP/month
	Above 20 HP Connected Load	4.10	50.00 Rs./HP/month	4.95/kVA h	50.00 Rs./HP/month
5	<b>LT-PL/Public Lighting</b>				
	Public Lighting	3.80		3.80	
6	<b>LT Public Water Works</b>				
	Upto 20 HP Connected Load	4.30	25.00 Rs./HP/month	4.30	25.00 Rs./HP/month
	Above 20 HP Connected Load	4.30	50.00 Rs./HP/month	4.30	50.00 Rs./HP/month
7	<b>HT</b>				
	<b>HT Category</b>				
	11 kV	Rs.3.85/k VAh	375.00 Rs./kVA/month	Rs.4.65/k VAh	375.00 Rs./kVA/month
	66 kV	Rs.3.80/k VAh	500.00 Rs./kVA/month	Rs.4.60/k VAh	500.00 Rs./kVA/month
	220 kV	Rs.3.75/k VAh	550.00 Rs./kVA/month	Rs.4.55/k VAh	550.00 Rs./kVA/month
8	<b>Hoardings/Advertisements</b>				
	For all units	7.00	100.00 Rs./kVA/month	7.00	100.00 Rs./kVA/month
9	<b>Charging Stations for e-rickshaw/e-vehicle on single point delivery</b>	4.50	100.00 Rs./kVA/month	4.50	100.00 Rs./kVA/month

DNHPDCL, requests the Hon'ble Commission to approve the fuel purchase adjustment formula including the "k" factor for FY 20-21 as well, which can take care of any variation in the ARR over and above the approved level by the Commission for FY 20-21.

