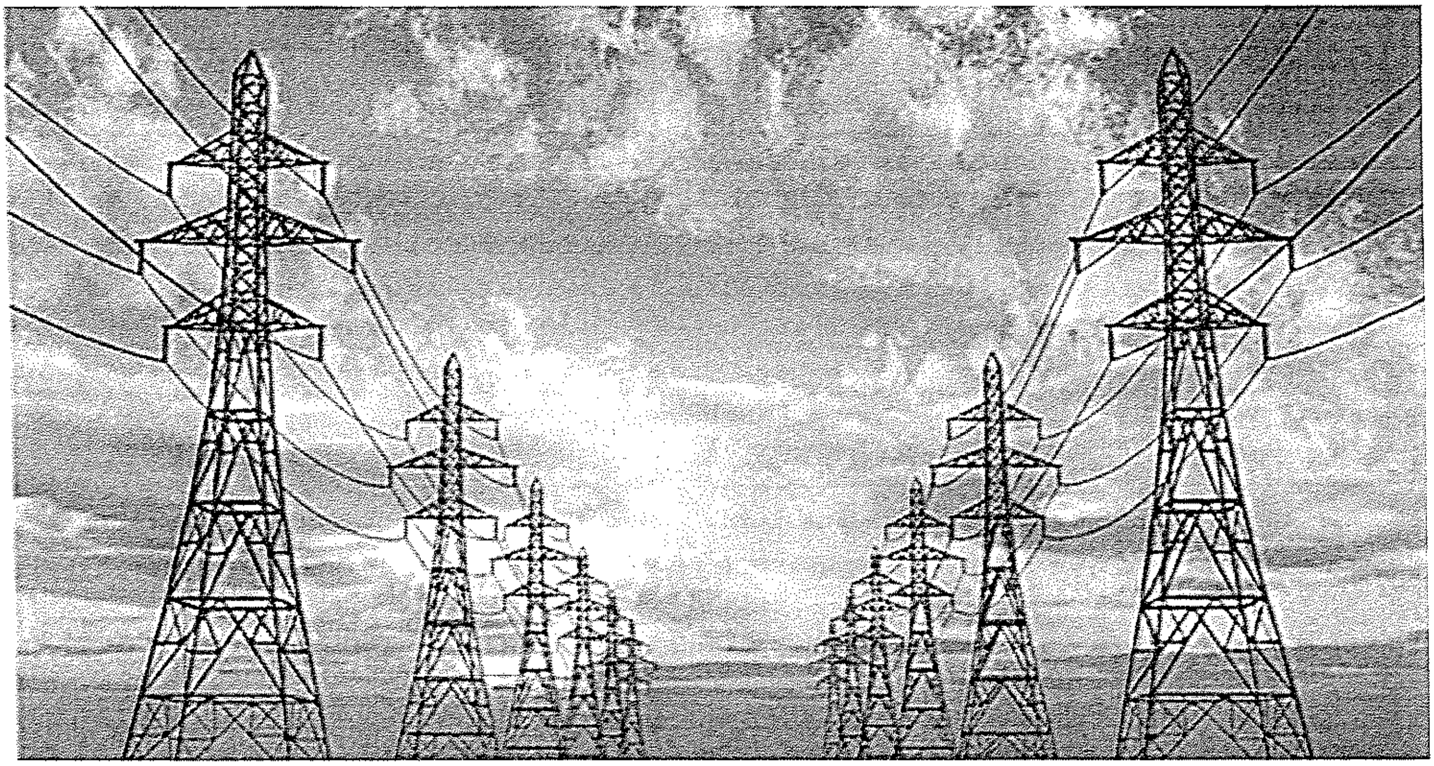
Annex-1

National Transmission & Despatch Company



Multi-Year Tariff Petition for Use of System Charges / Wheeling Charges

FY 2019-20, 2020-21 and 2021-22

NATIONAL TRANSMISSION AND DISPATCH COMPANY

Managing Director NTDC

No. MD/NTDC/ 1475-86

Dated: 29-06-2020

The Registrar
National Electric Power Regulatory Authority
NEPRA Tower, Ataturk Avenue (East),
G-5/1, Islamabad.

Subject: **FILING OF MULTI-YEAR TARIFF PETITION FOR DETERMINATION OF TRANSFER/WHEELING CHARGES FOR THE YEAR 2019-20, 2020-21 & 2021-22**

NTDC intends to file its multi-year tariff petition for the year 2019-20, 2020-21 & 2021-22 as per Subsection 3, Part II of the NEPRA (Tariff Standards and Procedure) Rules, 1998, to meet with the corresponding revenue requirement and to cater for operating and development cost of the system. In this regard please find enclosed herewith the following:

i. Board Resolution.
ii. Affidavit.
iii. Copy of Tariff Petition.
iv. Standard Formats of the Tariff Petition dully filled in
v. Tariff Petition fee amounting to Rs.17,13,408/- after deduction of Income Tax Rs.148,992/- Vide Cheque No.99790607 dated:29.06.2020

This is submitted for your information and acceptance of the captioned please.

Regards,

29/06/2020
Engr Dr. Khawaja Riffat Hassan
Managing Director-NTDC

Copy to:

1-2 DMD (AD&M) NTDC and DMD (P&E) NTDC.
3. Chief Financial Officer, (NTDC)
4. General Manager (Technical), NTDC.
5-6 DM Project Delivery (North and South) NTDC.
7-8 GM Asset Management (North and South) NTDC.
9. General Manager (PSP) NTDC.
10. General Manager (SO) NPCC, NTDC.
11. Chief Legal Officer NTDC.

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NATIONAL TRANSMISSION & DESPATCH CO. LTD

Company Secretary

No. NTDC/CS/926-38

Dated: 29 - 06 - 2020

NOTIFICATION

Approval for Filing of Multi-Year Tariff Petition with NEPRA for Determination of Use of System Charges (UOSC) for FY 2019-20, 2020-21 and FY 2021-22

The Board of Directors National Transmission & Despatch Company Ltd. (NTDC) through resolution by circulation No.409 has resolved and approved the following: -

(a) To file Tariff Petition for FY 2019-20, 2020-21 & 2021-22 with NEPRA.

(b) To approve the Investment Plan provided by DMD(AD&M) for FY 2019-20, 2020-21 & 2021-22.

(c) In addition to above revenue requirements of NTDC, the approved tariff for HVDC line, with effect from March 2021, which will be billed to NTDC as per contractual arrangement and that may be incorporated as received.

(d) To file Addendum, Review Motion or to deal with any other incidental matter, if necessitated included the charges for approved tariff for HVDC line and reorganization effect.

(e) To allow the following officers of NTDC as representatives of the Company to file as well as to deal with all matters regarding the Petition.

(i) Managing Director
(ii) Dy. Managing Director (AD&M and P&E)
(iii) Chief Financial Officer
(iv) General Managers (Technical, AM North & South, PD North & South, Planning (PSP), SO – NPCC)
(v) Chief Law Officer

REGISTRAR
Dy. No. 8679
Dated: 30/06/20

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e: chairman —VC
M(T) —M(CA) —M(Lic)

29/06/2020

Farid Iqbal
Company Secretary

Copy to:

1. Managing Director
2. Dy. Managing Director (AD&M and P&E)
3. Chief Financial Officer, Chief Law Officer
4. General Managers (Technical, AM North & South, PD North & South, HR, Planning, SO – NPCC)

Managing Director NTDC
414-Wapda House Lahore.

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Before the National Electric Power Regulatory Authority

Affidavit

I, Engr Dr. Khawaja Riffat Hassan, Managing Director, National Transmission & Despatch Company Limited (Transmission Licensee # TL/01/2002) being duly authorized representative/attorney of National Transmission & Despatch Company Limited, hereby solemnly affirm and declare that the contents of the accompanying petition/application No. MD/NTDC/1475-86 dated 29-06-2020 including all supporting documents are true and correct to the best of my knowledge and belief and that nothing has been concealed. I also affirm that all further documentation and information to be provided by me in connection with the accompanying petition shall be true to the best of my knowledge and belief.

DEPONENT

Engr Dr. Khawaja Riffat Hassan
Managing Director-NTDCL

M. NADEEM CHOHAN
Oath Commissioner
Lahore High Court
Lahore.

1. Petitioner's Information

a. Introduction

National Transmission and Despatch Company Limited (NTDC) 414-Wapda House, Lahore, was incorporated under the Companies Ordinance 1984 on November 6, 1998, as a result of structural reforms introduced by the Government of Pakistan in the Power Sector. The principal business of NTDC is to own, operate and build infrastructure for transmission system of 500kV and 220kV Transmission Lines and associated Sub-Stations.

NTDC commenced its commercial operations on March 1st, 1999 and was organized to take over the properties, assets, rights and obligations of the Transmission network all over Pakistan previously owned by WAPDA, except the area served by K-Electric.

NTDC was granted Transmission License No. TL/01/2002 on 31st December 2002 by National Electric Power Regulatory Authority (NEPRA) to engage exclusively in the transmission business for a term of thirty (30) years, valid up to December 30, 2032 pursuant to Section 17 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

The Company is wholly owned by Government of Pakistan, which makes appointments to the Company's Board of Directors and exercises ownership control through its various agencies. The Company is likely to remain under public sector governance and accountability mechanisms (such as Public Procurement Regulatory Authority, Public Accounts Committee, Auditor General of Pakistan and Planning Commission GoP. Presently, NTDC has the status of a non-listed public limited company under the Companies Ordinance, 1984 (now Company Act 2017).

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b. Main Functions of the Company

By virtue of modifications in the Transmission License by NEPRA dated 29th May, 2015, further endorsed by the Authority vide No. NEPRA/R/LAT-01/13111-13150 dated 4th September, 2015 functions of the Company have been restricted to System Operations, thereafter, NTDC only deals with System Operations whereas the Market Operations function has been assigned to CPPA-G through Business Transfer Agreement (BTA) between NTDC and CPPA-G dated 03-6-2015. Further under article 17 (1) (Functional Separation) of the Modification-II in the Transmission License by NEPRA vide No. NEPRA/R/LAT-01/8287-8303 dated 29th May 2015; NTDC will perform independently in both accounting and management terms:

a. Transmission Network Planning, Design, Operation and Maintenance (the "wire business");
b. 'System operation and dispatch;

NTDC, in addition to its core functions, is also providing services (non-core function) to the Distribution Companies (DISCOs) in the of areas design, construction of transmission lines/substations and maintenance of support for the telecommunication and system protection. To discharge these functions NTDC has established "Services Division", headed by a General Manager, which is a self-financing department.

c. Scope of Business

NTDC operates and maintains sixteen (16) 500kV and forty-five (45) 220kV Grid Stations having MVA Capacity of 23,400 and 26,550 respectively with 7,238 km of 500kV & 11,280 km of 220kV Transmission Lines.

Managing Director NTDC
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Pakistan is geographically a longitudinal country, i.e. more like a vertical rectangle and same is true for the primary network of NTDC. The 220kV & 500kV Transmission Network runs from Peshawar in the North to HUBCO near Karachi in the South. This Transmission Network evacuates power from all generation facilities and delivers it to the XWAPDA Distribution Companies (DISCOs) and K-Electric.

2. Summary of Last Tariff Determination

NTDC last Tariff Petition for FY 2017-18 & 2018-19 was determined by NEPRA on July 31, 2019 at the rate of Rs.151.77/kW/month. Being aggrieved against the Authority's Determination, NTDCL filed a Motion for Leave for Review the same was decided on March 31, 2020 and NEPRA issued revised Tariff for NTDC at the rate of Rs. 176.16/kW/month, the gazette notification in this respect is still awaited from GOP. It is pertinent to mention here that the Authority did not accommodate some of the justified claims raised by NTDC in its review motion, which include the following:

- NEPRA allowed Cost of equity at 15% and cost of debt at 8.99% against NTDC's claim of 16% (since business-risk remained same as elaborated in NTDC Reconsideration Determination FY 2015-16 & FY 2016-17) and 12% (as per relent policy of GoP) respectively. It was submitted that the Company carries long term loans for a tenor which ranges from 15-20 years, therefore, basing Cost of Debt on short term (two years tenor) rates is unjustified, NTDC's request is to that long-term parameters may be decided. However, Authority maintained short-term rates without providing any supporting justification to this effect.

- NEPRA arbitrarily curtailed regulatory losses to 2.80% and did not accept the NTDC claim of 3.0%, without providing fair justification which has result in negative impact on financial health of the Company. It may please be noted that NTDC has supported it's claim with valid arguments in the petition as well as during hearing while proposing an alternative means of engaging an independent consultant to study and provide their assessment of the level of transmission losses to be applicable for NTDC.

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- It is unfortunate that despite close follow-up from both NTDC and Ministry of Energy (Power) side NEPRA took 21 months in deciding the tariff for the years 2017-18 & 2018-19 and thus dented profitability and liquidity gaps which resultantly formed into sizeable claims of uncovered cost of Rs. 13,941 million and further burdened NTDC to face financial stress.

The following table depicts the components of Revenue Requirement determined by NEPRA following the Motion for Leave for Review for the Tariff Petition FY 2017-18 and 2018-19:

(Rs. in million)

Sr. No.	Components of Rev. Requirement	2017-18	2018-19
1	GE&A	7,334	9,885
2	Repair & Maintenance	905	1,242
3	Insurance	199	232
4	Depreciation	6,880	9,278
5	Financial Charges	4,575	8,119
7	Return on Equity	16,187	17,322
9	Prior Year Adjustment	8,264	6,002
	Total	**44,345**	**52,081**
10	Less: other income	969	1,994
11	**Total Revenue Requirment**	**43,376**	**50,087**
	MDI	22,720	23,694
	Tariff For the Year kW/Month	159.08	176.16

a. Current Use of System Charge

The NTDC's Use of System Charge (UoSC) comprises of two components i.e. fixed and variable for the transmission of electricity to be charged to XWAPDA Distributions Companies and K-electric. NEPRA has recently determined fixed tariff of Rs.176.16/kW/Month for FY 2018-19, which is yet to be notified by the GoP. However, the last notified tariff for the FY 2016-17, prior to determination of reconsideration request for the FY 2018-19 was Rs.148.33/kW/Month and it has still been presently applied by NTDC for raising Invoices.

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3. Grounds for Filling Tariff Petition

As per NEPRA standard and guidelines 17(3) (i), tariff should allow licensees the recovery of all costs prudently incurred to meet the demonstrated needs of their customers. Hence following NEPRA tariff mechanism the company has disciplined financial management system which is subject to audit by the teams of Internal Audit, External Audit and AGPR and ensures reasonableness of the financial statements prepared and presented to NEPRA. NTDC has a professional team which strives to maintain an adequate stream of cash flows for the smooth operations of its transmission network, fulfillment of its financial obligations in a timely manner, while ensuring reasonable return on Capital Base for augmentation of the existing system and enables the company to invest in the ever-growing expansion of the Company's transmission infrastructure in line with the GoPs vision of overcoming the power demand.

The core reasons for the tariff petition have been summarized below:

a) To ensure meeting incremental impact in the operational & financial costs, construction of new grids and expansion of transmission network;
b) Increase in Operational & Maintenance Costs including Pay & Allowances.
c) The induction of employees against vacant posts and due to new vacancies arising from system expansion as per yard sticks.
d) Timely manage funding requirements for the required increase in the Capital Base of the company for the FY 2019-20, 2020-21 and 2021-22, due to capital investment growth in ongoing enhancing capacity of existing network as well as for the new projects;
e) Being an infrastructure-based company, NTDC arranges funds from foreign/local financial institutions for the expansion/development of its Transmission Network, this leads to increase in financial charges which are required to be timely paid to meet its financial obligations;

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f) Regulatory Revenue Gap has arisen due to the award of inadequate revenue requirement which was based on estimates versus actual results, delayed determination, and notification of Tariff.

a. Summary of Tariff Petition

In view of the aforementioned underlying justifications/assumptions, the petitioner has calculated its revenue requirements under the specific heads of expenditures stipulated as per NEPRA's Tariff methodology. The Revenue requirement for FY 2019-20, 2020-21 & 2021-22 is as under:

Rs. Mln

Sr. No.	Components of Rev. Requirement	2019-20	2020-21	2021-22
1	GE&A	11,149	14,031	15,599
2	Repair & Maintenance	716	875	1,064
3	Insurance	284	265	286
4	Depreciation	12,007	13,468	14,615
5	Financial Charges	9,135	9,443	9,893
6	Return on Equity	25,134	28,209	32,395
7	Prior Year Adjustment	13,942	-	-
	Total	**72,367**	**66,291**	**73,852**
8	Less: other income	1,507	1,343	1,421
9	**Total Revenue Requirment**	**70,859**	**64,948**	**72,432**
	MDI	23,646	24,333	25,550
	Tariff For the Year kW/Month	249.72	222.43	236.24

4. Authorization & Representation

The petition is being filed through Engr. Dr. Khawaja Riffat Hassan, Managing Director of NTDC who has been duly authorized by the Board of Directors under Resolution passed vide Notification No. NTDC/CS/926-38 dated: 29-06-2020 to sign and file the Tariff Petition for the FY 2019-20, 2020-2021 & FY 2021-22. The following officers of NTDC have also been authorized by the Board to sign individually or jointly the tariff petition and the necessary documents in support of the petition and also to appear before the Authority as needed and do all acts necessary during the proceeding(s) of this petition: -

a. Dy. Managing Director (AD&M and P&E)

b. Chief Financial Officer

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c. General Manager (Technical)

d. General Manager (Asset Management North & South)

e. General Manager (Project Delivery North & South)

f. General Manager (Power System Planning)

g. General Manager (SO) NPCC

h. Chief Legal Officer

5. Assumptions to Tariff Petition

Realistic assumptions have been taken into account while preparing the petition; the major assumptions are detailed hereunder:

I. MDI Demand for Distributions Companies

NTDC has been charging Use of System Charge / Wheeling Charges to DISCOs including K-electric on the basis of Maximum Demand Indicator (MDI) which is reckoned on maximum demand recorded at the Common Delivery Points (CDPs) during the billing period at the particular time on Non-Coincidental basis. The maximum demand (kW) of DISCOs is measured through Digital Energy Meters installed at their electrical boundaries called Common Delivery Points (CDPs) by designated metering committee(s) having one member of the respective DISCOs.

The Authority's determined mechanism for charging of MDI is as under:

XWD = The sum of the maximum demand of the XWDISCOs in kW recorded during a billing period at all the delivery metering points at which power is received by the XWDISCOs.

It is apprised that in the Motion for Leave for Review filed on 30-08-2019, NTDC once again submitted the reasons for impracticality of Co-Incidental MDI calculations at current stage. In the Decision of the Authority in the matter of

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said Motion for Leave for Review (Case No. NEPRA/TRF-450/NTDC-2018), the Authority has decided to address NTDC's concerns and that the matter of coincidental and non-coincidental requires further deliberations with joint participation of all stakeholders i.e. CPPA-G, NTDC and XWDISCOs etc. for sectorial harmony and allocation of fixed cost on justified basis. Accordingly, the Authority has decided that separate proceedings shall be initiated apart from the review decision. NTDC greatly appreciates the decision of the Authority.

NTDC is already complying by the directions of the Authority on the subject to develop system for calculation of co-incidental MDI. The progress of co-incidental MDI system undertaken by NTDC on war footing basis is detailed as below:

1. PROGRESS ON CO-INCIDENTAL MDI SYSTEM

The project was undertaken by NTDC with the assistance from the USAID for enabling the accurate calculation of MDI on co-incidental basis from CDP meters. In this regard, the procurement of Secured Metering System (SMS) is being carried under the USAID Program. The scope of the project is to bring all the primary meters online to ensure real-time operational monitoring and to meet the requirements of Regulator (NEPRA). The detail of the scope of this project is as under.

- Procurement and installation of 100 revenue meters;
- Procurement and installation of 300 inverters to power up all DCU's through Sub Station batteries bank;
- Meter reading software Head-end and MDM (installation, training, support);
- Installation and laying communication modules (380 Ethernet + 150 GSM)
- Installation of 300 GSM antennas

In this regard, the updated status of the project is given as under:

Sr. No.	Activity details	Status/Timelines
1	Bids evaluation	Done
2	Contract Award	Done
3	Factory Acceptance Test for ISKRA meters	Done

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4	Head End and MDM implementation	Underway
5	Date of equipment delivery	19- June-2020
6	Integration of HE and MDM	Completion by September-2020
7	Training on software (HE and MDM)	Oct 2020

Due to sensitive calculation mechanism of co-incidental MDI, it is important to mention that this system cannot be fully functional unless ALL the CDP meters are to be integrated into the Online Meter Data Management Software 'en-bloc'. Therefore, the timeline for its implementation and deployment poses challenge and may change due to current Covid-19 pandemic.

Moreover, in the above mentioned decision in the matter of Motion for Leave for Review (Case No. NEPRA/TRF-450/NTDC-2018), Authority has also directed NTDC to file the next Tariff petition on the basis of coincidental MDI. It is submitted that the decision for adoption of coincidental approach needs to be taken after the finalization of deliberations among all stakeholders which has been decided by the Authority. Moreover, calculation of MDI on co-incidental basis is impractical at this stage due to the reasons as mentioned earlier and the same have been reiterated in the following points;

2. SECTORIAL HARMONY

All Power Sector participants (i.e. CPPA-G, NTDC, DISCOs) currently use non co-incidental MDI metering Data which is jointly signed by respective Metering Committees for all billing matters. It is also highlighted that CPPA-G also uses non-coincidental MDI for the purpose of charging its Market Operation Fee.

3. SIZING OF NTDC INFRASTRUCTURE

CDP-wise non-coincidental MDI dictates the sizing of NTDC infrastructure (transmission lines, transformers and circuit breakers) requirement at every CDP location even if that demand lasts just one hour in whole year. NTDC has invested in infrastructure and keeps it ready to cater for the highest

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possible non-coincidental peak demand of DISCOs keeping in view the N-1 contingency criteria.

NTDC prepares medium-term and long-term plans based on non-coincidental peak load demands for each individual grid station. Moreover, as per GRID Code 2.2.1, NTDC submits Annual System Reliability Assessment and Improvement Report (ASRAIR) based on station wise peak demand, which is non-coincidental in nature.

Moreover, this CDP-wise non-coincidental MDI is technically more meaningful as it directly reflects Load Factor of the CDP.

4. CO-INCIDENTAL MDI CALCULATION MECHANISM & SCOPE

Use of non-coincidental MDI metering data practice has matured over time while co-incidental MDI system first needs to be deployed, monitored and benchmarked for various testing and/or fault tolerant scenarios before before it can be utilized as a reliable source for billing purposes.

Further, at-least 12-months real-time co-incidental MDI data shall be required to establish annual averages, trends and projections, before filing the petition on co-incidental basis. Such data is essentially required for ensuring that differences between projections and real-time data do not negatively affect tariff.

MDI has been projected based on the Growth Rate for DISCOs and the prevailing situation of Corona pandemic.

Description	2018-19 Actual	2019-20	2020-21 Projected	2021-22
Average Monthly MDI (MW)	23,694	23,646	24,333	25,550

The DISCOs-wise MDI is Annexed (Annex-IV)

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5. Power Factor Penalty:

The clause 'OC 4.9.1 - Reactive Power Management' of the Grid Code 2005 states that:

> " Distribution companies, KESC, BPC's, and other power consuming entities, as applicable, shall all be responsible for the maintenance of power factor at 132 kV Connection Point grid station busses; such that the power factor at 132 kV busses in the NTDC portion of Connection Point substations shall be maintained within the range of 95% and better during steady-state operating conditions.
> Distribution companies, including KESC, shall require BPCs within their Service Territory to install shunt capacitors and/or other power factor correction facilities so that the power factor at their Point of Connection is 95% or better.
> In no case, DISCOs and BPCs shall offer leading power factor to NTDC. "

In the decision in the matter of Motion for Leave for Review (Case No. NEPRA/TRF-450/NTDC-2018), it has been stated at Sr. No. 15.1 that DISCOs shall maintain an average power factor of at least 85% lagging. This is in contradiction to Grid Code which clearly states that DISCOs need to maintain power factor of 95% and better, therefore, it is requested to allow NTDC that Power Factor Penalty should be imposed at power factor falling below 95% lagging of the concerned DISCO.

It is also important to highlight that the lower voltage profile of DISCOs is currently being addressed by maximizing taps of 220/132 kV transformers as DISCOs are not managing their voltage profile through capacitor banks and other techniques. This situation results in excessive drawl of reactive power from primary network in order to boost 132 kV system voltages. As a consequence; primary network experiences low voltages and excessive current flows causing two major issues on NTDC primary network:

- Voltage Stability gets reduced and risk of partial collapse, during peak load conditions, increases.
- T&T losses are increased two-folds i.e., due to low voltage and due to excessive current flows.

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II. Operating Cost

a. General Establishment and Administration Expenses

General Establishment cost includes Pay and Allowances, Employee benefits, staff costs, retirement benefits and other administrative expenses. Being a public-sector entity NTDC follows the pay scales of GoP, hence increase in salary and other employee benefits approved in the GoP finance bill 2019-20 have to be adopted by the Company under the terms of employment and expected increase in 2020-21 and 2021-22 has been accounted for accordingly.

Each component of General Establishment & Administration expenses and retirement benefits has been discussed hereunder:

i. Basis for increase in Pay & Allowances FY 2019-20

- Adhoc relief allowance @ 10% to BPS 1-16 and 5% to BPS 17-20.
- Impact of annual increment becames due in December 2019.
- Increase in employee benefits and other components of employee's salaries as a result of transfer, promotions.
- Increase in Pension benefits announced by GoP 10 %.
- Ex-gratia to employees.

GoP Orders/Notifications are Annexed (Annex-XII).

ii. Basis for increase in Pay & Allowances FY 2020-21

- Impact of annual increment will be due from December 2020.
- Expected provision of Adhoc relief allowance @ 10%
- Increase in employee benefits and other components of employee's salaries as a result of transfer/ promotions.
- Expected provision for increase in Pension benefits by GoP 10 %.
- Ex-gratia to employees.

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ii. Basis for increase in Pay & Allowances FY 2021-22

- Impact of annual increment will be due from December 2021.
- Expected Adhoc relief allowance @ 10%
- Increase in employee benefits and other components of employee's salaries as a result of transfer/ promotions.
- Expected increase in Pension benefits @ 10 %.
- Ex-gratia to employees.

Keeping in view the above increases, the Salaries and Wages have been projected as under:

Rs. Mln

Description	2018-19 Actual	2019-20 Prov.	2020-21 --- Projected	2021-22 ---
Basic Pay	2,865	3,259	3,454	3,661
Other Allowances	1,811	2,096	2,522	2,658
Contractual & Daily Wage	49	61	67	74
Employee Benefits	2,019	1,639	2,284	2,366
Total	**6,744**	**7,054**	**8,328**	**8,760**

<u>Bereavement and Donation:</u>

The GoP has announced the Prime Minister's Assistance Package for employees who died during service (both natural death and fatal accidents), which has been adopted by NTDC being the public sector company. In this regard, it is apprised that the said head fall under the head of Employees Benefits and considerable expenditure has been observed of Rs. 148 million during the FY 2019-20, and sizeable claims are in hand for the FY 2020-21 of Rs. 269 million and also adopted in next financial years accordingly.

The Prime Minister's Direction and BOD (NTDC) notification are annexed (Annex-XII).

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iii. Induction Plan

NTDC transformation capability has been enhanced through energizing new grid stations and transmission lines in the last couple of years to ensure reliable voltage profile and to overcome forced load shedding. This network expansion needs competent and skilled professionals in the technical, finance and administration fields. Further, the work force is retiring each year and therefore it is necessary for the company to hire their replacement in order to handle the growing work load and for efficient and effective operations of the business.

The below exhibited table shows the current sanctioned strength as well as the present working strength and clearly describes the shortage of staff in the Company. In order to meet with the technical and operational targets, the management intends to recruit personnel in different cadres from BPS-1 to BPS 20 during FY 2019-20, 2020-21 and FY 2021-22 for which recruitment process will be started with the approval of the Board of Directors.

Description	Saction Strength	Working Strength					Deficiency	%age
		Regular	Contract	Package	Daily Wages	Total		
BPS 1-16	12,105	6,797	1,448	-	6	8,251	3,854	46.7%
BPS 17-20	1,541	1,167	185	-	-	1,352	189	14.0%
PPS 17-20	19	2	3	10	-	15	4	26.7%
Total	13,665	7,966	1,636	10	6	9,618	4,047	42.1%

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The annual financial impact of positions to be filled is tabulated below:

S.No.	BPS	2019-20		2020-21		2021-22	
		No. of Employees	Annualized Impact	No. of Employees	Annualized Impact	No. of Employees	Annualized Impact
1	20	2	8,945,400	2	4,145,400	1	2,238,516
1	19	-	-	5	8,881,500	4	7,673,616
2	18	2	2,301,000	17	19,558,500	17	21,123,180
3	17	1	911,100	105	95,665,500	107	105,286,716
4	16	8	4,538,400	33	18,720,900	33	20,218,572
5	15	13	6,286,800	108	52,228,800	108	56,407,104
6	14	-	-	248	112,939,200	243	119,515,176
7	13	-	-	4	1,711,200	4	1,848,096
8	12	-	-	7	2,797,200	7	3,020,976
9	11	1	377,100	98	36,955,800	98	39,912,264
10	10	-	-	-	-	-	-
11	9	10	3,531,000	310	109,461,000	280	106,777,440
12	8	36	12,290,400	116	39,602,400	125	46,089,000
13	7	1	329,700	283	93,305,100	350	124,626,600
14	6	47	14,974,200	179	57,029,400	176	60,559,488
15	5	8	2,462,400	17	5,232,600	17	5,651,208
16	4	-	-	2	594,000	2	641,520
17	3	-	-	25	7,207,500	25	7,784,100
18	2	18	5,027,400	2	558,600	2	603,288
19	1	9	2,465,100	270	73,953,000	269	79,573,428
Total		156	64,440,000	1831	740,547,600	1868	809,550,288

The financial impact for recruitment has been taken for eight months after taking into account the due time required for completion of recruitment process.

iv. Post-Retirement Benefits

The post-retirement benefits include pension, leave encashment, free electricity supply & medical facility to the retired employees. The Company adopted the WAPDA's employee pension scheme, post retirement free electricity scheme and post-retirement medical benefits scheme.

- Post Retirement Fund

NEPRA vide NTDC Review Motion dated October 20, 2015 allowed post-retirement benefits to the extent of cash payment until the Company establishes and maintains its own post retirement fund, the same has also been emphasized in the subsequent Tariff Determinations. Therefore, in compliance with the Authority's direction NTDC has established Pension fund and made a financial

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proposal to fund this account and included the same in its Revenue Requirements. NTDC also made analysis / working for both allowed and dis-allowed cost as per actuarial valuation in the tariff till 2013 and the same is being shared with NEPRA for its consideration. The analysis is as under:

Year	GE & A - NTDC (inc. DL Expense) (A)	GE & A - NEPRA (B)	DL Expense (NTDC) (C)	Pension Paid (D)	D.L. Exp. (Excl. of Pension Paid) C - D (E)	NTDC GE&A (Excl. of future DL Exp) - Pension Paid A - E (F)	Difference F - B (G) Pension not Allowed	Difference D - G (H) Pension Allowed
2005	1,394	1,248	538	217	321	1,072	(176)	392
2006	1,632	1,621	803	184	619	1,013	(608)	792
2007	1,727	1,621	594	217	377	1,350	(271)	488
2008	1,728	1,621	489	279	210	1,517	(104)	382
2009	2,494	1,621	829	301	528	1,966	345	(44)
2010	3,184	1,621	971	352	620	2,564	943	(591)
2011	4,099	3,419	1,006	407	599	3,500	81	326
2012	4,393	3,419	1,185	445	740	3,653	234	211
2013	5,887	4,825	2,213	441	1,772	4,116	(709)	1,150
2014	7,743	4,825	1,811	863	948	6,795	1,970	(1,107)
Total	34,280	25,841	10,440	3,705	6,735	27,546	1,705	2,001

It is worth mentioning here that NTDC has initiated the process of establishing its own Post-Retirement Fund duly approved from FBR the same has also been emphasized by the Authority in the most recent determination dated May 4th, 2018. Regular investment in the fund will be undertaken on monthly/ annual basis subject to availability of required cash as received from CPPA(G).

In this Petition NTDC has claimed a minimum amount of Rs. 200 million, Rs. 600 million and Rs. 600 million in FY 2019-20, FY 2020-21 and FY 2021-22 respectively, the same will be actualized later on based on actual results.

The year wise post-retirement benefits projection is as under: -

Description	2018-19 Actual	2019-20 Prov.	2020-21 Projected	2021-22 Projected
Pension and Post Retirement Fund	2,694.0	3,159.2	4,075.1	5,082.6

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- Pension

Pension is payable under the scheme to all eligible employees by the rules of the scheme. Pension is calculated on last pay drawn on completion of qualifying service. No benefit is payable under the scheme for less than five years of service.

An employee is entitled to benefit under Pension Scheme on ceasing to be an employee due to any of the following reasons:

- Retirement after completion of 25 years of service
- Retirement at age 60
- Death in service
- Disability during service
- Lump sum Gratuity, if service is less than 10 years

The GoP has granted increase to all pensioners @ 10% in FY 2019-20 and expected provision have been made for FY 2020-21 and FY 2021-22.

- Post-Retirement Medical Facility

All regular employees and their family members (retiring on superannuation, voluntary retirement, early retirement, death/disability in service) are eligible for the post-retirement medical benefits without any limitation subject to a minimum service requirement as under:

- Superannuation Retirement on attaining the age of 60 years
- Normal Retirement 25 Years
- Death/Disability in minimum service of 10 Years

- Leave Encashment

In case of retirement of an employee on superannuation, a lump-sum payment of 365 days leave in his credit is allowed as leave encashment. An increase of 10% in this head has been estimated in line with salaries in the petition for the year 2018-19.

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- Post Retirement Free electricity

Electricity is payable under the scheme to all eligible employees of the company. The benefit is payable at the rates based on units consumed against entitled units according to Grades.

An employee is entitled to benefit under Pension Scheme on ceasing to be an employee due to any of the following reasons:

- Retirement at age 60
- Retirement after completion of 25 years of service
- Death in service
- Disability
- Compulsory Retirement

v. Vehicle Running Expenses

NTDCL Transmission network spreads across the country approximately 18,518 km 500kV/220kV transmission lines, these lines pass through remote areas of Baluchistan and KPK, so extensive patrolling is inevitable by technical staff for the maintenance of the transmission system as well as by the security staff to avoid sabotage activities. Hence, NTDCL requires funds to cover the vehicle running expenses. The below tabulated projects of vehicle running expenditure has been incorporated in the wake of expansion in the transmission network.

Rs. Mln

Description	2018-19 Actual	2019-20 Prov.	2020-21 Projected	2021-22
Vehicle Running Expenses	231.4	208.3	229.1	252.0

The projection has been made in view of fuel price increase, old vehicles, system expansion.

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vi. Travelling Expenses

To ensure continuous and reliable transmission of energy through NTDC's ever-expanding Transmission Network requires extensive patrolling by the maintenance and security staff to avoid threats of sabotage activities and for regular/scheduled maintenance purposes. Further, keeping in view the current law and order situation in the country security personnel are frequently transferred from one grid station to other and paid transfer T.A/D.A as per policy. Hence, keeping in view above Travelling Expenses have been projected as under:

Rs. Mln

Description	2018-19 Actual	2019-20 Prov.	2020-21 Projected	2021-22 Projected
Travelling Expenses	267.9	304.2	325.5	348.2

vii. Power Light Gas and Water Charges.

Utilities prices have been increased as per the historical trend as well as hike in the prices of Furnace Oil and Gas ultimately increasing the Electricity Prices.

Rs. Mln

Description	2018-19 Actual	2019-20 Prov.	2020-21 Projected	2021-22 Projected
Power, Light, Gas and Water	89.3	98.0	109.7	122.9

viii. Rent, Rates and Taxes

As most of NTDC lower formations offices are hired on rental basis, therefore an annual average contractual increase in Rent & Rates @ 5% has been assumed in the calculations.

Rs. Mln

Description	2018-19 Actual	2019-20 Prov.	2020-21 Projected	2021-22 Projected
Rent Rate & Taxes	108.2	139.4	146.4	153.7

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ix. Communication

Communication charges include Telephone, Postage and Telegram & Cell Phone Charges, Fax and Internet. NTDC has acquired the services of Ufone for mobile postpaid SIMs to NTDC officers as per their entitlement. Due to accounts automation IT Department has enhanced the bandwidth of broadband in order to cater the upcoming requirements.

Rs. Mln

Description	2018-19 Actual	2019-20 Prov.	2020-21 Projected	2021-22
Communication	28.3	48.1	51.6	56.2

x. Offices Supplies and Other Expenses

Office supplies & other expenses are market based costs, hence they have been increased in line with CPI. It is apprised that these expenses do not include communication expenses and hence the same have been claimed above in a separate head as per NTDC accounts.

Rs. Mln

Description	2018-19 Actual	2019-20 Prov.	2020-21 Projected	2021-22
Office Supplies & other Expenses	15.1	24.3	26.5	28.9

xi. Professional Fee:

Increase in the professional fee has been estimated as a result of revised rates of professional contracts/ legal counsel fee. Further NTDC has hired the services of an Organizational Development (OD)/HR Consultancy firm. The firm has been mandated with the restructuring of NTDC hierarchy, processes and for the

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preparation of policies & regulations to cater the needs of NTDC's ever expanding system. Please note that the fees claimed pertain to operations only.

Rs. Mln

Description	2018-19 Actual	2019-20 Prov.	2020-21 Projected	2021-22
Professional Fee	36.1	34.5	59.6	48.6

xii. Other General Establishment and Admin. Expenses

Includes outside services employed, store handling charges, advertising and publicity, Representations and Entertainment, NEPRA annual license fee, Management fees and other miscellaneous expenses.

Rs. Mln

Description	2018-19 Actual	2019-20 Prov.	2020-21 Projected	2021-22
Other G&EA	64.4	79.9	87.0	94.7

b. Repair and Maintenance (including Vehicle R&M Expenses)

As NTDC's transmission network is the backbone of the country's electric power supply system, it comprises a mix of old and new grid stations & transmission equipment. The continuous growth in demand load has necessitated the Company to ensure and attain optimal level of its Transmission network reliability and sustainability which can only be achieved through regular repairs and maintenance. Therefore, a realistic maintenance plan has been annexed, the below table depicts the estimated R&M plan (Annex-V).

Rs. Mln

Description	2018-19 Actual	2019-20 Prov.	2020-21 Projected	2021-22
Repair & Maintenance	585	716	875	1,064

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As mentioned above, since NTDC Transmission network spreads across the country making extensive patrolling by technical staff inevitable due to maintenance system and security of the transmission system. Hence, NTDC requires funds for repair and regular maintenance of these vehicles in order to enhance the useable life of the vehicles. The below table projects the estimated repair and maintenance costs required for up keep of the rather older vehicles fleet in the proposed tariff petition, these estimates are included in above table.

Rs. Mln

Description	2018-19 Actual	2019-20 Prov.	2020-21 Projected	2021-22 Projected
Vehicle R&M Expenses	62.6	76.6	93.6	113.9

c. Insurance

The assets of the company are protected /covered under WAPDA Equipment Protection Scheme (WEPS) vide which insurance cost is calculated @ 0.30% of book value of Grid Stations and insurance cost has been established on the same formula. This is usually paid at the book value and subject to change every year as a result of increase in assets.

Rs. Mln

Description	2018-19 Actual	2019-20 Prov.	2020-21 Projected	2021-22 Projected
Book Value of Grid Stations	88,192.6	89,300.6	88,340.9	95,268.4
Insurance	265.0	284.0	278.3	319.9
%age	0.3%	0.3%	0.3%	0.3%

d. Depreciation

Depreciation is also a significant component to determine revenue requirement of the tariff petition which may change as a result of addition or deletion in the

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fixed assets and would require adjustments accordingly. The depreciation for FY 2019-20, 2020-21 & 2021-22 has been calculated on established basis of:

(i) Value of existing assets,

(ii) The anticipated additions in existing assets during the FY 2019-20, 2020-21 & 2021-22

It is worthwhile to mention here that an extraordinary capitalization of over Rs. 116 Bln will be made in the FY 2019-20, FY 2020-21 and FY 2021-22 substantially enhancing the quantum of depreciation, this will also address the issue raised by the Authority of having a sizeable amount parked in the Capital Work-in-Progress. Details of capitalization have been provided in this petition under the caption "Projects Expected To Be Completed During FY 2019-20, 2020-21 & 2021-22".

Fixed assets are depreciated on the basis of straight-line method as per company policy at following rates:

a. Land @ Zero %
b. Buildings and Civil Works @ 2%
c. Transmission & Despatch Equipments @ 3.5%
d. Furniture and fittings, other office equipments & Vehicles @ 10%.

Based upon these assumptions the depreciation has been worked out as under:

Rs. Mln

Description	2018-19 Actual	2019-20 Prov.	2020-21 Projected	2021-22 Projected
Value of Assets	304,913	350,457	384,451	421,765
Depreciation	9,278	12,007	13,468	14,615

e. Financial Charges

NTDC is an infrastructure-based company, thus, striving vigorously for enhancing its transmission network system to cater the growing needs of Distribution Companies. NTDC is responsible to build, design and operate the

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Extra High Voltage (EHV) Transmission lines to evacuate Power from all upcoming power generation centers. Therefore, NTDC plays a crucial role in arranging the availability of transmission network to align with the availability of power plants. NTDC undertakes numerous projects to coup with the demand of Distribution Companies, therefore managing its investment program through a mix of financing i.e Return on Equity (RoE) and Loans (Foreign & Local). At present, foreign loans are taken through the GoP re-lent policy whereas local loans are obtained from local financial institutions, these loans comprise of a 15-20 years tenure for the construction of 500/220kV Transmission Lines/Grid Stations to meet the costs of an ever-expanding transmission system across the country.

Following are the major sources of foreign re-lent loans:

- Asian Development Bank (ADB)
- Japan International Cooperative Agency (JICA)
- World Bank (WB)
- KFW (Frankfurt Germany)
- AFD (Agence Française de Développement)

The projected Capital Investment program for FY 2019-20 is Rs.39,062 Mln, FY 2020-21 is Rs.56,443 Mln and FY 2020-21 is Rs.69,046 Mln which has been planned through a combination of own sources (by ploughing back profit), local loans and foreign relent loans. The capital investment program is annexed.

Markup during the construction period is charged to Projects (as CWIP) in line with IAS 23 and after completion of the project markup on those loans is charged to operations till the full retirement/repayment of loans.

Financial Charges have been worked out taking into account completion of assets during FY 2019-20, 2020-21 and 2021-22. It is expected that during FY 2019-20 Assets amounting Rs. 45,544 Mln, FY 2020-21 Rs. 33,994 Mln and

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during FY 2020-21 Rs. 37,314 Mln will be completed and transferred to operations resultantly a noticeable surge can be witnessed in Financial Charges chargeable to operations. The capitalization detail is annexed.

Rs. Mln

Description	2018-19 Actual	2019-20 Prov.	2020-21 Projected	2021-22
Total Financial Charges	12,101	15,225	14,755	14,766
Charge to CWIP	3,982	6,090	5,312	4,873
Charge to Operation	**8,119**	**9,135**	**9,443**	**9,893**

f. Return on Equity

According to Section 17 (3) (iii) of NEPRA (Tariff Standards and Procedure) Rules, "Tariff should allow licensees a rate of return which promotes continued reasonable investment in equipment and facilities for improved and efficient service."

NTDC hereunder maintained the same methodology as decided by NEPRA for the calculation of NTDC's Return. By applying the assessed ROE on the 30% portion of the Return on Asset Base (RAB) and assessed Cost of Debt on the remaining portion of equity (capital base),

The Cost of Equity (Ke) and Cost of Debt (Kd) have been calculated as follows:

Cost of equity (ke)

It is apprised that NEPRA in the Tariff Determination of 2016-17 after the detailed working and deliberation has determined ROE @ 16% and associated it with the prevailing sector specific evacuation risks. Therefore, the same cost of equity (ke) has been considered in calculating the ROE.

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NEPRA in Tariff Determination 2017-18 and 2018-19 has reduced the ROE to 15%. However, no change in NTDC's prevailing sector specific evacuation risk environment has been witnessed since the Authority's determination of GoP Reconsideration Request in light of NTDC's Tariff Petition for FY 2015-16 & FY 2016-17, vide letter no. NEPRA/TRF-365/NTDC-2016/7235-7237 dated 4th May, 2018.

It is therefore requested that the Authority may maintain the Return on Equity at the same level as allowed in the above mentioned reconsideration request i.e. RoE 16%.

Cost of debt (kd)

In this regard, it is brought to the Authority's consideration that NTDC is an infrastructure-based company and the current loan portfolio of NTDC includes foreign loans which have been taken at 17% (prior to 17th March, 2009), 15% (following 17th March, 2009) and 12% (following 8th September, 2016) as per the relent policy of GoP along with some local loans. The relent policies are annexed.

The Cost of Debt in this petition has been maintained at the rate of 12% in line with the prevailing GoP Relent Policy. However, it is submitted that NTDC operates on a going concern basis as per IAS 1, and is engaged in the Transmission Business with long-term obligations, in view of the same the loans obtained are on long term basis and therefore any parameters determined for tariff on short-term basis would distort the consistency of tariff, hence directly conflicting with the Petitioners long term commitments resulting in severe profitability/ liquidity issues while honoring the loan commitment and dot payments. This will adversely affect the Company's credit rating which will negatively impact its future development prospects.

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The Authority is therefore requested that while determining NTDC's Cost of Debt, the Authority may consider NTDC's loan portfolio and allow a reasonable spread on the KIBOR as per the NEPRA's previous practice in NTDC Tariff Determination for FY 2015-16 & FY 2016-17.

Furthermore, the Authority is also requested to constitute a working group comprising of officers from NTDC and NEPRA in order to resolve disagreements regarding different aspects of the Tariff Parameters to avoid undue time consumed in filing and determining Review Petitions and Reconsideration Requests.

It is pertinent to mention here that the increase in the return is due to increase in Asset Base (Assets - Liabilities) as a result of sizeable investment mentioned in the upcoming sections of this petition. The return will be ploughed back to finance the projected Investment program for FY 2019-20 is Rs.39,062 Mln, FY 2020-21 is Rs.56,443 Mln and FY 2020-21 is Rs.69,046 Mln. The return will also fund the Interest during Construction (IDC) arising during the Project-Development and Execution phase.

g. True Up Mechanism

As per the True Up Mechanism the tariff may be allowed to the petitioner in a manner so that the Company may offset its financial obligations in time with respect to the regulatory gap.

Furthermore, as per NEPRA standard and guidelines 17(3) (i) "tariff should allow licensees the recovery of all costs prudently incurred to meet the demonstrated needs of their customers", hence, the prior year adjustment for FY 2017-18 and 2018-19 have been calculated in light of actual costs incurred.

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The Authority in its most recent Determination FY 2017-18 and FY 2018-19 has allowed Rs. 8,264 million on account of uncovered cost for FY 2017-18 and Rs. 6,002 million for FY 2018-19.

i. Prior Year Adjustment of FY 2017-18 to be claimed in FY 2018-19;

It is submitted that there may have been an oversight while calculating the figure of Prior Year Adjustment for FY 2017-18 in FY 2018-19, as per Financial Statements for FY 2017-18 NTDC's billed revenue amounted to Rs. 36,744 Mln, whereas the revenue requirement determined by NEPRA for 2017-18 was Rs. 43,375 million, hence NTDC's claim for uncovered cost stands at Rs. 6,631 Mln as opposed to Rs. 6,002 Mln, calculations for the same are as-under:

Uncovered Cost to be Claimed	Rs. Mlns
Total Revenue Requirement as per NEPRA for FY 2017-18	43,375
Total Revenue Requirement as per F/S for FY 2017-18	36,744
Net Uncovered Cost to be claimed	**6,631**

ii. Prior Year Adjustment of FY 2018-19 to be claimed in FY 2019-20;

The Revenue Requirement of Rs. 50,087 million determined by the Authority for FY 2018-19 is on the lower side, this is mainly on account of return on equity (ROE). It is submitted that two types of gaps have been observed while calculating the uncovered cost for FY 2018-19. Firstly, there is an arithmetic error found in the calculation of ROE, since the actual Average Capital Base in-line with NTDC Financial Statements comes at Rs. 164,194 Mln after considering the last year actual capital base Rs. 158,017 Mln, whereas the Average Capital Base taken by NEPRA is Rs. 141,497 Mln, which is an under-assessment without any backup calculation in the determination. The second gap was due to the Authority allowing a lower Cost of Equity and Cost of Debt

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rate. The sum of the impact of both gaps comes to Rs. 7,309 million. The ROE calculation by NTDC is Annexed (Annex-XI)

Therefore, Authority is requested to allow uncovered cost for FY 2018-19 as given below;

(Rs. Mln)

	Revenue Requirement	As per FS 2018-19	2018-19 (NEPRA)	True Up 2018-19	to be Trued-up
1	General Est. & Admn.	10,279	9,885	10,279	-
2	Repair & Maintenance	585	1,242	585	-
3	Insurance	265	232	265	-
4	Depreciation	9,278	9,278	9,278	-
5	Financial Charges	8,119	8,119	8,119	-
6	Return on Equity	15,456	17,322	22,766	7,309
Total		**43,983**	**46,079**	**51,292**	**7,309**
7	Less: other income	(1,994)	(1,994)	(1,994)	-
8	Uncovered Cost 2017-18	-	6,002	6,631	6,631
9	Total Revenue Requirment	**41,989**	**50,087**	**55,930**	**13,941**
MDI		23,694	23,694	23,694	23,694
Rate kW/Month		147.68	176.16	196.71	49.03

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Electricity is indispensable for socio-economic development of the country. Pakistan faces chronic power shortages across industrial, commercial and residential sectors, which severely hampers the economic growth of the country. High cost of power generation is un-affordable for the majority of consumers. This has adverse impact on competitiveness and national production so country has an urgent requirement to generate additional power at affordable price to feed into the national grid.

Ministry of Power, Government of Pakistan (GoP) has promulgated ambitious, Power policy to support the current and future energy needs of the country. The bold strategy will set Pakistan on trajectory of rapid economic growth and social development.

NTDC management in line with the preferential requirements as set by GoP has planned to accelerate the completion of existing ongoing projects and to expand its transmission network for evacuation of power from newly upcoming generation projects to eradicate power shortage in the country for good.

For achieving this goal NTDC has planned following investment program to make the system more stable, reliable and have capacity to accommodate the future load. Also, the target /criteria set by NEPRA in terms of voltage profile Reliability &losses will likely to be achieved.

(Rs.in million)

S.No.	Description	No. of Projects	FY 2019-20	FY 2020-21	FY 2021-22
1	Completed Projects	33	12,855	12,135	11,855
2	On-going Projects	20	21,784	20,229	10,015
3	New Projects	27	4,313	22,669	40,826
4	New Projects to be Started	23	110	1,410	6,350
	Total	103	39,062	56,443	69,046

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The detailed investment plan with financing composition is Annexed (Annex-VI).

b. Capitalization During FY 2019-20, 2020-21 and 2021-22

The following is the asset capitalization projection which has been adopted in calculating the assets base. The detail of projects is Annexed (Annex-VII).

(Mln Rs)

Description	2019-20	2020-21	2021-22
Capitalization	45,544	33,994	37,314

c. Proposed Financing Plan

The proposed financing plan against the investment is as under:

(Rs. In million)

Description	F.Y 2019-20	F.Y 2020-21	F.Y 2021-22
Foreign Relent Loans from GoP:			
Asian Development Bank (ADB)	8,737	13,227	15,910
World bank	2,387	8,605	16,810
Japan International Coopration Agency (JICA)	544	300	500
Frankfurt (KFW)	114	600	610
US-AID	-	-	1,000
Other Donars (to be identified)	-	110	4,240
Sub Total (A)	11,782	22,842	39,070
Direct Loans from Commercial Bank:			
Neelam Jehlum T/L Project (UBL)	3,771	1,500	500
1320MW PP at BinQasim (HBL)	4,360	2,000	200
K-2/K-3 T/Line (ABL)	2,143	3,046	1,000
HVDC T/line for convertar Station (ABL)	1,834	806	100
SSRL/SECL Power Plant at Thar (New)	35	3,000	4,110
Other Projects (New Loan)	-	-	3,390
Sub-Total (B)	12,143	10,352	9,300
Total loans (A+B)	23,925	33,194	48,370
Funds from own sources	15,138	23,249	20,676
Investment program	39,062	56,443	69,046

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7. T&T Losses

Month wise NTDC T&T losses for July 2019 to April 2020 are given in following table:

Month	Energy Received by NTDC at CDPs (kWh)	Energy Delivered by NTDC at CDPs (kWh)	T&T Loss (kWh)	% T&T Loss Expressed as % of Energy Received by NTDC at CDPs
Jul-19	13,304,754,125	12,874,848,858	429,905,267	3.231%
Aug-19	14,527,753,272	14,129,999,134	397,754,137	2.738%
Sep-19	13,708,427,197	13,341,000,018	367,427,178	2.680%
Oct-19	10,153,670,603	9,901,326,978	252,343,625	2.485%
Nov-19	7,969,409,779	7,759,859,946	209,549,833	2.629%
Dec-19	8,219,571,201	7,990,119,046	229,452,155	2.792%
Jan-20	8,930,797,332	8,626,736,754	304,060,577	3.405%
Feb-20	7,493,058,532	7,274,371,485	218,687,048	2.919%
Mar-20	7,710,296,999	7,489,023,706	221,273,293	2.870%
Apr-20	8,920,349,853	8,716,142,863	204,206,990	2.289%

The above table depicts the actual T&T losses obtained from CDP Points at NTDC Grid stations for the year 2019-20. Authority, in the decision in the matter of Motion for Leave for review (Case No. NEPRA/TRF-450/NTDC-2018) has directed NTDC to complete the installation of secured/smart metering system. Therefore, the data so obtained will become basis for calculating the actual annual transmission losses.

In this regard it is submitted that until the data from Smart meters is obtained, NTDC may be allowed the average annual losses to be maintained @ 3% at least due to following reasons:

i. There is continuous increase in load demand except for recent months due to Corona pandemic.

ii. The previous loss calculation methodology has been modified as per instructions of NEPRA.

iii. The DISCO's are drawing excessive reactive power from NTDC transformers.

iv. The power flows from South to North regions of the country resulting in longer distances.

v. Due to Covid-19, the trend of losses in future cannot be predicted.

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8. NTDC Restructuring

The design phase of HRM/OD Consultancy Project is under process. The timelines for implementation of the policies can only be shared after finalization and approval of the "transition and implementation plan" by the competent authority. The same is yet to be delivered by consultant after finalization and approval of design phase. This may take 3-4 months and same will be shared as and when it received.

9. HVDC Transmission Line

NTDC entered in its Transmission Serice Agreement (TSA) with M/s Pak Matiari-Lahore Transmission Company (Pvt) Limited relating to 660kV HVDC Transmission Project on 14th May, 2018. The Company will design, engineer, construct, insure, operate and maintain a 660kV, Bi-pole HVDC, approximately eight hundred and seventy (878) KM electric transmission line. The Commercial Operation Date (COD) of the Company is 1st March, 2021. The HVDC Transmission Project will interconnect with the Grid System of the Purchaser to be located on the Land Route from Matiari, in the province of Sindh to Lahore, in the province of Punjab, Pakistan and with a Design Transmission Capability of 4,000 MW with availability of ninety eight point fiver percent (98.5%).

In addition to above revenue requirements of NTDC, the approved tariff for HVDC Transmission Line which will be billed to NTDC as per contractual arrangement and that may be incorporated as received.(Annex HVDC Tariff for Ready reference)- (Annex-XIII)

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F/A-1

10. Determination Sought

Approval of Authority is solicited for the grant of Use of System Charge (UoSC) to be charged to X-WAPDA Distribution Companies and K-Electric requested as under:

- Determination of Proposed Tariff of Rs.249.72/kW/month for FY 2019-20, Rs.222.43/kW/month for FY 2020-21 & Rs.236.24/kW/month for FY 2021-22 may please be granted.
- To allow un-covered cost for FY 2017-18 Rs. 6,631 Mln & 2018-19 Rs.7,309 Mln.
- To allow claim for the recovery of all legitimate costs incurred prudently during FY 2017-18 & FY 2018-19 in accordance with NEPRA Standard and Guidelines 17(3)(i) to run the business.
- To maintain the ROE at-least at 16% i.e. the level which has already been determined by the Authority in its determination of GoP's Reconsideration Request in light of NTDC's Tariff Petition for FY 2015-16 & FY 2016-17, vide letter no. NEPRA/TRF-365/NTDC-2016/7235-7237 dated 4th May, 2018.
- To allow Cost of Debt in light of the GoP relent policies of the respective loans along with reasonable spread.
- To form a working group comprising of NEPRA and NTDC officers for resolution of recurring disagreements due to the parameters of NTDC Tariff.
- To approve the investment program of Rs.39,062 Mln for FY 2019-20, Rs. 51,633 Mln for FY 2020-21 and Rs. 69,046 Mln. For FY 2021-22 respectively.
- Projected data for FY 2019-20, 2020-21 & 2021-22 may be applied across the board for different components of Capital Base.
- Effective date of implementation (i.e 1st July 2020) for determined tariff may be mentioned in the determination of Use of System Charges (UoSC).
- MDI may be considered on Non-Coincidental Basis due to the facts mentioned above.
- Annual average T&T Losses level may be maintained at 3.0 % at least.
- The restructuring of NTDC is in finalization process and may be shared during tariff proceedings for consideration.
- In addition to above revenue requirements of NTDC, the approved tariff for HVDC Transmission Line which will be billed to NTDC as per contractual arrangement and that may be incorporated as received.(Annex HVDC Tariff for Ready reference)

Managing Director NTDC
414-Wapda House Lahore.

Revenue Requirement of NTDC

(Rs. Mln)

	Revenue Requirement	2018-19	2019-20	2020-21	2021-22
		Actual		Projected	
1	General Establishment & Admn.	10,279	11,149	14,031	15,599
2	Repair & Maintenance	585	716	875	1,064
3	Insurance	265	284	265	286
4	Depreciation	9,278	12,007	13,468	14,615
5	Financial Charges	8,119	9,135	9,443	9,893
6	Prior Year Adjustment	-	13,941	-	-
7	Return on Equity	15,457	25,134	28,209	32,395
Total		43,983	72,366	66,291	73,852
8	Less: other income	1,994	1,507	1,343	1,421
9	Total Revenue Requirment	41,989	70,858	64,948	72,432
MDI		23,693.74	23,645.69	24,333.19	25,549.85
Rate kW/Month		147.68	249.72	222.43	236.24

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