

**BEFORE THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
ISLAMABAD**

Petition No. _____ / 2020

**KHYBER PAKHTUNKHWA TRANSMISSION & GRID SYSTEM COMPANY
(PRIVATE) LIMITED**

APPLICANT / PETITIONER.....

**PETITION FOR TRANSMISSION LICENCE FOR PROVINCIAL GRID
COMPANY PURSUANT TO SECTION 18A OF THE NEPRA ACT, 1997**

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**PETITION FOR TRANSMISSION LICENCE FOR PROVINCIAL GRID
COMPANY PURSUANT TO SECTION 18A OF THE NEPRA ACT, 1997**

INTRODUCTION

1. Khyber Pakhtunkhwa Transmission & Grid System Company (Private) Limited (the “**Applicant / Petitioner**”) is registered with Securities & Exchange Commission of Pakistan (“**SECP**”) under Companies Act, 2017 (“**Companies Act**”) as a private limited company which is a wholly owned by Government of Khyber Pakhtunkhwa (“**GoKP**”) with the object of engagement in the business of transmission, grid systems, transmission infrastructure and catering the need of extra high voltage electric power infrastructure within the Khyber Pakhtunkhwa Province (“**KP Province**”);.
2. That the Applicant / Petitioner is duly certified under the Certificate of Incorporation and its Memorandum and Articles of Association are registered (**Annex – A**). The Applicant / Petitioner’s Certificate of Incorporation under Section 16 of the Companies Act is issued on 25th September, 2020. The objects and purpose of the Applicant / Petitioner pertaining to Provincial Grid are specified in the Memorandum of Association whereas the affairs of the Applicant / Petitioner shall be regulated in accordance with the Articles of Association (**Annex B and C**).
3. That the principal object and business of the Applicant / Petitioner is to inter alia:
 - (i). carry out business of electric transmission lines, laying of transmission lines, construction, operation and maintenance of the grid systems, system operator, scheduling of generation and despatch of the generation plants, wheeling of electricity, transmission of electric power, all within the territorial limits of the KP Province;
 - (ii). act as a Provincial Grid Company under section 18A of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (as amended from time to time) (“**NEPRA Act**”);
 - (iii). operate and provide safe and reliable transmission services on a non-discriminatory basis including to a bulk power consumers;

- (iv). provide transmission and interconnection services to the National Grid Company;
- (v). purchase interconnection services from the National Grid Company for connection of its facilities to the National Grid; and
- (vi). develop and maintain investment program in support of its service obligations and sale purchase of assets.

I. APPLICANT / PETITIONER /AS PROVINCIAL GRID COMPANY (PGC)

1. That earlier the NEPRA Act was amended through Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act 2018 on 30.04.2018 ("**Amendment Act**"). That pursuant to Section 18A of the NEPRA Act, the NEPRA Authority is empowered to grant a license authorizing a company owned by a Provincial Government to engage in the transmission of electric power within the territorial limits of such Province subject to meeting the defined eligibility criteria (**Annex – D**).

2. That Section 18A of the NEPRA Act provides as follows:

"18A, Provincial Grid Company- (1) The Authority may, subject to the provisions of this Act and after such enquiry as it may deem appropriate, grant a license authorizing a company owned by a Provincial Government to engage in the transmission of electric power within the territorial limits of such Province, subject to such conditions as it may impose:

provided that only one such license shall be granted for each Province at any one time."

3. That the KP Province comprises of mountainous terrain and vast sweeps of barren land where the renewable sources for generation of electric power are

located. The consumers are also scattered in various localities of mountains and remote villages. So far the National Grid has not been able to penetrate into the far flung area which on one hand has deprived the Province from realizing its full generation potential and on the other hand deprived the population from access to electricity. The GoKP intends to aggressively tap its potential of hydroelectric power, solar and wind power renewables as well as indigenously produced gas based power generation.

4. That the Applicant / Petitioner therefore intends to construct, operate and maintain transmission lines and grid facilities including the construction, operation and maintenance high and extra high voltage transmission lines, transmission facilities, grid systems and the grid stations allied with system operations with dispatch facilities all within the KP Province.
5. That the Applicant / Petitioner shall ensure safe and reliable operations of the transmission and grid system through adherence to the performance standards prescribed by the NEPRA Authority. The Applicant / Petitioner shall operate and maintain the transmission and grid system consistent with the requirements of the Grid Code or as the case may be the Distribution Code.
6. That initially six corridors have been identified in regions of Chitral, Dir, Mansehra, Kohistan, DI Khan and Swat (the "Transmission Corridors") for the transmission of electric power services and provision of the grid related activities.

A. Evacuation Strategy

7. The proposed strategy is envisaged for power evacuation of nearly 7,320 MW, which will be available in KP Province in the next 5-10 years from various Hydro Power Project (**HPP Projects**) located at Chitral, Dir, Swat, Kohistan and Mansehra regions.
8. The available power from various HPP Projects under Pakhtunkhwa Energy Development Organization ("**PEDO**") in the next 5-10 years is detailed below.

- (i). Chitral Region: 2946 MW
- (ii). Dir region: 508 MW
- (iii). Kohistan Region: 2054 MW
- (iv). Swat Region: 1076 MW
- (v). Mansehra Region: MW 736

9. The above available MWs demands a transmission network of 500 KV, 220 KV and 132 KV rings to connect these HPP Projects in the most optimal and integrated fashion in a bid to evacuate this power to reach the potential load centres.

10. The evacuation strategy has been divided into three (3) stages and each stage further divided into various phases, which will be planned, designed and executed accordingly and under a priority list contemplated to meet needs and requirements of various stack holders. The region wise transmission strategy of power evacuations will be streamlined as under.

(i). **DIR and Chitral Region**

11. As evident from the figures provided above, a total of 3,454 MW will be available from these two regions, which according to the transmission capacity acquired through various voltage levels will require two Double Circuit 500 KV Transmission lines including requirements of contingency plans running in parallel.

12. It is forecasted that One Double Circuit 500 KV Transmission Line will be required immediately from Chitral to Chakdara to evacuate part of the available MW along with two (2) terminal 500/220/132 KV grid station at each end

located at Chitral and Chakdara. The Transmission and Grid Projects are planned to be executed under Phase- I with a time line falling under 1-5 years.

13. The MWs available from various HPP Projects in Chitral and Dir Regions will be linked through a sub transmission system of 132 KV network and linked to the two Major stations of 500/220/132 KV at Chitral and Dir according to the most technically and financially viable international practices.
14. It will be appropriate to mention here that PEDO has already finalized consultant for an evacuation study of 3100 MW from various HPP Projects located in Chitral and Dir Regions.

(ii). **Swat Region**

15. That 220/132 KV Grid station is proposed at Swat Region with a 220 KV transmission link both to Chakdara 500/220/132 KV grid station and 220/132 KV Kohistan Grid Station. The 220 KV transmissions will be adequate enough to handle for the available 1076 MW available from Swat region.
16. Furthermore, the MWs available from various HPP Projects in Swat Regions will be linked through a sub transmission system of 132 KV to be connected to the main 220/132 KV Grid Station (GS). The Transmission and Grid Projects are planned to be executed under Phase-I with a timeline falling under 1-5 years.

(iii). **Kohistan Region**

17. That 220/132 KV Grid station is proposed at Kohistan Region with a 220 KV transmission link both to Swat 220/132 KV grid station and 220/132 KV Mansehra Grid Station. In order to handle 2054 MW of power, from various HPP Projects in Kohistan Region, the HPP Projects will be linked through a sub transmission system of 132 KV to the main 220/132 KV GS at Kohistan. The

220 KV Transmission line(s) will establish the required link between Mansehra Region and Swat Region. The Transmission and Grid Projects are planned to be executed under Stage-01, Phase-II with a time line falling under 5-10 years.

(iv). **Mansehra Region**

18. That 220/132 KV Grid station is proposed at Mansehra Region with a 220 KV transmission link to Kohistan 220/132 KV grid station .The 736 MW available from various HPP Projects at Mansehra region will be linked through a sub transmission system of 132 KV to the main Mansehra 220/132 KV GS. The 220/132 KV GS at Mansehra can be linked to National Transmission and Despatch Company Limited (NTDC) 220/132 KV GS in the vicinity. The Transmission and Grid Projects are planned to be executed under Phase-II with a timeline falling under 5-10 years.

B. Special Economic Zones

19. That it has been proposed that inter-connection and transmission facilities shall be provided to the proposed special economic zones.
20. The present networks of NTDC and Peshawar Electric Supply Company Limited (PESCO) needs sizable investment and time to upgrade the system in order to meet the new load patterns including existing and forthcoming KP Province economic zone (EZ) and Special Economic Zones (SEZ) being in pipe lines by provisional and central governments.

Sr. No.	Economic Zone / Small Industrial Estate	Power Requirement (MW)	Possible Power Feeding Arrangement	Status of Economic Zone
1.	Chitral SEZ	5-10	69MW, Lawi Hydropower Project	Land measuring 40 acres identified, SEZ planned to be completed by 2022
2.	Lower Dir SEZ	15-20	40MW, Koto Hydropower Project	Land measuring 1500 canals identified near Koto Hydropower Project, SEZ planned to be completed by 2024
3.	Dargai SEZ	20-25	81MW, Malakand Hydropower Project	Established in the year 2015 by SIDB, can be improved with cheap energy through wheeling
4.	Swat SEZ	10-15	37MW, Daral Khwar Hydropower Project	Land measuring 1200 canals identified, SEZ planned to be completed by 2022
5.	Rashakai SEZ	210	Direct Transmission line / Wheeling from various plants	Rashakai SEZ is under the CPEC umbrella, Land acquired is 1000acres, Scheduled for development by 2022

6.	Ghazi SEZ	15-20	Direct Transmission line / Wheeling from various plants	Ghazi SEZ with acquired land of 89 acres, being inaugurated shortly and planned for completion during 2020
7.	Jalozai SEZ	40-60	Direct Transmission line / Wheeling from various plants	Jalozai SEZ with acquired land of 257 acres, development work will be completed in 2021
8.	Buner Marble City	10	No nearby Hydropower Project, Wheeling Arrangement	Land measuring 100 acres identified, planned to be completed by 2023
9.	Daraband DIK, SEZ	40-60	No nearby Hydropower Project, Wheeling Arrangement	Land measuring 3000 acres identified, SEZ planned to be completed by 2023

10.	Hattar, SEZ	24	No nearby Hydropower Project, Wheeling Arrangement	424 acre Land acquired, SEZ planned to be completed by 2022
11.	Nowshera Industrial Estate Extention	10	No nearby Hydropower Project, Wheeling Arrangement	67 acre Land acquired, SEZ planned to be completed by 2021
12.	Mohmand Marble City	15	No nearby Hydropower Project, Wheeling Arrangement	Industrial Estate completed

II. COMPETENCE OF THE APPLICANT / PETITIONER FOR SETTING UP A PROVINCIAL GRID COMPANY

1. That the eligibility criteria for setting up a Provincial Grid Company under Section 18B of the NEPRA Act is as follows:

“The eligibility criteria for grant of license as a Provincial Grid Company shall be prescribed and shall include, without limitation:

(a) Minimum solvency requirements; and

(b) Minimum technical and human resource requirements.”

2. That the Provincial Grid Company is wholly owned by the GoKP. The GoKP has committed and guaranteed to meet the Applicant / Petitioner financial and operational requirements. The minimum solvency requirements are guaranteed and assured by GoKP (**Annex – E**).
3. That the professional team of Applicant / Petitioner has the competency to operate the Applicant / Petitioner as Provincial Grid Company, as the expert professionals of the Applicant / Petitioner have relevant experience and have served with various national and multi-nation state and private owned companies. The Human Resource Manual has been designed to specify *inter alia* the terms and conditions of the service of the employees etc (**Annex – F**). The curriculum vitae of the Applicant / Petitioner senior management, technical and professional staff is placed at (**Annex - G**).
4. That the Applicant / Petitioner shall own, operate and maintain a Provincial Grid System by further enhancing its technical competence by hiring necessary professionals from open market if needed through transparent and competitive process.
5. That there are no charges or encumbrances attached to the Applicant’s / Petitioner’s assets.
6. The Applicant / Petitioner has identified the technical requirements and outlaid its technical plan for those requirements below.
7. The Pre-Feasibility Report explains the factual position with much clarity (**Annex - H**).

8. Immediate upon grant of the License, the Applicant / Petitioner shall undertake System Studies and prepare the feasibility study. It shall also obtain environmental approvals specific to the projects undertaken by the Applicant / Petitioner.
9. Post Financial Close / approval for each intended transmission line shall be detailed designed, engineered, constructed, completed and commissioned at the earliest in-line with the detail design.
10. The standards and the specifications of the equipment and material shall be as per the requirements that meets the Grid Code and in accordance with the standards enumerated by the NTDC/System Operator

III. LEGAL COMPETENCE OF THE APPLICANT / PETITIONER TO SETUP PROVINCIAL GRID COMPANY

1. That in pursuance of Article 157 (2) (c) of the Constitution of Islamic Republic of Pakistan (“Constitution”), the Government of a Province may construct power houses and grid stations and lay transmission lines for use within the Province.
2. That pursuance of Article 157 (2) (c) of the Constitution, the Parliament has enacted Section 18A through the NEPRA Act for establishment and grant of license to Provincial Grid Company for transmission of electricity within a Province

IV. RESPONSIBILITIES OF THE PROVINCIAL GRID COMPANY UNDER NEPRA ACT

1. That in pursuance of Section 18B of the NEPRA Act, the Provincial Grid Company shall be responsible to operate and provide safe and reliable transmission services on a non-discriminatory basis, including to a bulk-power consumer who proposes to become directly connected to its facilities.

2. That without prejudice to the foregoing responsibilities, the Provincial Grid Company shall:

- (i) provide transmission and inter-connection services to the national grid company and to others, wherever necessary, at such rates, charges and terms and conditions as the Authority may determine;
- (ii) purchase interconnection service from the national grid company as may be necessary and to connect its facilities to the national transmission grid at the rates, charges and terms and conditions determined by the Authority;
- (iii) follow the performance standards laid down by the Authority for transmission of electric power, including safety, health and environmental protection instructions issued by the Authority or any Governmental agency;
- (iv) make available to the general public the tariff specifying the Authority's approved rates, charges and other terms and conditions for transmission services;
- (v) not levy any rate or charge or impose any condition for the transmission of electric power which has not been approved by the Authority as a tariff;
- (vi) not cause a division or any associated undertaking to engage in generation and distribution; and
- (vii) develop, maintain and publicly make available, with the prior approval of the Authority, an investment program for satisfying its service obligations and acquiring and selling its assets.

V. OPEN ACCESS

1. That the Applicant / Petitioner shall offer a non-discriminatory open access transmission inter-connection service to any party or parties who are either connected to or intend to be connected to its transmission system. The inter-connection service shall be offered in terms of non-preferential point-by-point and network service on comparable terms and conditions. The following parties shall be qualified to obtain inter-connection service from the Applicant / Petitioner:
 - (i) a licensed generator of electricity or a person who is intending to become one;
 - (ii) a person who is or intends to become a Bulk Power Consumer taking power supply directly from the Applicant / Petitioner transmission system;
 - (iii) any power plant that is constructed and owned by the GoKP and or PEDO;
 - (iv). any power plant that is constructed and owned by the WAPDA and or Federal Government;
 - (v). any power plant that is constructed and owned by any other Province;
 - (vi). an electricity trader or supplier of electric power services;
 - (vii). private power generation companies;
 - (viii). transfer of electric power services from and to the National Grid on mutually agreed terms and conditions;
2. That the Applicant / Petitioner shall administer its transmission access (offer to connect) in a fair, transparent and open manner setting out rules, policies,

procedures and charges to be developed by the Applicant / Petitioner and approved by the NEPRA Authority.

3. That the Applicant / Petitioner shall ensure a fair, non-discriminatory and effective management, operation and planning of the transmission services, in order to optimize the transportation costs attributable to transmission services within the Applicant's / Petitioner's transmission system. The Applicant / Petitioner shall also ensure that the resultant financial impact of transmission services is equitably distributed among the parties connected to or intending to be connected to its transmission system.

VI. GRID CODE

1. That the Applicant / Petitioner shall ensure that there is in force at all times a Grid Code, which meets the requirements under NEPRA Act, Rules and Regulations. The Applicant / Petitioner shall implement and comply with the provisions of such Grid Code.

A. The Grid Code shall include but not be limited to:

- (i) Connection Code
- (ii) Operating Code
- (iii) Planning Code
- (iv) Scheduling and Dispatch Code
- (v) Metering Code
- (vi) Protection Code

(vii) Commercial Code

2. That the Grid Code shall be drawn-up after consultation with the licensees and other interested parties to the extent possible with a view:-
 - (i) to achieve the performance standards (transmission) prescribed under the NEPRA Act;
 - (ii) to facilitate the engineering and design, development, maintenance and operation of an efficient, co-ordinated, safe, reliable and economical system for transmission of electric power;

VII. REQUIREMENTS

1. The KP Province is gifted by nature with water and other resources. There is lot of generation potential in the area. However, there is non-availability and insufficient transmission capacity of the national grid in many parts of the Province that is severely hampering transmission of electric power besides development and exploitation of the natural resources available within the Province who intends to harness power potentials for its industries and the people;
2. The national grid company in submitting the Indicative Generation Capacity Expansion Plan (**IGCEP**) has considered only 171 MW from the KP Province until 2030. The Pre-Feasibility Report reflects a much larger capacity in the Province; out of which few are under construction while others are expected shortly. There is dearth of transmission capacity for evacuation of power (**Annex I**).
3. On the other hand, the KP Province is engaged in various projects related to power sector while there are various power producers as well as consumers in its geographical territory those require supply and provision of electric power. To add, the GoKP has already extended its commitments for growth of the industry,

and resultant benefit to its people, through the Industrial Policy 2016. To serve these consumers for which 132, 220, 500 kV lines and a High Voltage Direct Current (**HVDC**) Transmission Line is proposed.

4. GoKP through PEDO is already engaged in the generation of electric power at various districts of the Province.
5. The Transmission constraints has seriously affected GoKP plans and time lines to evacuate power its cheap and abundant HPP Projects potential and transmit it to the nearby and remote load centers in a flexible manner. Further, non-availability of a proper and adequate transmission network has hit planned schedules of existing and future HPP Projects which are under execution/to be executed by PEDO under various contractual modes such as Private Sector, G2G, PPP and through competitive biddings. Further, non-availability of a comprehensive transmission network to evacuate its HPP Projects power has affected KP Province HPP Projects in a multilateral directions as follows:
 - (i) How to evacuate power from current and future HPP Projects and in the absence of a readily available network to link HPP Projects source to the load centers as and when required. It has resulted heavy financial loss to the national and provincial exchequer;
 - (ii) The Commercial Operation Date (**COD**) timeline of completed HPP Projects consequently and consistently delayed;
 - (iii) Contractual & financial damages to ancillary projects;
 - (iv) Difficult to plan, showcase and market future HPP Projects and to seek and attract potential investors within the country and from abroad; and
 - (v) Projects of strategic and urgent natures which are needed to be run and completed on **Fast Track** are greatly affected due to power evacuation problems. The COD of various HPPS cannot be figured out in the absence of a timely available HV & Extra High Voltage (**EHV**) transmission network.

6. The Applicant / Petitioner, in capacity of the Provincial Grid Company, shall serve as the cornerstone of the GoKP's existing and upcoming Energy Policies those aim to utilize at optimum level, the massive potential of water and other renewable resources to produce clean & cheap electricity.

VIII. LIMITATIONS AND CONSTRAINTS OF NTDC NETWORK IN KP PROVINCE

1. The NTDC has five (5) Major network feeding points in KP province
 - 1.1 **Sheik Muhammadi 500/220/132 KV GS:** Looking at the NTDC 500KV and 220 KV network Single line diagram, it can be noted (and since early 1990s when the Sheikh Muhammadi 500/220/132 grid station was commissioned), till today, Sheikh Muhammadi GS is fed from Tarbela Power House by only one (1) 500 KV Single Circuit line with power capability of **around 1000 MW**. This MW transfer is also highly compromised with difference in seasonal generation capacities of Tarbela power house.
 - 1.2. In addition to the above, Sheikh Mohammedi 500K/220/132 KV GS has three Single Circuit (SC) 220 KV Transmission lines, two of which are fed from Chashama Nuclear power Plants via Daud Khel GS and one is fed from Ghazi Brotha Power House. The three of the 220 KV Lines has an accumulative MW transfer capacity of **nearly 2000-3000 MW** with due consideration to the an effective contingency plans to keep the system stable.
 - 1..3. **220/132 KV Nowshera GS:** The Nowshera GS is fed from Ghazi Brotha through Single Circuit (SC) 220 KV Transmission lines with a 1000 MW transfer capacity.
 - 1.4. **220/132 KV Mardan GS:** The Mardan GS is fed from Tarbela Power through one 220 KV line double circuit (DC) Transmission line with 1200 MW transfer

capacity. Please note in June 2020, this line has contributed a transmission of 609 MW only and running around 50% of its utilization factor.

- 1.5. **220/132 KV Mansehra GS:** The Maneshra GS is fed through one single circuit from Allai Khwar Power House (108 MW) and another Single Circuit 220 KV T/line from 220KV/New Islamabad.

From the above data (items VIII: 1-5) it can be seen that though NTDC has 220 KV and 500 KV transmission network, which indicates a theoretical transmission capacity of around 5000-6000 MW in KP Province, Nevertheless , NTDC is unable to utilize it up to 100% capacity for a variety of serious limitations and constraints.

Further, it is to be noted that the above transmission network by NTDC was built and established in decades, with serious apprehension at the moment as how could NTDC will be able to put in place a transmission Network in North to evacuate 7,320 MW of power from KP in the next 10-15 years.

At present and according to the recent load management data collected from utility PESCO for the Y2019-20, under the present NTDC network configuration, NTDC contributed a maximum of **2182 MW** against **PESCO peak demand of 3137 MW**. A maximum **shortfall of 1019 MW** prevailed over the period.

2. The difference between supply and demand due to generation and transmission constraints between NTDC & PESCO inflicts uncontrolled service voltage fluctuation and out of the utility guaranteed ranges. This result in huge asset damages and financial loses to the domestic and industrial consumer beside operational damages to the network itself. The problem is resolved with forced outages which give further rise to consumer resentments.
- 3 As the energy sector at the national level is under financial crises for reasons known to all and is presently touching the lowest ebb, including but not limited to circular debt, unmet revenue requirements, high transmission losses, dilapidated infrastructure, chances are remote that the above constraints and limitations could

be settled out by NTDC to revamp, upgrade and extend its transmission capacity of its existing system and particularly in northern part of KP Province

- 4. Under such scenario, there seems to be little or no chances that GoKP could be able to get adequate share of NTDC Transmission corridors in near future to evacuate its mammoth HPP Projects potential. This is also established by the IGCEP 2020-2047 report prepared by the NTDC which either delays or ignores the provincial power projects.
- 5.. The NTDC transmission limitations will deprive the GoKP and Federal Government and all other stakeholders to yield huge benefit from the cheap Hydro potential of the KP Province. This Hydro power is badly required to limit and control prevailing energy crisis. Besides, its strategic objectives is to enhance hydro generation to the desired level and to reduce and keep thermal generation's component at minimum.

IX. PLAN TO MEET THE TECHNICAL REQUIREMENTS

1. Available HPP Projects at various Geographical Location

Sr.	Region	By Year 2030 (MW)
1.	Chitral	2946
2.	Dir	508
3.	Kohistan	2054

4.	Mansehra	736
5.	Swat	1076
6.	DI Khan (Solar)	249
TOTAL		7,539

2. Power Evacuation & Transmission Strategy

The Government of KP's power evacuation and transmission strategy is as follows:

- (i) **Stage 1:** To evacuate power from HPP Projects available in Short term over the next 1-7 years;
- (ii) **Stage 2;** To evacuate power from HPP Projects available in medium term over the next 7-15 years;
- (iii) **Stage 3:** To evacuate power from HPP Projects available in long term over the next 15-30 years and beyond.

3. Major Milestones of the Applicant's / Petitioner's Network

Phase-I

- (i) It will provide transmission of bulk power through 500 KV and 220 KV transmission lines network with the major transmitting and receiving

stations located at Chitral (500/220/132 KV GS), Chakdara (500/220/132 KV GS), Swat 220/132 KV GS, Kohistan 220/132 KV GS and Mansehra 220/132 KV GS.

- (ii) These Major Stations will be inter-connected in such a way as to establish 500 KV and 220 KV network rings. In parallel, 132 KV network ring will be added looping various HPPs.
- (iii) The 500 KV and 220 KV network will be extended to NTDC and PESCO networks at appropriate nodes for the export/import of Power.

Phase-II

- (i) Network stage Phase -II is intended to link one 500 KV Double Circuit Transmission Lines from Chakdara 500/220/132 HV GS to Sheikh Mahammad 500/220/132 KV GSK. It will play a major role to reinforce the central and southern power network of KP Province.
- (ii) A regional control center will be part of the Applicant / Petitioner transmission and grid network to control, monitor and dispatch power according to the best international transmission practices and through fully equipped SCADA system.
- (iii) The Applicant / Petitioner medium term plans to connect and strengthen KP Province southern network with a step further to provide surplus power to Baluchistan province from a gate way provided at DI Khan.

Phase-III

- (i) The Applicant / Petitioner long term plans is to export surplus MW to cross border to Afghanistan and Central Asian Republics.

Diagram depicting Phase Milestones is attached herewith as (Annex-J)

4. **Preliminary Proposed HV and EHV Network**

The preliminary proposed HV and EHV network comprising of 500 KV, 220 KV and 132 KV supply rings. It is aimed to cater transmission link between various regions and load centers. The proposed network will comprise the following Grids and Transmission lines. (Annex – K)

S.NO	KV LEVEL	OVERHEAD TRANSMISSION LINE (OHTL)	GRID SYSTEM (GS)
1.	500 KV	Chitral - Lower Dir	Chitral 500/220/132 KV
2.	500 KV	Chakdara – Peshawar	Chakdara 500/220/132 KV
3.	220 KV	Chakdara - Swat	Swat 220/132 KV
4.	220 KV	Swat- Kohistan	Kohistan 220/132 KV
5.	220 KV	Kohistan – Mansehra	Mansehra 220/132 KV
6.	220 KV	Manshra –Peshawar	Peshawar 220/132 KV

5. **Technical details of Complete Network including Transmission and Grid Station.**

The technical details of complete HV and EHV network including transmission lines and grid stations are subject to approval and finalization of the complete integrated network diagram.

The network finalizations further demands a host of technical studies with technical evaluations such as system planning, system structure, configuration of HV & EHV rings, load flow studies and establish tie lines for coordination with other adjoining systems such as NTDC & PESCO which will be done once the License is issued and the Applicant / Petitioner is authorized to carry out such activities.

6. **Evacuation Plans until Complete KPTGC Network Is Configured and fully established.**

Till the complete network is Configured and established to provide flexible HV & EHV rings of adequate and flexible KV levels to link HPP Projects to various load centers, the power of the completed HPP Projects shall be dispatched through short radial Transmission lines and through **wheeling Arrangements to PESCO & NTDC.**

7. **Financial Requirements to Execute and Complete HV and EHV Network over Various Stages**

The GoKP has identified a three phase plan for the purposes of investment in the KP Province. The investments are indicated to be made in formation and maintenance of transmission line and for construction and maintenance of Grid Stations. During the first phase a total of USD 157 Million shall be invested in the transmission network and USD 270 Million in the grid network. While during phase 2 a sum of USD 117 Million shall be invested and transmission network and USD 180 Million shall be

invested in grid network. Lastly, in phase 3 a total of USD 43 Million shall be invested and transmission and USD 80 Million shall be invested in grid network (Annex – L).

8. First Phase of Evacuation

- (i). As part of the first phase of the first stage, evacuation will be carried through a network link established between Chitral, Dir, Swat, Kohistan and Mansehra regions.
- (ii). To combat and counter transmission deficiencies, the GoKP decided to establish a company namely Pakhtunkhwa Transmission and Grid Company to cater its needs and requirements for the evacuation of power of hundreds of thousands of MW from its HPP Projects generation points located at various geographic locations which will be available to be connected to the system over a planned period of time.

IX. COST/BENEFIT RATIO/REVENUE

1. No company whether Public or Private can be termed as stable and sustainable and well placed to maintain a growth projectile until its corporate financial system is based on a sound financial structure. Once operationalized, Applicant's / Petitioner's financial assessment indicates stark and promising returns on investments.
2. The unique advantage of the Applicant / Petitioner will be its ability to link KP Province huge HPP Projects potentials falling under various contracts and agreements to remote load centers at an affordable and attractive tariff rates to the high likes of various categories of domestic, agricultural and industrial consumer.

3. It is forecasted that Applicant / Petitioner will be able to handle transmission of nearly 4628 MW from various HPP Projects to various load centers in the next 7-10 years. The 4,628 MW will generate a revenue of Rs. 127 Billion for various HPP based on a plant factor (PF) of 45% and a selling price of Rs.7.0/KWh. In addition to this, the transmission of this MW will generate a revenue of Rs. 56 Billion for KPTGC based on a Load factor (LF) of 70% and at a unit rate of Rs.2.0/KWh. This revenue is adequate to run Applicant / Petitioner operational costs, cater financial equity and debt obligations plus a sound return to various stock holders.

X. PUBLIC PRIVATE PARTNERSHIPS

1. That the Applicant / Petitioner may enter into Public Private Partnership with other international reputed transmission companies for construction, operation, and maintenance of the transmission and grid systems under the Public Private Partnership Act of the GoKP and Transmission Policy 2015 of the Federal Government.
2. That the Applicant / Petitioner may enter into contracting with other international reputed transmission companies for construction, operation, and maintenance of the transmission and grid systems under the Public Private Partnership Act of the GoKP and Transmission Policy 2015 of the Federal Government.

XI. TARGETS

1. Subject to the grant of the requisite License, the Applicant / Petitioner intends to construct the provincial transmission system that would complement national grid capacity and further provides carrier facility and wheeling service to all potential investors interested in the development of renewable energy as well as hydel.
2. The proposed transmission and grid system may also be synchronized with the facilities of national or other transmission or grid systems within Pakistan and

1. The Applicant / Petitioner has opted to obtain the Provincial Grid License to become a Provincial Grid Company for carrying the roles and responsibilities as provided for in the NEPRA Act.
2. That the Applicant / Petitioner shall be authorized to engage in the business of transmission of electric power including engineering, procurement, construction, operation and maintenance of transmission lines and grid stations at all voltage levels within the territorial limits of KP Province, subject to such conditions as the NEPRA Authority may impose

XIV. TERM AND RENEWAL OF LICENCE

1. It is proposed that the License shall come into force from the date of issue and shall remain in force for a period of 30 years.
2. Furthermore, subject to the provisions of the NEPRA (Application & Modification) Procedure Regulations, 1999, the NEPRA Authority may renew this license for such further term as deemed appropriate.

XV. EXCLUSIVITY

1. The Licensee shall during the term of this License have the exclusive right in respect of the Service Territory specified in **Schedule I** of this Petition to:
 - (i). Design, engineer, construct, operate and maintain grid system;
 - (ii). carry out transmission of electric power;
 - (iii). provide transmission and interconnection services;
 - (iv). allow open access to and through its transmission network;

(v). permit wheeling of electricity; and

(vi) engage in other activities incidental to the transmission business.

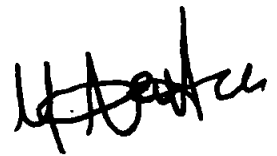
XVI. REPRESENTATIONS AND WARRANTIES

1. That this is the first application being submitted to NEPRA Authority.
2. The Applicant / Petitioner is solvent and owned by the GoKP hence solely entitled to make this Application since the law prescribes that there shall be only one licensee to be licensed as the Provincial Grid Company.
3. There is a demand, as detailed herein this Application, hence the investment is prudent and justified.
4. The Applicant / Petitioner warrants compliance of standards set out by NEPRA as well as the Prudent Utility Practices and Prudent Electrical Practices.
5. The Applicant / Petitioner shall also comply with all other laws of Pakistan and the KP Province including environment and taxation.
6. The Applicant / Petitioner shall make all efforts to render safe and reliable transmission services.
7. The Applicant / Petitioner shall offer its services in areas where the national grid is not serving or lacks capacity to serve within the KP Province and even otherwise the complement, augment and reinforce transmission facilities of the National Grid.
8. The Applicant / Petitioner / Petitioner shall make all efforts to render suitable services in accordance with the applicable law including the NEPRA Performance Standards (Transmission) Rules 2005.

PRAYER

1. In view of above facts, reasons and grounds, it is most humbly prayed to the NEPRA Authority as follows:

- A. That the NEPRA Authority may admit the Applicant / Petitioner request for the grant of License for Provincial Grid Company for the KP Province to Khyber Pakhtunkhwa Transmission & Grid Company Limited in pursuance of the Constitution of Pakistan and NEPRA Act;
- B. That the NEPRA Authority may grant License for Provincial Grid Company for the KP Province to Khyber Pakhtunkhwa Transmission & Grid Company Limited in order to carry its roles and responsibilities as Provincial Grid Company in pursuance of the Constitution of Pakistan and NEPRA Act; and
- C. Any further and better relief that the NEPRA Authority may deem appropriate in the circumstances may kindly be granted to the Applicant / Petitioner.




Applicant / Petitioner

Through

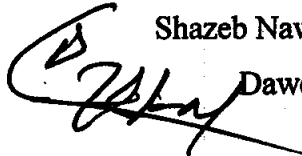


Barrister Asghar Khan (Advocate)


Faisal Atta Bhatti (Advocate)



Shazeb Nawaz Khan (Advocate)


Dawood Iqbal (Advocate)



B039453

SECURITIES AND EXCHANGE COMMISSION OF PAKISTAN
COMPANY REGISTRATION OFFICE
(PESHAWAR)

CERTIFICATE OF CONVERSION OF A SINGLE MEMBER
COMPANY INTO PRIVATE COMPANY

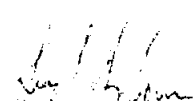
[Under Section 50 of the Companies Act, 2017 (XIX OF 2017)]

Corporate Universal Identification No. 0149274


I hereby certify that pursuant to the provisions of section 50 read with sub-section (5) of section 47 of the Companies Act, 2017 (XIX OF 2017), **KHYBER PAKHTUNKHWA TRANSMISSION & GRID SYSTEM COMPANY (SMC-PRIVATE) LIMITED** has complied with the requirements precedent and incidental to the conversion of a single member company into private company. The said company stands converted into a private company with effect from 04-09-2020.

Given under my hand at Peshawar, this 25th day of September Two Thousand and Twenty.




(Saqib Aslam)
Deputy Registrar of Companies
Peshawar

Certified to be True Copy


(Muzam Shah)
Assistant Registrar of Companies
Securities & Exchange Commission of Pakistan
No. 129/2020 Peshawar
25/09/2020

30/9/22

A069873



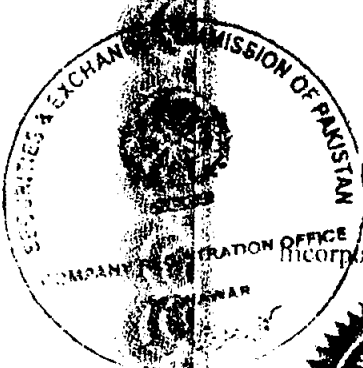
SECURITIES AND EXCHANGE COMMISSION OF PAKISTAN
COMPANY REGISTRATION OFFICE
(PESHAWAR)

CERTIFICATE OF INCORPORATION
[Under section 16 of the Companies Act, 2017 (XIX of 2017)]

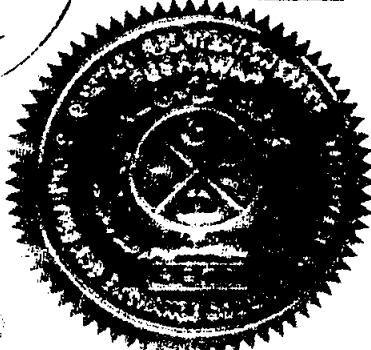
Corporate Unique Identification No. 0149274

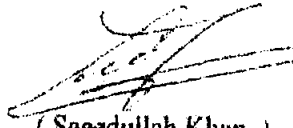
I hereby certify that KHYBER PAKHTUNKHWA
TRANSMISSION & GRID SYSTEM COMPANY (SMC-PRIVATE)
LIMITED is this day incorporated under the Companies Act, 2017 (XIX of
2017) and that the company is limited by shares.

Given under my hand at Peshawar this Thirteenth, day of
March, Two Thousand and Twenty.




Incorporation Fee Rs. 410500/- only




(Saeedullah Khan)
Additional Registrar of Companies
Peshawar

No. 4254 / 2-9316/Cos. Dated 13-Mar-2020

Certified to be True Copy

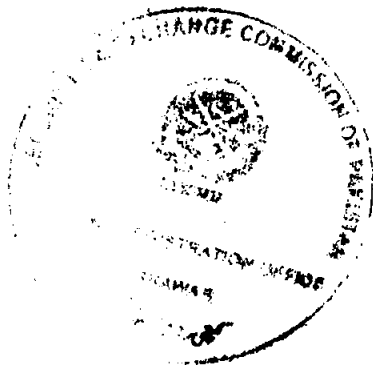

(Muzamil Shah)
Assistant Registrar of Companies
Securities & Exchange Commission of Pakistan

30/9/2020

THE COMPANIES ACT, 2017 (XIX of 2017)

(COMPANY LIMITED BY SHARES)

MEMORANDUM OF ASSOCIATION



OF

**KHYBER PAKHTUNKHWA
TRANSMISSION & GRID SYSTEM
COMPANY (PRIVATE) LIMITED**

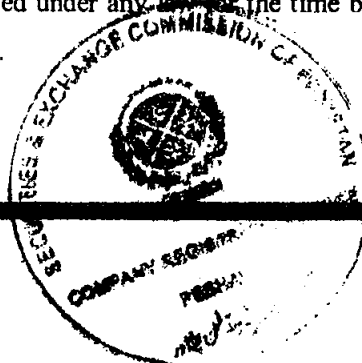
THE COMPANIES ACT, 2017 (XIX of 2017)
(COMPANY LIMITED BY SHARES)

MEMORANDUM OF ASSOCIATION

OF

KHYBER PAKHTUNKHWA TRANSMISSION & GRID SYSTEM COMPANY
(PRIVATE) LIMITED

- 1) The name of the Company is Khyber Pakhtunkhwa Transmission & Grid System Company (Private) Limited.
- 2) The Registered Office of the Company will be situated in the province of Khyber Pakhtunkhwa.
- 3)
 - i. The principal line of business of the company shall be to carry on all or any of the businesses of electric transmission lines, to schedule and dispatch generation, and provincial grid company as provided in the Regulation of Generation of Transmission and Distribution Act, 1997.
 - ii. Except for the businesses mentioned in sub-clause (iii) hereunder, the company may engage in all the lawful businesses and shall be authorized to take all necessary steps and actions in connection therewith and ancillary thereto.
 - iii. Notwithstanding anything contained in the foregoing sub-clauses of this clause nothing contained herein shall be construed as empowering the Company to undertake or indulge, directly or indirectly in the business of a Banking Company, Non-banking Finance Company (Mutual Fund, Leasing, Investment Company, Investment Advisor, Real Estate Investment Trust management company, Housing Finance Company, Venture Capital Company, Discounting Services, Microfinance or Microcredit business), Insurance Business, *Modaraba* management company, Stock Brokerage business, forex, real estate business, business of providing the services of security guards or any other business restricted under any law for the time being in force or as may be specified by the Commission.



- iv. It is hereby undertaken that the company shall not:
- a. engage in any of the business mentioned in sub-clause (iii) above or any unlawful operation;
 - b. launch multi-level marketing (MLM), Pyramid and Ponzi Schemes, or other related activities/businesses or any lottery business;
 - c. engage in any of the permissible business unless the requisite approval, permission, consent or license is obtained from competent authority as may be required under any law for the time being in force.
- 4) The liability of the member is limited.
- 5) The Authorized Share Capital of the Company is Rs.100,000,000/- (Rupees One Hundred Million only) divided into 1,000,000 (One Million) ordinary shares of Rs.100 (Rupees One Hundred Only) each with powers to the company from time to time to increase and reduce its capital subject to any permission required under the law.



I whose name and adress is subscribed below, am desirous of forming a company in pursuance of these Memorandum of Association and agree to take the number of shares in the capital of the company as set opposite my name:

Sr	Name and surname in full	CNIC/PP /INC	Father's/ Husband's Name in full	Nationality with any former nationality	Occupation	Residential Address in full	No. of shares taken by each subscriber
01	GOVERNMENT OF KHYBER PAKHTUNKHWA Through: SECRETARY, ENERGY & POWER (MR. MUHAMMAD ZUABAIR)	— 17301-2074212-1	— S/O BAZ MUHAM MAD	PAKISTANI PAKISTANI	GOVERNMENT GOVERNMENT	ENERGY AND POWER DEPARTMENT, 1 st FLOOR BLOCK – A ABDUL WALI KHAN MULTIPLEX CIVIL SECRETARIAT PESHAWAR HOUSE # 219 STREET # 5 SECTOR C-4 HAYATABAD PHASE V PESHAWAR	50000 (FIFTY THOUSAND ONLY)

Total number of shares taken

50000
(FIFTY THOUSAND)

Dated the 28th day of February 2020

Certified to be True Copy



(Muzam Shah)
Assistant Registrar of Companies
Securities & Exchange Commission of Pakistan
CRO, Peshawar

30/9/2020

THE COMPANIES ACT, 2017 (XIX of 2017)

(COMPANY LIMITED BY SHARES)

ARTICLES OF ASSOCIATION



**KHYBER PAKHTUNKHWA
TRANSMISSION & GRID SYSTEM
COMPANY (PRIVATE) LIMITED**

THE COMPANIES ACT, 2017 (XIX of 2017)

(Company Limited by Shares)

ARTICLES OF ASSOCIATION

OF

**KHYBER PAKHTUNKHWA TRANSMISSION & GRID SYSTEM COMPANY (PRIVATE)
LIMITED**

PRELIMINARY

1. (1) In these regulations-

- (a) "section" means section of the Act;
- (b) "the Act" means the Companies Act, 2017;
- (c) "company" means Khyber Pakhtunkhwa Transmission & Grid System Company (Private) Limited;
- (d) "member director" means a director who is the member of the company;
- (e) "non-member" means an individual who is not a member, but has been nominated under this Act; and
- (f) "the seal" means the common seal or official seal of the company as the case may be;

(2) Unless the context otherwise requires, words or expressions contained in these regulations shall have the same meaning as in this Act; and words importing the singular shall include the plural, and *vice versa*, and words importing the masculine gender shall include feminine, and words importing persons shall include bodies corporate.

BUSINESS

2. The directors shall have regard to the restrictions on the commencement of business imposed by section 19 if, and so far as, those restrictions are binding upon the company.

SHARES

3. In case of shares in the physical form, every person whose name is entered as a member in the register of members shall, without payment, be entitled to receive, within thirty days after allotment or within fifteen days of the application for registration of transfer, a certificate under the seal specifying the share or shares held by him and the amount paid up thereon.

Provided that if the shares are in book entry form or in case of conversion of physical

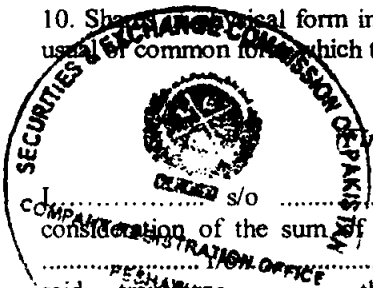
shares and other transferable securities into book-entry form, the company shall, within ten days after an application is made for the registration of the transfer of any shares or other securities to a central depository, register such transfer in the name of the central depository.

- 4. The company shall not be bound to issue more than one certificate in respect of a share or shares in the physical form, held jointly by several persons and delivery of a certificate for a share to one of several joint holders shall be sufficient delivery to all.
- 5. If a share certificate in physical form is defaced, lost or destroyed, it may be renewed on payment of such fee, if any, not exceeding one hundred rupees, and on such terms, if any, as to evidence and indemnity and payment of expenses incurred by the company in investigating title as the directors think fit.
- 6. Except to the extent and in the manner allowed by section 86, no part of the funds of the company shall be employed in the purchase of, or in loans upon the security of, the company's shares.
- 7. The company may alter its share capital in accordance with section 85 of the Act.
- 8. Share certificate shall be issued under the seal of the company and shall be signed by the member director or non-member director and the case may be.

TRANSFER AND TRANSMISSION OF SHARES

9. The instrument of transfer of any share in physical form in the company shall be executed both by the transferor and transferee, and the transferor shall be deemed to remain holder of the share until the name of the transferee is entered in the register of members in respect thereof.

10. Shares in physical form in the company shall be transferred in the following form, or in any usual or common form which the members and non-member directors shall approve: -



Form for Transfer of Shares
(First Schedule to the Companies Act, 2017)

I, s/o r/o..... (hereinafter called "the transferor") in consideration of the sum of rupees paid to me by..... s/o (hereinafter called "the transferee"), do hereby transfer to the said transferee..... the share (or shares) with distinctive numbers from inclusive, in the..... Limited, to hold unto the said transferee, his executors, administrators and assigns, subject to the several conditions on which I held the same at the time of the execution hereof, and I, the said transferee, do hereby agree to take the said share (or shares) subject to the conditions aforesaid.
As witness our hands this..... day of....., 20.....

Signature
Transferor
Full Name, Father's / Husband's Name
CNIC Number (in case of foreigner,
Passport Number)
Nationality
Occupation and usual Residential Address

Signature
Transferee
Full Name, Father's / Husband's Name
CNIC Number (in case of foreigner,
Passport Number)
Nationality
Occupation and usual Residential Address
Cell number
Landline number, if any
Email address

Witness 1:

Signature.....date
Name, CNIC Number and Full Address

Witness 2:

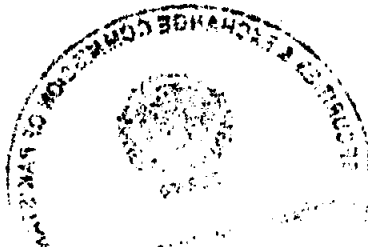
Signature.....date
Name, CNIC Number and Full Address

Bank Account Details of Transferee for Payment of Cash Dividend

(Mandatory in case of a listed company or optional for any other company)

It is requested that all my cash dividend amounts declared by the company, may be credited into the following bank account:

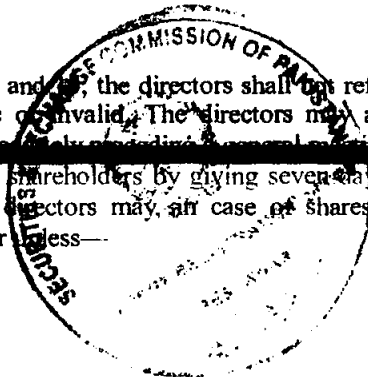
Title of Bank Account
Bank Account Number
Bank's Name
Branch Name and Address



It is stated that the above mentioned information is correct and that I will intimate the changes in the above-mentioned information to the company and the concerned Share Registrar as soon as these occur.

.....
Signature of the Transferee(s)

11. (1) Subject to the restrictions contained in regulation 12 and 13, the directors shall not refuse to transfer any share unless the transfer deed is defective or invalid. The directors may also suspend the registration of transfers during the ten days immediately preceding a general meeting or prior to the determination of entitlement or rights of the shareholders by giving seven days' previous notice in the manner provided in the Act. The directors may, in case of shares in physical form, decline to recognise any instrument of transfer unless—



- a) a fee not exceeding fifty rupees as may be determined by the directors is paid to the company in respect thereof; and
- b) the duly stamped instrument of transfer is accompanied by the certificate of the shares to which it relates, and such other evidence as the directors may reasonably require to show the right of the transferor to make the transfer.

(2) If the directors refuse to register a transfer of shares, they shall within fifteen days after the date on which the transfer deed was lodged with the company send to the transferee and the transferor notice of the refusal indicating the defect or invalidity to the transferee, who shall, after removal of such defect or invalidity be entitled to re-lodge the transfer deed with the company.

Provided that the company shall, where the transferee is a central depository the refusal shall be conveyed within five days from the date on which the instrument of transfer was lodged with it notify the defect or invalidity to the transferee who shall, after the removal of such defect or invalidity, be entitled to re-lodge the transfer deed with the company.

TRANSMISSION OF SHARES

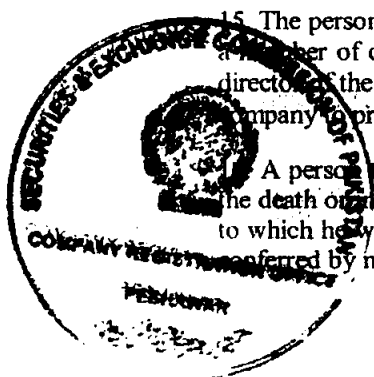
12. The executors, administrators, heirs, or nominees, as the case may be, of a deceased sole holder of a share shall be the only persons recognised by the company to deal with the share in accordance with the law. In the case of a share registered in the names of two or more holders, the survivors or survivor, or the executors or administrators of the deceased survivor, shall be the only persons recognised by the company to deal with the share in accordance with the law.

13. The shares or other securities of a deceased member shall be transferred on application duly supported by succession certificate or by lawful award, as the case may be, in favour of the successors to the extent of their interests and their names shall be entered to the register of members.

14. A person may on acquiring interest in a company as member, represented by shares, at any time after acquisition of such interest deposit with the company a nomination conferring on a person, being the relatives of the member, namely, a spouse, father, mother, brother, sister and son or daughter, the right to protect the interest of the legal heirs in the shares of the deceased in the event of his death, as a trustee and to facilitate the transfer of shares to the legal heirs of the deceased subject to succession to be determined under the Islamic law of inheritance and in case of non-Muslim members, as per their respective law.

15. The person nominated under regulation 14 shall, after the death of the member, be deemed as a member of company till the shares are transferred to the legal heirs and if the deceased was a director of the company, not being a listed company, the nominee shall also act as director of the company to protect the interest of the legal heirs.

A person to be deemed as a member under regulation 13, 14 and 15 to a share by reason of the death or insolvency of the holder shall be entitled to the same dividends and other advantages to which he would be entitled if he were the registered holder of the share and exercise any right conferred by membership in relation to meetings of the company.



ALTERATION OF CAPITAL

17. The company may, by special resolution-

- (a) increase its authorised capital by such amount as it thinks expedient;
- (b) consolidate and divide the whole or any part of its share capital into shares of larger amount than its existing shares;
- (c) sub-divide its shares, or any of them, into shares of smaller amount than is fixed by the memorandum;
- (d) cancel shares which, at the date of the passing of the resolution in that behalf, have not been taken or agreed to be taken by any person, and diminish the amount of its share capital by the amount of the share so cancelled.

18. Subject to the provisions of the Act, all new shares shall at the first instance be offered to such persons as at the date of the offer are entitled to such issue in proportion, as nearly as the circumstances admit, to the amount of the existing shares to which they are entitled. The offer shall be made by letter of offer specifying the number of shares offered, and limiting a time within which the offer, if not accepted, will deem to be declined, and after the expiration of that time, or on the receipt of an intimation from the person to whom the offer is made that he declines to accept the shares offered, the directors may dispose of the same in such manner as they think most beneficial to the company. The directors may likewise so dispose of any new shares which (by reason of the ratio which the new shares bear to shares held by persons entitled to an offer of new shares) cannot, in the opinion of the directors, be conveniently offered under this regulation.

19. The new shares shall be subject to the same provisions with reference to transfer, transmission and otherwise as the shares in the original share capital.

20. The company may, by special resolution-

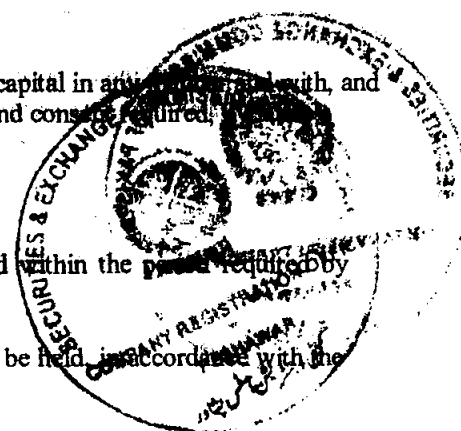
- (a) consolidate and divide its share capital into shares of larger amount than its existing shares;
- (b) sub-divide its existing shares or any of them into shares of smaller amount than is fixed by the memorandum of association, subject, nevertheless, to the provisions of section 85;
- (c) cancel any shares which, at the date of the passing of the resolution, have not been taken or agreed to be taken by any person.

21. The company may, by special resolution, reduce its share capital in any manner, with, and subject to confirmation by the Court and any incident authorised and consistent with, and

GENERAL MEETINGS

22. The statutory general meeting of the company shall be held within the period required by section 131.

23. A general meeting, to be called annual general meeting, shall be held in accordance with the



provisions of section 132, within sixteen months from the date of incorporation of the company and thereafter once at least in every year within a period of one hundred and twenty days following the close of its financial year.

24. All general meetings of a company other than the statutory meeting or an annual general meeting mentioned in sections 131 and 132 respectively shall be called extraordinary general meetings.

25. The directors may, whenever they think fit, call an extraordinary general meeting, and extraordinary general meetings shall also be called on such requisition, or in default, may be called by such requisitionists, as provided by section 133. If at any time there are not within Pakistan sufficient directors capable of acting to form a quorum, any director of the company may call an extraordinary general meeting in the same manner as nearly as possible as that in which meetings may be called by the directors.

26. The company may provide video-link facility to its members for attending general meeting at places other than the town in which general meeting is taking place after considering the geographical dispersal of its members:

Provided that in case of listed companies if the members holding ten percent of the total paid up capital or such other percentage of the paid up capital as may be specified, are resident in any other city, the company shall provide the facility of video-link to such members for attending annual general meeting of the company, if so required by such members in writing to the company at least seven days before the date of the meeting.

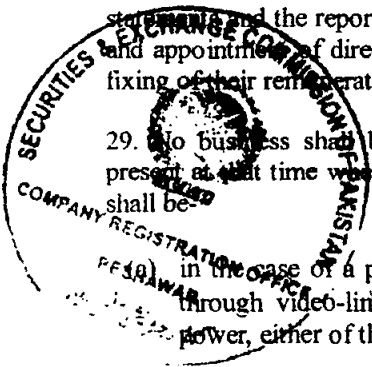
NOTICE AND PROCEEDINGS OF GENERAL MEETINGS

27. Twenty-one days' notice at the least (exclusive of the day on which the notice is served or deemed to be served, but inclusive of the day for which notice is given) specifying the place, the day and the hour of meeting and, in case of special business, the general nature of that business, shall be given in manner provided by the Act for the general meeting, to such persons as are, under the Act or the regulations of the company, entitled to receive such notice from the company; but the accidental omission to give notice to, or the non-receipt of notice by, any member shall not invalidate the proceedings at any general meeting.

28. All the business transacted at a general meeting shall be deemed special other than the business stated in sub-section (2) of section 134 namely; the consideration of financial

statements and the reports of the board and auditors, the declaration of any dividend, the election and appointment of directors in place of those retiring, and the appointment of the auditors and fixing of their remuneration.

29. No business shall be transacted at any general meeting unless a quorum of members is present at that time when the meeting proceeds to business. The quorum of the general meeting shall be-



(a) in the case of a public listed company, not less than ten members present personally, or through video-link who represent not less than twenty-five percent of the total voting power, either of their own account or as proxies;

(b) in the case of any other company having share capital, two members present personally, or through video-link who represent not less than twenty-five percent of the total voting

power, either of their own account or as proxies.

30. If within half an hour from the time appointed for the meeting a quorum is not present, the meeting, if called upon the requisition of members, shall be dissolved; in any other case, it shall stand adjourned to the same day in the next week at the same time and place, and, if at the adjourned meeting a quorum is not present within half an hour from the time appointed for the meeting, the members present, being not less than two, shall be a quorum.

31. The chairman of the board of directors, if any, shall preside as chairman at every general meeting of the company, but if there is no such chairman, or if at any meeting he is not present within fifteen minutes after the time appointed for the meeting, or is unwilling to act as chairman, any one of the directors present may be elected to be chairman, and if none of the directors is present, or willing to act as chairman, the members present shall choose one of their number to be chairman.

32. The chairman may, with the consent of any meeting at which a quorum is present (and shall if so directed by the meeting), adjourn the meeting from time to time but no business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place. When a meeting is adjourned for fifteen days or more, notice of the adjourned meeting shall be given as in the case of an original meeting. Save as aforesaid, it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.

33. (1) At any general meeting a resolution put to the vote of the meeting shall be decided on a show of hands unless a poll is (before or on the declaration of the result of the show of hands) demanded. Unless a poll is so demanded, a declaration by the chairman that a resolution has, on a show of hands, been carried, or carried unanimously, or by a particular majority, or lost, and an entry to that effect in the book of the proceedings of the company shall be conclusive evidence of the fact, without proof of the number or proportion of the votes recorded in favour of, or against, that resolution.

(2) At any general meeting, the company shall transact such businesses as may be notified by the Commission, only through postal ballot.

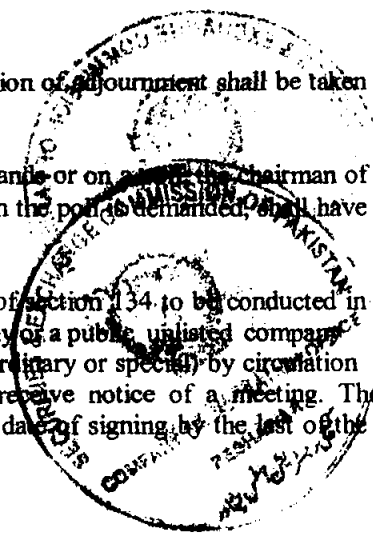
34. A poll may be demanded only in accordance with the provisions of section 143.

35. If a poll is duly demanded, it shall be taken in accordance with the manner laid down in sections 144 and 145 and the result of the poll shall be deemed to be the resolution of the meeting at which the poll was demanded.

36. A poll demanded on the election of chairman or on a question of adjournment shall be taken at once.

37. In the case of an equality of votes, whether on a show of hands or on a poll, the chairman of the meeting at which the show of hands takes place, or at which the poll is demanded, shall have and exercise a second or casting vote.

38. Except for the businesses specified under sub-section (2) of section 134 to be conducted in the annual general meeting, the members of a private company or a public unlimited company (having not more than fifty members), may pass a resolution (ordinary or special) by circulation signed by all the members for the time being entitled to receive notice of a meeting. The resolution by circulation shall be deemed to be passed on the date of signing by the last of the



signatory member to such resolution.

VOTES OF MEMBERS

39. Subject to any rights or restrictions for the time being attached to any class or classes of shares, on a show of hands every member present in person shall have one vote except for election of directors in which case the provisions of section 159 shall apply. On a poll every member shall have voting rights as laid down in section 134.

40. In case of joint-holders, the vote of the senior who tenders a vote, whether in person or by proxy or through video-link shall be accepted to the exclusion of the votes of the other joint-holders; and for this purpose seniority shall be determined by the order in which the names stand in the register of members.

41. A member of unsound mind, or in respect of whom an order has been made by any court having jurisdiction in lunacy, may vote, whether on show of hands or on a poll or through video link, by his committee or other legal guardian, and any such committee or guardian may, on a poll, vote by proxy.

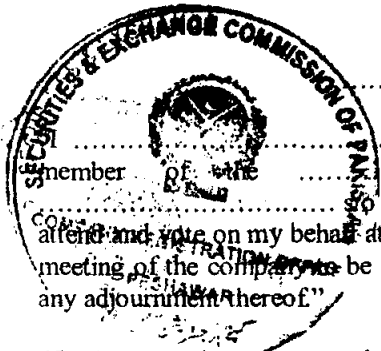
42. On a poll votes may be given either personally or through video-link, by proxy or through postal ballot:

Provided that nobody corporate shall vote by proxy as long as a resolution of its directors in accordance with the provisions of section 138 is in force.

43. (1) The instrument appointing a proxy shall be in writing under the hand of the appointer or of his attorney duly authorised in writing.

(2) The instrument appointing a proxy and the power-of-attorney or other authority (if any) under which it is signed, or a notarially certified copy of that power or authority, shall be deposited at the registered office of the company not less than forty-eight hours before the time for holding the meeting at which the person named in the instrument proposes to vote and in default the instrument of proxy shall not be treated as valid.

44. An instrument appointing a proxy may be in the following form, or a form as near thereto as may be:



INSTRUMENT OF PROXY

..... Limited
s/o r/o being a
member of the Limited, hereby appoint
..... r/o as my proxy to
attend and vote on my behalf at the (statutory, annual, extraordinary, as the case may be) general
meeting of the company to be held on the day of 20..... and at
any adjournment thereof

45. A vote given in accordance with the terms of an instrument of proxy shall be valid notwithstanding the previous death or insanity of the principal or revocation of the proxy or of the authority under which the proxy was executed, or the transfer of the share in respect of which

the proxy is given, provided that no intimation in writing of such death, insanity, revocation or transfer as aforesaid shall have been received by the company at the office before the commencement of the meeting or adjourned meeting at which the proxy is used.

DIRECTORS

46. The following subscribers of the memorandum of association shall be the first directors of the company, so, however, that the number of directors shall not in any case be less than that specified in section 154 and they shall hold office until the election of directors in the first annual general meeting:

1. **Mr. Humayun** Planning and Development, Government of KPK
2. **Mr. Muhammad Atif** Secretary Finance, Government of KPK
3. **Mr. Muhammad Zuabair** Secretary Energy and Power, Government of KPK
4. **Mr. Maqsood Anwar Khan** Chief Engineer O&C (PEDO)
5. **Muhammad Naeem** Chief Executive Officer (PEDO)

47. The remuneration of the directors shall from time to time be determined by the company in general meeting subject to the provisions of the Act.

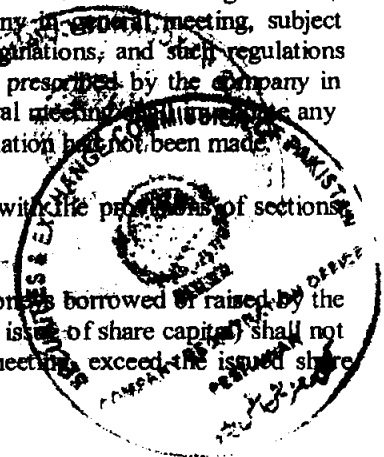
48. Save as provided in section 153, no person shall be appointed as a director unless he is a member of the company.

POWERS AND DUTIES OF DIRECTORS

49. The business of the company shall be managed by the directors, who may pay all expenses incurred in promoting and registering the company, and may exercise all such powers of the company as are not by the Act or any statutory modification thereof for the time being in force, or by these regulations, required to be exercised by the company in general meeting, subject nevertheless to the provisions of the Act or to any of these regulations, and such regulations being not inconsistent with the aforesaid provisions, as may be prescribed by the company in general meeting but no regulation made by the company in general meeting shall invalidate any prior act of the directors which would have been valid if that regulation had not been made.

50. The directors shall appoint a chief executive in accordance with the provisions of sections 186 and 187.

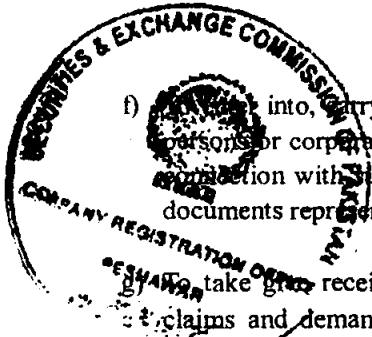
51. The amount for the time being remaining undischarged of moneys borrowed or raised by the directors for the purposes of the company (otherwise than by the issue of share capital) shall not at any time, without the sanction of the company in general meeting, exceed the issued share capital of the company.



52. The directors shall duly comply with the provisions of the Act, or any statutory modification thereof for the time being in force, and in particular with the provisions in regard to the registration of the particulars of mortgages, charges and pledge affecting the property of the company or created by it, to the keeping of a register of the directors, and to the sending to the registrar of an annual list of members, and a summary of particulars relating thereto and notice of any consolidation or increase of share capital, or sub-division of shares, and copies of special resolutions and a copy of the register of directors and notifications of any changes therein.

53. Without prejudice to the general powers conferred by the last preceding article and the other power conferred by these presents it is expressly declared that the Directors shall have the following powers provided below;

- a) To take on lease, purchase, erect or otherwise acquire for the Company any land building, property rights or privileges which the Company is authorized to acquire at such price and generally on such terms and conditions, as they think fit.
- b) To sell, let, exchange or otherwise dispose of absolutely or conditionally all or any part of the property, privileges and undertaking of the Company upon such terms and conditions and for such consideration as they may think fit.
- c) To buy, sell, import, export or procure the supply of all plants and machinery, material, stocks in trade and other movable and immovable property and things required for the purpose of the Company.
- d) To engage, fix and pay the remuneration of and dismiss or discharge any manager, engineer, agent, secretary, clerk, accountant, workman, expert, technical adviser, or other persons employed or to be employed in or in connection with business of the Company.
- e) To appoint any person to be attorney of the Company for such purposes and with such powers, authority and discretions and for such period and subject to such conditions as they may from time to time think fit and to revoke such powers at pleasure.



- f) To enter into, carry, rescind or vary all financial arrangements or agreement with any banks, persons or corporations for, or in connection with the Company's business and affairs and in connection with such arrangements to deposit, hypothecate any property of the Company or documents representing or relating to the same.
- g) To take and give receipts and other discharges for money payable to the Company and to the claims and demands of the Company and to draw, accept, endorse, negotiable promissory notes, bills of exchange or other negotiable and transferable instruments concerning/ relating to business of the company.

- h) To deal with surplus money of the Company not immediately required for the purpose thereof upon such terms and conditions as may be thought expedients.
- i) To determine who shall be entitled to sign on Company's behalf, bills, cheques, notes, receipts, acceptances, endorsements, releases, contracts and documents.
- j) To enter into such negotiations and contracts and rescind or vary all such contracts and execute and do all such acts, deeds and things in the name of the Company as they may consider expedient.
- k) To open accounts with any bank or bankers and to pay into and withdraw money from such accounts from time to time.
- l) To get insured the movable and immovable property of the Company.
- m) To pay to any person employed by the Company a commission on the profits of the Company.
- n) To institute, combat, prosecute, defend, compound, settle compromise adjust refer to arbitration withdraw, abandon any legal proceedings by or against the Company or its officers or otherwise concerning the affairs of the Company.
- o) To make advances for the business of the Company to such persons upon such security or without security as they may think fit, and generally to direct, manage, control the receipts, custody, employment, investment and expenditure of the moneys and funds of the Company and the keeping of accounts thereof.
- p) To appear for and on behalf of the Company in any Court of Justice, Criminal, Civil or Revenue, Police, Postal, Excise, Transport, Income Tax, Regulator, NERFA or other office in any action or proceedings or matters in which the Company may be interested and to promote, safeguard or defend its interest. The directors can delegate such powers aforementioned to any person through a duly authorized instrument.
- q) To sign and verify any plan, written statement, petition, compromise, mukdarnama, vakalatnama, authorizing the legal practitioner to act on behalf of the Company in all Court, Civil, Criminal, and Revenue. The directors can delegate such powers aforementioned to any person through a duly authorized instrument.

MINUTE BOOKS

54. The directors shall cause records to be kept and minutes to be made in book or books with regard to:

- (a) all resolutions and proceedings of general meeting(s) and the meeting(s) of directors and Committee(s) of directors, and every member present at any general meeting and every director present at any meeting of directors or Committee of directors shall put his signature in a book to be kept for that purpose;
- (b) recording the names of the persons present at each meeting of the directors and of any committee of the directors, and the general meeting; and
- (c) all orders made by the directors and Committee(s) of directors:

Provided that all records related to proceedings through video-link shall be maintained in accordance with the relevant regulations specified by the Commission which shall be appropriately rendered into writing as part of the minute books according to the said regulations.

THE SEAL

55. The directors shall provide for the safe custody of the seal and the seal shall not be affixed to any instrument except by the authority of a resolution of the board of directors or by a committee of directors authorized in that behalf by the directors and in the presence of at least two directors and of the secretary or such other person as the directors may appoint for the purpose; and those two directors and secretary or other person as aforesaid shall sign every instrument to which the seal of the company is so affixed in their presence.

DISQUALIFICATION OF DIRECTORS

56. No person shall become the director of a company if he suffers from any of the disabilities or disqualifications mentioned in section 153 or disqualified or debarred from holding such office under any of the provisions of the Act as the case may be and, if already a director, shall cease to hold such office from the date he so becomes disqualified or disabled:

Provided, however, that no director shall vacate his office by reason only of his being a member of any company which has entered into contracts with, or done any work for, the company of which he is director, but such director shall not vote in respect of any such contract or work, and if he does so vote, his vote shall not be counted.

PROCEEDINGS OF DIRECTORS

57. The directors may meet together for the dispatch of business, adjourn and otherwise regulate their meetings, as they think fit. A director may, and the secretary on the requisition of a director shall, at any time, summon a meeting of directors. Notice sent to a director through email whether such director is in Pakistan or outside Pakistan shall be a valid notice.

58. The directors may elect a chairman of their meetings and determine the period for which he is to hold office; but, if no such chairman is elected, or if at any meeting the chairman is not present within ten minutes after the time appointed for holding the same or is unwilling to act as chairman, the directors present may choose one of their number to be chairman of the meeting.

59. At least one-third ($\frac{1}{3}^{\text{rd}}$) of the total number of directors or two (2) directors whichever is higher, for the time being of the company, present personally or through video-link, shall

constitute a quorum.

60. Save as otherwise expressly provided in the Act, every question at meetings of the board shall be determined by a majority of votes of the directors present in person or through video-link, each director having one vote. In case of an equality of votes or tie, the chairman shall have a casting vote in addition to his original vote as a director.

61. The directors may delegate any of their powers not required to be exercised in their meeting to committees consisting of such member or members of their body as they think fit; any committee so formed shall, in the exercise of the powers so delegated, conform to any restrictions that may be imposed on them by the directors.

62. (1) A committee may elect a chairman of its meetings; but, if no such chairman is elected, or if at any meeting the chairman is not present within ten minutes after the time appointed for holding the same or is unwilling to act as chairman, the members present may choose one of their number to be chairman of the meeting.

(2) A committee may meet and adjourn as it thinks proper. Questions arising at any meeting shall be determined by a majority of votes of the members present. In case of an equality of votes, the chairman shall have and exercise a second or casting vote.

63. All acts done by any meeting of the directors or of a committee of directors, or by any person acting as a director, shall, notwithstanding that it be afterwards discovered that there was some defect in the appointment of any such directors or persons acting as aforesaid, or that they or any of them were disqualified, be as valid as if every such person had been duly appointed and was qualified to be a director.

64. A copy of the draft minutes of meeting of the board of directors shall be furnished to every director within seven working days of the date of meeting.

65. A resolution in writing signed by all the directors for the time being entitled to receive notice of a meeting of the directors shall be as valid and effectual as if it had been passed at a meeting of the directors duly convened and held.

FILLING OF VACANCIES

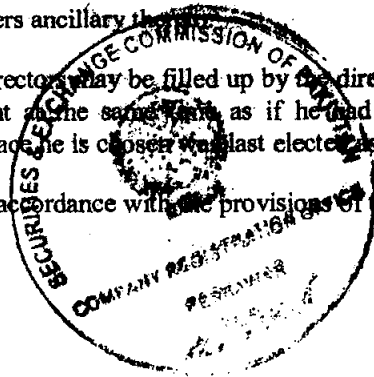
66. At the first annual general meeting of the company, all the directors shall stand retired from office, and directors shall be elected in their place in accordance with section 159 for a term of three years.

67. A retiring director shall be eligible for re-election.

68. The directors shall comply with the provisions of sections 154 to 159 and sections 161, 162 and 167 relating to the election of directors and matters ancillary thereto.

69. Any casual vacancy occurring on the board of directors may be filled up by the directors, but the person so chosen shall be subject to retirement on the same date as if he had become a director on the day on which the director in whose place he is chosen was last elected as director.

70. The company may remove a director but only in accordance with the provisions of the Act.



DIVIDENDS AND RESERVE

71. The company in general meeting may declare dividends but no dividend shall exceed the amount recommended by the directors.

72. The directors may from time to time pay to the members such interim dividends as appear to the directors to be justified by the profits of the company.

73. Any dividend may be paid by a company either in cash or in kind only out of its profits. The payment of dividend in kind shall only be in the shape of shares of listed company held by the distributing company.

74. Dividend shall not be paid out of unrealized gain on investment property credited to profit and loss account.

75. Subject to the rights of persons (if any) entitled to shares with special rights as to dividends, all dividends shall be declared and paid according to the amounts paid on the shares.

76. (1) The directors may, before recommending any dividend, set aside out of the profits of the company such sums as they think proper as a reserve or reserves which shall, at the discretion of the directors, be applicable for meeting contingencies, or for equalizing dividends, or for any other purpose to which the profits of the company may be properly applied, and pending such application may, at the like discretion, either be employed in the business of company or be invested in such investments (other than shares of the company) as the directors may, subject to the provisions of the Act, from time to time think fit.

(2) The directors may carry forward any profits which they may think prudent not to distribute, without setting them aside as a reserve.

77. If several persons are registered as joint-holders of any share, any one of them may give effectual receipt for any dividend payable on the share.

78. (1) Notice of any dividend that may have been declared shall be given in manner hereinafter mentioned to the persons entitled to share therein but, in the case of a public company, the company may give such notice by advertisement in a newspaper circulating in the Province in which the registered office of the company is situate.

(2) Any dividend declared by the company shall be paid to its registered shareholders or to their order. The dividend payable in cash may be paid by cheque or warrant or in any electronic mode to the shareholders entitled to the payment of the dividend, as per their direction.

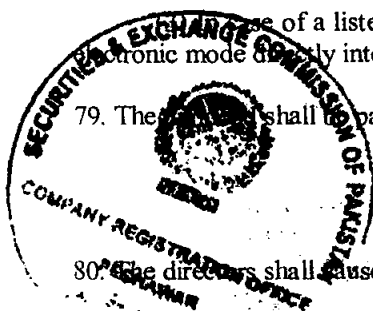
In the case of a listed company, any dividend payable in cash shall only be paid through electronic mode directly into the bank account designated by the entitled shareholders.

79. The dividend shall be paid within the period laid down under the Act.

ACCOUNTS

80. The directors shall cause to be kept proper books of account as required under section 220.

81. The books of account shall be kept at the registered office of the company or at such other place as the directors shall think fit and shall be open to inspection by the directors during



business hours.

82. The directors shall from time to time determine whether and to what extent and at what time and places and under what conditions or regulations the accounts and books or papers of the company or any of them shall be open to the inspection of members not being directors, and no member (not being a director) shall have any right of inspecting any account and book or papers of the company except as conferred by law or authorised by the directors or by the company in general meeting.

83. The directors shall as required by sections 223 and 226 cause to be prepared and to be laid before the company in general meeting the financial statements duly audited and reports as are referred to in those sections.

84. The financial statements and other reports referred to in regulation 80 shall be made out in every year and laid before the company in the annual general meeting in accordance with sections 132 and 223.

85. A copy of the financial statements and reports of directors and auditors shall, at least twenty-one days preceding the meeting, be sent to the persons entitled to receive notices of general meetings in the manner in which notices are to be given hereunder.

86. The directors shall in all respect comply with the provisions of sections 220 to 227.

87. Auditors shall be appointed and their duties regulated in accordance with sections 246 to 249.

NOTICES

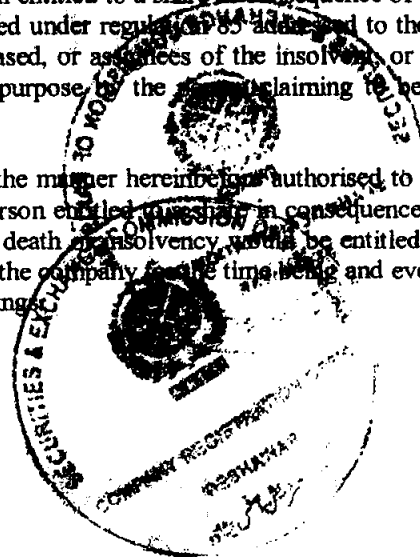
88. (1) A notice may be given by the company to any member to his registered address or if he has no registered address in Pakistan to the address, if any, supplied by him to the company for the giving of notices to him against an acknowledgement or by post or courier service or through electronic means or in any other manner as may be specified by the Commission.

(2) Where a notice is sent by post, service of the notice shall be deemed to be effected by properly addressing, prepaying and posting a letter containing the notice and, unless the contrary is proved, to have been effected at the time at which the letter will be delivered in the ordinary course of post.

89. A notice may be given by the company to the joint-holders of a share by giving the notice to the joint-holder named first in the register in respect of the share.

90. A notice may be given by the company to the person entitled to a share in consequence of the death or insolvency of a member in the manner provided under regulation 85 addressed to them by name, or by the title or representatives of the deceased, or assignees of the insolvent, or by any like description, at the address, supplied for the purpose by the person claiming to be so entitled.

91. Notice of every general meeting shall be given in the manner hereinafter authorised to (a) every member of the company and also to (b) every person entitled to notice in consequence of the death or insolvency of a member, who but for his death or insolvency would be entitled to receive notice of the meeting, and (c) to the auditors of the company for the time being and every person who is entitled to receive notice of general meeting.



WINDING UP

92. The company shall follow, in case of its winding up, the relevant provisions of the Act.

INDEMNITY

93. Every officer or agent for the time being of the company may be indemnified out of the assets of the company against any liability incurred by him in defending any proceedings, whether civil or criminal, arising out of his dealings in relation to the affairs of the company, except those brought by the company against him, in which judgment is given in his favour or in which he is acquitted, or in connection with any application under section 492 in which relief is granted to him by the Court.



Certified to be True Copy

(Munir Shah)
Assistant Registrar of Companies
Securities & Exchange Commission of Pakistan
Peshawar



I, whose name and address is subscribed below, am desirous of forming a compa these Articles of Association and agree to take the number of shares in set opposite my name:

Sr	Name and surname in full	CNIC/PP /INC	Father's/ Husband's Name in full	Nationality with any former nationality	Occupation	Residential Address in full	No. of shares taken by each subscriber
01	GOVERNMENT OF KHYBER PAKHTUNKHWA Through: SECRETARY, ENERGY & POWER (MR. MUHAMMAD ZUABAIR)	17301-2074212-1	S/O BAZ MUHAMMAD	PAKISTANI	GOVERNMENT GOVERNMENT SERVANT	ENERGY AND POWER DEPARTMENT, 1 st FLOOR BLOCK - A ABDUL WALI KHAN MULTIPLEX CIVIL SECRETARIAT PESHAWAR HOUSE # 219 STREET # 5 SECTOR C-4 HAYATABAD PHASE V PESHAWAR	50000 (FIFTY THOUSAND ONLY)

Total number of shares taken 50000

(FIFTY THOUSAND)

Dated the 24th day of February 2020



Certified to be True Copy

(Muzamil Shah)
Assistant Registrar of Companies
Securities & Exchange Commission of Pakistan
CRO, Peshawar

30/2/20

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ISLAMABAD, WEDNESDAY, MAY 2, 2018

PART I

Acts, Ordinances, President's Orders and Regulations

GOVERNMENT OF PAKISTAN

NATIONAL ASSEMBLY SECRETARIAT

Islamabad, the 30th April, 2018

No. F. 22(23)/2017-Legis.—The following Act of *Majlis-e-Shoora* (Parliament) received the assent of the President on the 27th April, 2018 is hereby published for general information:—

ACT NO. XII OF 2018

An Act further to amend the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997

WHEREAS it is expedient further to amend the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997) for the purposes hereinafter appearing:

(223)

Price: Rs. 30.50

It is hereby enacted as follows:—

1. **Short title and commencement.**—(1) This Act shall be called the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018.

(2) It shall come into force at once.

2. **Amendment of preamble, Act XL of 1997.**—In the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997), hereinafter called as the said Act, in the preamble, after the first paragraph, the following paragraphs shall be added, namely:—

“AND WHEREAS it is expedient to ensure the elimination of energy poverty in the country to ensure the highest standards of transparent, certain and effective regulation of the electric power markets of the Islamic Republic of Pakistan, to provide the legal framework within which a competitive electric power market can develop and sustain, to make special provisions for development of renewable electricity markets in accordance with the international commitments of the Islamic Republic of Pakistan as well as the responsibility of the Islamic Republic of Pakistan to support and encourage measures to effectively mitigate adverse climate change and to effectively manage conflict of interest of the State in relation to development of the electric power markets of the Islamic Republic of Pakistan;”

3. **Amendment of section 1, Act XL of 1997.**—In the said Act, in section 1, for sub-section (3), the following shall be substituted, namely:—

“(3) It shall come into force at once, except sections 23A, 23B, 23G and 23H which shall come into force within a period of five years of coming into force of the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018 or on such earlier date as the Federal Government may, by notification in the official Gazette, appoint.”

4. **Amendment of section 2, Act XL of 1997.**—In the said Act, in section 2,—

- (a) in clause (ii), for the word “determine”, wherever occurring, the word “specify” shall be substituted;
- (b) after clause (ii), amended as aforesaid, the following new clause shall be inserted, namely:—

- “(iia) “captive generating plant” means a power plant setup by any person to generate electricity primarily for his own use and includes a power plant setup by any co-operative society or association of persons for generating electricity primarily for use of members of such co-operative society or association;”;
- (c) after clause (iv), the following new clause shall be inserted, namely:—
 - “(iva) “consumer category” means such category of consumers as may be prescribed;”;
- (d) in clause (v), the expression “or sale” shall be omitted;
- (e) for clause (x), the following shall be substituted, namely:—
 - “(x) “electric power service” includes the generation, transmission, distribution, supply, sale or trading of electric power and all other services incidental thereto;”;
- (f) after clause (x), substituted as aforesaid, the following new clauses shall be substituted, namely:—
 - “(xa) “electric power supplier” means a person who has been granted a licence under this Act to undertake supply of electricity;
 - (xb) “electric power trader” means a person who has been granted a licence under this Act to undertake trading in electricity;”;
- (g) in clause (xvi), the expression “for generation, transmission or distribution” shall be omitted;
- (h) after clause (xvii), the following new clause shall be inserted, namely:—
 - “(xviiia) “market operator” means a person responsible for organization and administration of trade in electricity and payment settlements among generators, licensees and consumers;”;
- (i) in clause (xviii), after the word “Chairman”, the words “or a member of the Appellate Tribunal where the context so requires” shall be added;

(j) after clause (xix), the following new clauses shall be inserted, namely:—

“(xixa) “national electricity policy” means a policy approved by the Council of Common Interests and made under section 14A;

(xixb) “national electricity plan” means the plan made under section 14A;”;

(k) after clause (xx), the following new clause shall be inserted, namely:—

“(xxa) “Pakhtunkhwa Energy Development Organization” or “PEDO” means the Pakhtunkhwa Energy Development Organization established under the Pakhtunkhwa Energy Development Organization Act, 1993 (Khyber Pakhtunkhwa Act No. I of 1993);”;

(l) after clause (xxii), the following new clause (xxiia) shall be inserted, namely:—

“(xxiia) “provincial grid company” means the person engaged in transmission of electric power and licensed under section 18A;”;

(m) after clause (xxiv), the following new clauses shall be inserted, namely:—

“(xxiva) “renewable electricity” means electricity derived from—

(a) a wind, solar, renewable, biomass, ocean (including tidal, wave, current and thermal), geothermal or hydroelectric source; or

(b) hydrogen derived from renewable biomass or water using an energy source described in clause (a);”;

(xxivb) “service territory” means the area specified in a licence within which the licensee is authorized to conduct business;”;

(n) clause (xxv) shall be omitted; and

(o) after clause (xxv), omitted as aforesaid, the following new clauses shall be inserted, namely:—

“(xxva) “specified” means specified by regulations made under this Act;

(xxvb) “system operator” means a person licensed under this Act to administer system operation and dispatch;”.

5. Amendment of section 3, Act XL of 1997.—In the said Act, in section 3,—

(a) in sub-section (2), in clause (ii), for the expression “North-West Frontier”, the expression “Khyber Pakhtunkhwa” shall be substituted;

(b) for sub-sections (3) and (4), the following shall be substituted, namely:—

“(3) The Chairman shall be a person known for his integrity and eminence having experience of not less than twelve years in any relevant field including law, business, engineering, finance, accounting or economics preferably in the electric power services business.

(4) Every member shall be a person known for his integrity and eminence having experience of not less than twelve years in any relevant field including law, business, engineering, finance, accounting or economics preferably in the electric power services business.”;

(c) after sub-sections (3) and (4), substituted as aforesaid, the following new sub-section (4A) shall be inserted, namely:—

“(4A) The Authority as a whole shall comprise the requisite range of skills, competence, knowledge and experience relevant to its functions.”;

(d) in sub-section (5), for the proviso, the following shall be substituted, namely:—

“Provided that the Chairman or a member shall not be appointed under sub-section (1) or continue in office if he has attained the age of sixty years:

Provided further that the age limit of sixty years shall not apply to any person appointed as Chairman or member before the

coming into force of the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018.”

6. **Amendment of section 4, Act XL of 1997.**—In the said Act, in section 4, in sub-section (2), after the word “misconduct”, the words “or fails to disclose a conflict of interest as provided for under this Act” shall be added.

7. **Amendment of section 5, Act XL of 1997.**—In the said Act, in section 5, for sub-section (1), the following shall be substituted, namely:—

“(1) Subject to the provisions of this Act, the Authority shall, in performance of its functions and exercise of its powers, conduct its proceedings in accordance with regulations made under this Act.”

8. **Amendment of section 7, Act XL of 1997.**—In the said Act, in section 7,—

(A) in sub-section (2),—

(i) for clause (a), the following shall be substituted, namely:—

“(a) grant licences under this Act;”;

(ii) after clause (a), substituted as aforesaid, the following new clauses shall be inserted, namely:—

“(aa) specify procedures and standards for registration of persons providing electric power services;

(ab) aid and advise the Federal Government, in formulation of national electricity plan;”;

(ac) ensure efficient tariff structures and market design for sufficient liquidity in power markets;

(iii) for clauses (b), (c) and (d), the following shall be substituted, namely:—

“(b) specify procedures and standards for investment programmes by generation companies and persons licensed or registered under this Act;

(c) specify and enforce performance standards for generation companies and persons licensed or registered under this Act;

- (d) specify accounting standards and establish a uniform system of account by generation companies and persons licensed or registered under this Act;”;
- (iv) in clause (e), for the word “prescribe”, the word “specify” shall be substituted;
- (v) clause (f) shall be omitted;
- (vi) for clause (h), the following shall be substituted, namely:—
 - “(h) settle disputes between licensees in accordance with the specified procedure;”;
- (vii) in clause (i), the word “and”, occurring at the end, shall be omitted;
- (viii) after clause (i), amended as aforesaid, the following new clause (ia) shall be inserted, namely:—
 - “(ia) promote development of a market, including trading, in accordance with the national electricity policy and the national electricity plan; and”;
- (B) in sub-section (3),—
 - (i) in clause (b),—
 - (a) the words “, transmission and distribution” shall be omitted; and
 - (b) after the word “companies”, the words “and persons licensed or registered under this Act”, shall be inserted;
 - (ii) in clause (c),—
 - (a) the expression “, transmission and distribution” shall be omitted; and
 - (b) after the word “companies”, the words “and persons licensed or registered under this Act” shall be inserted;
 - (iii) in clause (e),—

- (a) the expression “, transmission and distribution” shall be omitted; and
- (b) after the word “companies”, the words “and persons licensed or registered under this Act” shall be inserted;
- (c) in sub-section (4), after the word “Province”, occurring for the third time, the expression “and such tariff shall not be called into question by the Authority” shall be inserted; and
- (d) for sub-section (6), the following shall be substituted, namely:—
 - “(6) In performing its functions under this Act, the Authority shall protect interests of consumers and companies providing electric power services in accordance with the principles of transparency and impartiality.”.

9. **Substitution of section 8.**—In the said Act, for section 8, the following shall be substituted, namely:—

- “8. **Remuneration of Chairman and members.**—(1) The Chairman and members of the Authority shall be eligible for such remuneration and allowances as the Authority may, with approval of the Federal Government, determine.
- (2) The remuneration and allowances of the Chairman and members shall account for—
- (a) the specialised nature of work to be performed by the Authority;
 - (b) the need to ensure the financial self-sufficiency of the Chairman and members; and
 - (c) the salaries paid in the private sector to individuals with equivalent responsibilities, expertise and skills.

10. **Insertion of sections 8A and 8B, Act XL of 1997.**—In the said Act, after section 8, substituted as aforesaid, the following new sections shall be inserted, namely:—

- "8A. Disclosure of interest by members of the Authority.—**(1) For the purpose of this and the following section, a person shall be deemed to have an interest in a matter if he has any direct or indirect financial interest, or has any connection with any company connected with the provision of electric power services in such manner which could reasonably be regarded as giving rise to a conflict between his duty to honestly perform his functions under this Act and such interest, so that his ability to consider and decide any question impartially or to give any advice without bias, may reasonably be regarded as impaired.
- (2) A member of the Authority having any interest in any matter to be discussed or decided by the Authority or any of its committees shall, prior to any discussion of the matter, disclose in writing to the Authority, the fact of his interest and the nature thereof.
- (3) A disclosure of interest under sub-section (2) shall be recorded in minutes of the Authority prior to any discussion of or decision on the matter and after disclosure the member of the Authority who has made the disclosure—
- (a) shall not, except as provided in sub-sections (7) to (10), take part or be present in any deliberation or decision of the Authority; and
- (b) shall be disregarded for the purpose of constitution of a quorum of the Authority.
- (4) The member of the Authority who fails to disclose his interest as required by this section shall be guilty of an offence and shall on conviction be liable to imprisonment for a term which may extend to one year, or a fine not exceeding ten million rupees, or with both.
- (5) It shall be a valid defence for a person charged with an offence under sub-section (4), if he proves that he was not aware of the facts constituting the offence and that he exercised due care and diligence in discovering those facts which he ought reasonably to have known in the circumstances.
- (6) Upon being appointed, a member of the Authority shall give written notice to the Federal Government of all direct or indirect pecuniary interests that he has acquired or acquires in a body corporate carrying on a business in the Islamic Republic of Pakistan. The nature of such interests and the particulars and any changes thereof

shall be disclosed in the report of the Authority made under clause (a) of sub-section (1) of section 42.

(7) If the Chairman becomes aware that a member of the Authority has the interest, he shall—

(a) if he considers that the member of the Authority should not take part or continue to take part, as the case may require, in determining the matter, direct the member of the Authority accordingly, or

(b) in any other case, cause the member of the Authority's interest to be disclosed to the persons concerned in the matter, including any person whose application is pending decision or adjudication by the Authority.

(8) The member in respect of whom a direction has been given under clause (a) of sub-section (7) shall comply with the direction.

(9) The Chairman of the Authority shall disclose his interest to the persons concerned in the matter including any person whose application is pending decision or adjudication by the Authority.

(10) Subject to sub-section (7), the Chairman or the member who has any interest in any matter referred to in this section shall not take part or continue to take part, as the case may require, in determining the matter unless everyone concerned in it consents to the Chairman or, as the case may be, the member so taking part.

8B. Notification of interest by others.—(1) Where a person who, in the course of—

(a) performing a function or exercising a power, as a delegate of the Authority;

(b) performing functions or service as an employee; or

(c) performing a function or services in any capacity by way of assisting or advising the Authority or any of its committees or any delegate of the Authority,

is required to consider a matter in which he has an interest, such person shall forthwith give to the Authority a written notice stating that he is required to consider the matter and has an interest in it and setting out particulars of the interest.

- (2) The person referred to in sub-section (1) shall also declare his interest in accordance with the said sub-section whenever it is necessary to avoid a conflict of interest.
- (3) Any person referred to in sub-section (1) who fails to disclose his interest as required by this section shall be guilty of an offence and shall on conviction be liable to imprisonment for a term which may extend to one year, or a fine not exceeding ten million rupees, or with both.
- (4) It shall be a valid defence for a person charged with an offence under sub-section (3), if he proves that he was not aware of the facts constituting the offence and that he exercised due care and diligence in discovering those facts which he ought reasonably to have known in the circumstances.”.

11. **Insertion of section 10A, Act XL of 1997.**—In the said Act, after section 10, the following new section 10A shall be inserted, namely:—

“10A. **Indemnity.**—No suit, prosecution or other legal proceedings shall lie against the Chairman, members, officers or any employee of the Authority for anything done in good faith or intended to be done in pursuance of this Act or any rules or regulations made thereunder.”.

12. **Amendment of section 11, Act XL of 1997.**—In the said Act, in section 11, the word “special” shall be omitted.

13. **Amendment of section 12, Act XL of 1997.**—In the said Act, in section 12,—

- (a) in clause (c), after semicolon, the word “and” shall be added;
- (b) for clause (d), the following shall be substituted, namely:—

“(d) the power to recommend rules or make or repeal regulations made under this Act.”;
- (c) clause (e) shall be omitted; and
- (d) after clause (e), omitted as aforesaid, the following shall be inserted, namely:—

**“CHAPTER IIA-
APPELLATE TRIBUNAL”; and**

14. **Substitution of section 12A, Act XL of 1997.**—In the said Act, for section 12A the following shall be substituted, namely:—

“12A. Establishment of Appellate Tribunal.—(1) The Federal Government shall, by notification in the official Gazette, establish an Appellate Tribunal for the purposes of exercising jurisdiction under this Act.

(2) The members of the Appellate Tribunal shall be appointed by the Federal Government and shall comprise—

(a) a former judge of a High Court who shall be the Chairman, for a single term of four years on such terms and conditions as may be prescribed and shall be nominated by the Provinces or Federal Government, as the case may be, by rotation in the following order, namely:—

(i) the member representing the Federal Government;

(ii) the member representing the Province of the Punjab;

(iii) the member representing the Province of Khyber Pakhtunkhwa;

(iv) the member representing the Province of Sindh; and

(v) the member representing the Province of the Balochistan;

Provided that the Chairman of the Appellate Tribunal shall not be appointed if he has attained the age of sixty-five years.

(b) a member finance who shall be a qualified chartered accountant or a qualified cost and management accountant or a qualified chartered financial analyst and shall be nominated by the Provinces or Federal Government, as the case may be, by rotation in the following order, namely:—

(i) the member representing the Province of Sindh;

(ii) the member representing the Province of the Punjab;

(iii) the member representing the Federal Government;

- (iv) the member representing the Province of Khyber Pakhtunkhwa; and
- (v) the member representing the Province of Balochistan;
- (c) a member electricity, who shall be a member of the Pakistan Engineering Council, with a specialization in electrical engineering and shall be nominated by the Provinces or the Federal Government, as the case may be, by rotation in the following order, namely:—
 - (i) the member representing the Province of Balochistan;
 - (ii) the member representing the Province of Khyber Pakhtunkhwa;
 - (iii) the member representing the Federal Government;
 - (iv) the member representing the Province of the Punjab; and
 - (v) the member representing the Province of Sindh.

(3) The member finance and member electricity of the Appellate Tribunal shall be appointed for a period of three years on such terms and conditions as may be prescribed:

Provided that no person who has attained the age of sixty years shall be appointed as member finance and member electricity:

Provided further that no person shall be eligible to be the member finance or member electricity, if in case of being a civil servant, they hold a position which is less than BPS-21 or equivalent.

(4) No person shall be appointed as member of the Appellate Tribunal unless he is a citizen of Pakistan and such member shall be employed on full-time basis.

12B. Qualifications and eligibility.—No person shall be appointed as member of the Appellate Tribunal unless he—

- (a) has at least a masters or professional degree or qualification from an accredited university;
- (b) has at least fifteen years of professional work experience;

- (c) has no past record of criminal conviction, other than for minor offences; and
 - (d) has no past record of any specific activities or conduct that could reasonably call into question his ability to discharge his duties as a member of the Appellate Tribunal with honesty, integrity, reliability, competence and objectivity.
- 12C. **Disqualifications.**—No person shall be appointed or continue as member or an employee of the Appellate Tribunal, if such person—
- (a) has been convicted of an offence involving moral turpitude;
 - (b) has been or is declared insolvent; or
 - (c) is incapable of discharging his duties by reasons of physical or mental unfitness and has been so declared by a duly constituted medical board appointed by the Federal Government.
- 12D. **Automatic disqualification.**—If a member of the Appellate Tribunal remains absent from his position or otherwise fails to undertake his duties for any reason whatsoever for a period of three months it shall be a ground for automatic disqualification of such member.
- 12E. **Decisions, determinations and quorum.**—(1) Decisions and determinations of the Appellate Tribunal shall be taken by majority.
- (2) If there are less than three members of the Appellate Tribunal, the presence of two members serving shall constitute a quorum:
- Provided that in the case of a quorum of two, the decision shall be taken by consensus.
- (3) Any decision or determination taken at a meeting where a quorum is present shall constitute a valid and enforceable decision or determination of the Appellate Tribunal.
- 12F. **Vacancy in the Appellate Tribunal.**—(1) If position of a member becomes vacant, the Federal Government shall designate a new member and where the vacancy arises in the position of the Chairman, the Federal Government shall appoint one of the existing members to serve as Acting Chairman:

Provided that no person shall serve as Acting Chairman for more than a period of three months:

Provided further that the Federal Government shall fill a vacancy in the Appellate Tribunal within a period of three months from the date such vacancy occurs.

- (2) The absence of the Chairman or the temporary incapacity of the Chairman shall not affect the other members' ability to act as the Appellate Tribunal and to exercise its powers and authority under this Act.

12G. **Appellate procedures.**—(1) Any person aggrieved by a decision or order of the Authority or a single member thereof or a Tribunal established under section 11 may, within thirty days of the decision or order, prefer an appeal to the Appellate Tribunal in the prescribed manner and the Appellate Tribunal shall decide such appeal within three months after filing of the appeal.

- (2) In examining an appeal under sub-section (1), the Appellate Tribunal may make such further inquiry as it may consider necessary and after giving the Authority or the Tribunal and an appellant an opportunity of being heard, pass such order as it thinks fit, confirming, altering or annulling a decision or order appealed against:

Provided that if the decision under appeal is a determination of tariff by the Authority, then the Appellate Tribunal may in case of disagreement with the determination of the Authority, remand the matter back to the Authority with relevant guidelines, which shall be duly considered by the Authority which shall be bound to review its determination within one month of the receipt of such guidelines from the Appellate Tribunal.

- (3) The decision of the Appellate Tribunal shall be in writing, detailing the issues raised in the appeal and the arguments adopted by the appellant and the Authority or Tribunal, as the case may be. The Appellate Tribunal shall also provide reasons for reaching its decision with reference to the provisions of this Act and the facts of the case.
- (4) The Appellate Tribunal shall provide copies of its decision to all the appellants and the respondents including the Authority or Tribunal, as the case may be, not later than five days from the date of rendering its decision.

- (5) A decision or order of the Authority or Tribunal, as the case may be, shall be given full force and effect during the pendency of any appeal of such determination.
- (6) The decision of the Appellate Tribunal shall be appealable before the High Court having territorial jurisdiction.
- 12H. **Disclosure of interest.**—The following shall apply to members of the Appellate Tribunal including the Chairman, namely:—
 - (a) a member of the Appellate Tribunal shall be deemed to have an interest in a matter if he has any interest, pecuniary or otherwise, in such matter which could reasonably be regarded as giving rise to a conflict between his duty to honestly perform his functions, so that his ability to consider and decide any question impartially or to give any advice without bias, may reasonably be regarded as impaired;
 - (b) a member of the Appellate Tribunal having any interest in any matter to be discussed or decided by the Appellate Tribunal shall disclose in writing to the Secretary to the Appellate Tribunal, the fact of his interest and the nature thereof;
 - (c) a member of the Appellate Tribunal shall give written notice to the Secretary to the Appellate Tribunal of all direct or indirect pecuniary or other material or personal interests that he has or acquires in a body corporate involved in a matter before the Appellate Tribunal; and
 - (d) a disclosure of interest under clause (a) shall be made a part of the record of the Appellate Tribunal in that particular matter.
- 12I. **Powers of the Appellate Tribunal.**—(1) The Appellate Tribunal shall, for the purpose of deciding an appeal, be deemed to be a civil court and shall have the same powers as are vested in such court under the Code of Civil Procedure, 1908 (Act V of 1908), including the powers of —
 - (a) enforcing attendance of any person and examining him on oath;
 - (b) compelling production of documents; and
 - (c) issuing commissions for examination of witnesses and documents.

- (2) The Appellate Tribunal may call for and examine any record, information or documents from any person in relation to the matter under appeal before it for the purposes of enabling it to come to a decision.
- 12J. **Panel of experts.**—The Appellate Tribunal may maintain a panel of national and international experts in power sector to assist it in performance of its functions under this Act as and when deemed fit by the Appellate Tribunal.
- 12K. **Budget.**—The Appellate Tribunal shall have an independent budget which shall comprise—
- (a) an initial grant from the Federal Government; and
 - (b) fees and costs associated with appellate procedures as may be prescribed.”.
15. **Amendment of section 13, Act XL of 1997.**—In the said Act, in section 13, in sub-section (1), in clause (b), the words “by it as prescribed from time to time” shall be omitted.
16. **Insertion of Chapters IIB and IIC, Act XL of 1997.**—In the said Act, after section 14, the following shall be inserted, namely:—

“CHAPTER IIB

NATIONAL ELECTRICITY POLICY AND PLAN

14A. **National electricity policy and plan.**—(1) The Federal Government shall, from time to time, with approval of the Council of Common Interests, prepare and prescribe a national electricity policy for development of power markets:

Provided that in development of policies under this section, the Federal Government may seek such input and assistance from the Authority as may be required.

(2) The policies referred to in sub-section (1) shall provide for, *inter alia*,—

- (a) development of systems based on optimal utilization of resources such as coal, natural gas, nuclear substances or materials, hydro and renewable sources of energy;

- (b) develop ment of efficient and liquid power market design;
- (c) integration of national and provincial transmission systems;
- (d) special provisions for ensuring development of a sustainable renewable energy market with a dedicated and gradually increasing share in electricity power sector; and
- (e) any other matter pertaining to development, reform, improvement and sustainability of power sector.

(3) The Federal Government may either on its own motion or on recommendation of a Provincial Government and subject to approval of the Council of Common Interests, review or revise the policies referred to in sub-section (1).

(4) The Federal Government, in consultation with the Provincial Governments, shall prepare a national electricity plan in accordance with the policies prepared and prescribed under sub-section (1) and notify such plan once in five years:

Provided that the Federal Government, while preparing or amending the national electricity plan, shall publish the draft national electricity plan and invite suggestions and objections thereon within thirty days of the notification:

Provided further that a Provincial Government may, if required, propose an amendment to the national electricity plan, which may be adopted with the concurrence of the Provincial Governments and the Federal Government.

(5) The Authority shall perform its functions in accordance with the national electricity policy and the national electricity plan.

CHAPTER IIC

GENERATION OF ELECTRICITY

14B. **Generation.**—(1) Subject to sub-section (5), no person shall, except under authority of a licence issued by the Authority under this Act and subject to the conditions specified in this Act and as may be imposed by the Authority, construct, own or operate a generation facility.

(2) An application for grant of a licence for generation facility shall specify—

- (a) the type of facility for which the licence is applied;

(b) the location of the generation facility; and

(c) the expected life of the generation facility.

(3) The Authority may, after such enquiry as it may deem appropriate and subject to the conditions specified in this Act and as it may impose, grant a licence authorizing the licensee to construct, own or operate a connected generation facility.

(4) In the case of a generation facility connecting directly or indirectly to the transmission facilities of the national grid company, the licensee shall make the generation facility available to the national grid company for the safe, reliable, non-discriminatory, economic dispatch and operation of the national transmission grid and connected facilities, subject to the compensation fixed by the Authority for voltage support and uneconomic dispatch directed by the national grid company.

(5) The Federal Government may, after consultation with the Authority and by notification in the official Gazette, provide a mechanism for gradual cessation of the generation licences for various classes of generation licence holders, which shall not extend beyond a period of five years from the coming into effect of the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018 and thereafter, any generation company may establish, operate and maintain a generation facility without obtaining a licence under this Act if it complies with the technical standards relating to connectivity with the grid as may be specified:

Provided that a generation company intending to set up a generating facility shall prepare and submit a detailed scheme covering all financial, geological, hydrological, technical, safety and environmental aspects to the Authority for its concurrence:

Provided further that, while considering the scheme submitted by a generation company intending to set up a hydro-generating facility, the Authority shall consider whether or not in its opinion the proposed river work will prejudice the prospects for the best ultimate development of the river or its tributaries for power generation and are consistent with the requirements of drinking water, irrigation, flood control and other public purposes and shall satisfy itself that necessary approvals have been sought from the concerned authorities of the Federal Government and Provincial Governments.

14C. Captive generation.—(1) Notwithstanding anything contained in this Act, a person may construct, maintain or operate a captive generating plant and dedicated transmission lines:

Provided that the supply of electricity from the captive generating plant through the grid shall be regulated in the same manner as the generating facility of a generating company.

(2) Every person, who has constructed a captive generating plant and maintains and operates such plant, shall have the right to open access for the purposes of carrying electricity from his captive generating plant to the destination of his use:

Provided that such open access shall be subject to availability of adequate transmission facility and such availability of transmission facility shall be determined by the national grid company or the provincial grid company, as the case may be:

Provided further that any dispute regarding the availability of transmission facility shall be adjudicated upon by the Authority.

14D. Duties of generating companies.—(1) Subject to the provisions of this Act, the duties of a generating company shall be to establish, operate and maintain generating stations, tie-lines, sub-stations and dedicated transmission lines connected therewith and within the generation facility, in accordance with the provisions of this Act or the rules or regulations made thereunder.

(2) In the case of a generation facility connecting directly or indirectly to the transmission facilities of the national grid company or a provincial grid company, the generation company shall make the generation facility available for the safe, reliable, non-discriminatory, economic dispatch and operation of the national transmission grid and connected facilities, subject to the compensation fixed by the Authority for voltage support and uneconomic dispatch directed by the system operator.

(3) A generating company may supply electricity to any transmission, distribution, supply or market trader licensee in accordance with this Act and the rules and regulations made thereunder and may, subject to section 23E, supply electricity to any consumer.

(4) Every generating company shall—

- (a) submit technical details regarding its generating stations to the Authority; and
- (b) co-ordinate with the relevant transmission company, for transmission of the electricity generated by it.”

17. **Amendment of Chapter III, Act XL of 1997.**—In the said Act, after section 14D, inserted as aforesaid, after the heading “CHAPTER III”, in the sub-heading “LICENCES”, after the word “LICENCES” the words “AND REGISTRATION” shall be added.

18. **Omission of section 15, Act XL of 1997.**—In the said Act, section 15 shall be omitted.

19. **Amendment of section 16, Act XL of 1997.**—In the said Act, in section 16,—

(a) for sub-section (1), the following shall be substituted, namely:—

“(1) Subject to the conditions laid down in this Act, no person shall engage in the transmission of electric power without obtaining a licence issued by the Authority.

(1A) The eligibility criteria for grant of transmission licence shall be prescribed by the Federal Government and shall include, without limitation—

(a) minimum solvency requirements; and

(b) minimum technical and human resource requirements.”; and

(b) in sub-section (2),—

(i) in clause (i), the word “and” shall be omitted;

(ii) in clause (ii), for the full stop at the end a semicolon and the word “; and” shall be substituted and thereafter the following new clause shall be added, namely:—

“(iii) any other information as may be specified.”.

20. **Amendment of section 17, Act XL of 1997.**—In the said Act, in section 17,—

(a) for sub-section (1), the following shall be substituted, namely:—

“(1) The Authority may, subject to the provisions of this Act and after such enquiry as it may deem appropriate, grant a licence authorizing the licensee to engage in the transmission of electric power subject to such conditions as it may impose:

Provided that only one such licence shall be granted at any one time.”;

(b) in sub-section (2),—

(i) after the words “in the”, the words “service” shall be inserted; and

(ii) the words “except the territory served by KESC” shall be omitted; and

(c) after sub-section (2), amended as aforesaid, the following new sub-section (3) shall be added, namely:—

“(3) The eligibility criteria for grant of licence as a national grid company shall be prescribed and shall include, without limitation,—

(a) minimum solvency requirements; and

(b) minimum technical and human resource requirements.”.

21. **Amendment of section 18, Act XL of 1997.**—In the said Act, in section 18, in sub-section (2),—

(a) in clause (c), in the proviso, the word “and” at the end shall be omitted; and

(b) in clause (d), for the full stop at the end a semicolon and the word “; and” shall be substituted and thereafter the following new clause shall be added, namely:—

“(c) perform functions of a system operator.”.

22. **Insertion of sections 18A and 18B, Act XL of 1997.**—In the said Act, after section 18, amended as aforesaid, the following new sections shall be inserted, namely:—

“18A. **Provincial grid company.**—(1) The Authority may, subject to the provisions of this Act and after such enquiry as it may deem appropriate, grant a licence authorizing a company owned by a Provincial Government to engage in transmission of electric power within territorial limits of such Province, subject to such conditions as it may impose:

Provided that only one such licence shall be granted for each Province at any one time.

- (2) The eligibility criteria for grant of license as a provincial grid company shall be prescribed and shall include, without limitation,—

- (a) minimum solvency requirements; and
- (b) minimum technical and human resource requirements.

18B. **Responsibilities of provincial grid company.**—(1) The provincial grid company shall be responsible to operate and provide safe and reliable transmission services on a non-discriminatory basis, including to a bulk-power consumer who proposes to become directly connected to its facilities.

Without prejudice to the foregoing responsibilities, the provincial grid company shall—

- a) provide transmission and inter-connection services to the national grid company and to others, wherever necessary, at such rates, charges and terms and conditions as the Authority may determine;
- (b) purchase inter-connection service from the national grid company as may be necessary and to connect its facilities to the national transmission grid at the rates, charges and terms and conditions determined by the Authority;
- (c) follow the performance standards laid down by the Authority for transmission of electric power, including safety, health and environmental protection instructions issued by the Authority or any governmental agency;
- (d) make available to general public the tariff specifying the Authority's approved rates, charges and other terms and conditions for transmission services;
- (e) not levy any rate or charge or impose any condition for transmission of electric power which has not been approved by the Authority as a tariff;
- (f) not cause a division or any associated undertaking to engage in generation and distribution; and

- (g) develop, maintain and publicly make available, with prior approval of the Authority, an investment program for satisfying its service obligations and acquiring and selling its assets."

23. **Amendment of section 19, Act XL of 1997.**—In the said Act, in section 19, in clause (f), for the word "prescribed" the word "specified" shall be substituted.

24. **Amendment of section 20, Act XL of 1997.**—In the said Act, in section 20,—

- (a) in sub-section (1), the words "in this Act and as may be imposed by the Authority" shall be omitted; and
- (b) after sub-section (1), amended as aforesaid, the following new sub-section (1A) shall be inserted, namely:—

"(1A) The eligibility criteria for grant of distribution licence shall be prescribed and shall include, without limitation,—

- (a) minimum solvency requirements; and
- (b) minimum technical and human resource requirements."

25. **Amendment of section 21, Act XL of 1997.**—In the said Act, in section 21,—

- (A) in sub-section (1), the words "in this Act and as it may impose" shall be omitted; and
- (B) in sub-section (2),—
 - (i) in clause (a),—
 - (a) the word "exclusive" shall be omitted;
 - (b) the expression "and to make sales of electric power to consumers" shall be omitted;
 - (c) for the word "territory", occurring twice, the words "service territory" shall be substituted; and

- (d) in the proviso, the expression "within such territory as the Authority may, subject to section 22, for a period of fifteen years, allow" shall be omitted;
- (ii) in clause (b),—
 - (a) the expression "and make sales of electric power" shall be omitted;
 - (b) after the word "its", the word "service" shall be inserted; and
 - (c) the proviso shall be omitted;
- (iii) in clause (c), the expression "and power sales to consumers" shall be omitted;
- (iv) for clause (d), the following shall be substituted, namely:—

"(d) establish, within three months of the issue of its licence for distribution of electric power and make available to public, the manner and procedure for obtaining its service;"
- (v) for clause (e), the following shall be substituted, namely:—

"(e) make its transmission facilities available for operation by any other licensee, consistent with applicable instructions established by the system operator;" and
- (vi) in clause (f), after the word "agency", the words "or Provincial Government" shall be inserted.

26. **Amendment of section 22, Act XL of 1997.**—In the said Act, in section 22,—

- (a) for sub-section (1), the following shall be substituted, namely:—

"(1) Notwithstanding anything contained in section 21, the Authority may permit sale of electric power to bulk power consumers located in service territory of the holder of a license under this Act." and

- (b) in sub-section (2), for the words "three years", the words "one year" shall be substituted, for colon a full stop shall be substituted and thereafter the proviso shall be omitted.

27. **Amendment of section 23, Act XL of 1997.**—In the said Act, in section 23, the words "or the bulk power consumers within its service territory subject to the provisions of section 22" shall be omitted.

28. **Insertion of sections 23A, 23B, 23C, 23D, 23E, 23F, 23G and 23H, Act XL of 1997.**—In the said Act, after section 23, amended as aforesaid, the following new sections shall be inserted, namely:—

"23A. **Market operator licence.**—(1) No person shall, unless licensed by the Authority under this Act and subject to the prescribed conditions, act as a market operator:

Provided that any person acting as a market operator on commencement of the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018, shall within a period of one year apply for a licence under this Act:

Provided further that only one market operator licence shall be granted at one time.

- (2) The eligibility criteria for grant of licence as a market operator shall be prescribed by the Federal Government and shall include, without limitation,—
- (a) minimum solvency requirements;
 - (b) minimum technical and human resource requirements; and
 - (c) public service obligations of the licensee including quality of service, transparency of transactions, timely collection and dissemination of payments, effective collection and dissemination of any and all taxes and surcharges as may be imposed by the Federal Government, etc.
- (3) A person eligible for a licence to be licensed as a market operator may make an application to the Authority in such form and manner and on such conditions as may be specified.
- (4) An application for licence under sub-section (3) shall be accompanied by a draft commercial code governing the form and

manner in which the market operator shall undertake its licensed activities.

- (5) The Authority may require an applicant under sub-section (3) to provide such further information as it considers necessary in relation to the application, in such form or verified in such manner as the Authority may direct.

23B. Duties and responsibilities of a market operator.—(1) A market operator may, from time to time and subject to approval by the Authority, make such commercial code as may be required to enable it to perform its functions as a market operator.

- (2) A market operator shall regulate its operations, standards of practice and business conduct of market participants and their representatives in accordance with its commercial code, policies and procedures as approved by the Authority.
- (3) The Authority may, if required in the public interest, direct a market operator to make such commercial code or amend its existing regulations as it may specify in writing:

Provided that if the market operator does not comply with the direction of the Authority within a period of thirty days without providing just cause for such non-compliance to the Authority, the commercial code of the market operator shall be deemed to have been made or amended, as the case may be, and shall take effect accordingly.

23C. Electric power trader licence.—(1) No person shall, unless licensed by the Authority under this Act, engage in trading of electric power.

- (2) The eligibility criteria for grant of licence for trading of electric power shall be prescribed and include, amongst others,—
 - (a) minimum solvency requirements;
 - (b) minimum technical and human resource requirements; and
 - (c) public service obligations of the licensee including quality of service, transparency of transactions, timely collection and dissemination of payments, effective collection and dissemination of any and all taxes and surcharges as may be imposed by the Federal Government, etc.

(3) An application for a licence under sub-section (1) shall specify—

- (a) the type of service for which the licence is being sought;
- (b) the mode and manner in which the service is proposed to be provided; and
- (c) any other information as may be specified.

23D. Duties and responsibilities of electric power trader.—(1) The Authority may, after such enquiry as it may deem appropriate and subject to the conditions specified, grant a licence for trading of electric power.

(2) The licensee shall—

- (a) possess a right to trade in electric power subject to the conditions of licence;
- (b) be responsible to carry out trade bilaterally between the parties by entering into appropriate contracts containing necessary safeguards with regard to supply of electricity through trading;
- (c) ensure that appropriate meters are in place for the purpose of energy accounting and comply with the specifications as specified by the Authority;
- (d) have requisite agreements with transmission licensees and distribution licensees for transmission or wheeling of electricity, as the case may be;
- (e) declare to the Authority its maximum trading monthly volume and five-year trading plan;
- (f) comply with any direction issued by the system operator;
- (g) publicly make available the Authority's approved applicable rates, charges and other terms and conditions for power sales to consumers;
- (h) maintain accounts in accordance with the manner and procedure laid down by the Authority; and
- (i) any other obligations as may be imposed by the Authority.

- 23E. **Electric power supply licence.**—(1) No person shall, unless licensed by the Authority under this Act, engage in supply of electric power to a consumer;

Provided that the holder of a distribution licence on the date of coming into effect of the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018 shall be deemed to hold a licence for supply of electric power under this section for a period of five years from such date.

- (2) The eligibility criteria for grant of licence to supply electric power shall be prescribed by the Federal Government and shall include, without limitation,—

- (a) minimum solvency requirements;
- (b) minimum human resource requirements;
- (c) provisions with respect to a supplier of the last resort, as the case may be; and
- (d) public service obligations of the licensee including quality of service, transparency of transactions, timely collection and dissemination of payments, effective collection and dissemination of any and all taxes and surcharges as may be imposed by the Federal Government, etc.

- (3) An application for a licence for supply of electric power shall specify—

- (a) the type of service for which the licence is being sought;
- (b) the mode and manner in which the service is proposed to be provided; and
- (c) any other information as may be specified.

- 23F. **Duties and responsibilities of an electric power supplier.**—The Authority may, after such enquiry as it may deem appropriate and subject to the conditions specified, grant a licence for supply of electric power.

- (2) The licensee shall—

- (a) possess a right to make sales of electric power to consumers in the territory specified in the licence and to frame schemes in respect of that territory;
- (b) be responsible to make sales of electric power within its territory on a non-discriminatory basis to all the consumers who meet the eligibility criteria laid down by the Authority;

Provided that—

- (i) the licensee may not be required to make sale of electric power to a bulk power consumer who has contracted for electric power supply from another supplier; and
 - (ii) the licensee may request the concerned distribution licensee to disconnect the provision of electric power to a consumer for default in payment of power charges or to a consumer who is involved in theft of electric power;
- (c) publicly make available the Authority's applicable rates, charges and other terms and conditions for power sales to consumers;
 - (d) establish, within three months of the issue of its licence and make available to the public, instructions specifying—
 - (i) procedures for obtaining service; and
 - (ii) the manner and procedure for metering, billing and collection of the licensee's approved charges and disconnection in case of non-payment of charges, electric power theft and use of energy for purposes other than for which it was supplied and procedures for re-connection and recovery of arrears and other charges;
 - (e) maintain accounts in accordance with the manner and procedure laid down by the Authority; and
 - (f) develop, maintain and publicly make available, with prior approval of the Authority, an investment program for satisfying its service obligations and acquiring and selling its assets.

23G. **System operator licence.**—(1) No person shall, unless licensed by the Authority under this Act, undertake functions as a system

operator as may be specified by the Authority, including but not limited to—

- (a) generation scheduling, commitment and dispatch;
- (b) transmission scheduling and generation outage coordination;
- (c) transmission congestion management;
- (d) cross border transmission coordination;
- (e) procurement and scheduling of ancillary services and system planning for long term capacity; and
- (f) such other activities as may be required for reliable and efficient system operations:

Provided that only one such licence shall be granted at any one time:

Provided further that the national grid company shall be deemed to be a system operator for a period of two years from commencement of the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018.

- (2) The eligibility criteria for grant of licence as a system operator shall be prescribed by the Federal Government and shall include, without limitation,—
 - (a) minimum technical and human resource requirements; and
 - (b) public service obligations of the licensee including quality of service and transparency of transactions.
- (3) A person eligible for a licence to be licensed as a system operator may make an application to the Authority in such form and manner and on such conditions as may be specified.
- (4) An application for licence under sub-section (3) shall be accompanied by a draft grid code governing the form and manner in which the system operator shall undertake its licensed activities.
- (5) The Authority may require an applicant under sub-section (3) to provide such further information as it considers necessary in

relation to the application, in such form or verified in such manner as the Authority may direct.

23H. **Duties and responsibilities of a system operator.**—(1) A system operator shall, from time to time and subject to approval by the Authority, make such grid management code as may be required to enable it to carry out its functions as a system operator.

(2) A system operator shall regulate its operations, standards of practice and business conduct in accordance with policies and procedures as approved by the Authority.

(3) The Authority may, if required in the public interest, direct the system operator to make such grid code or amend its existing grid code as it may specify in writing:

Provided that if the system operator does not comply with the directions of the Authority within a period of thirty days without providing just cause for such non-compliance to the Authority, the grid code of the system operator shall be deemed to have been made or amended, as the case may be, and shall take effect accordingly.”.

29. **Amendment of section 24, Act XL of 1997.**—In the said Act, in section 24,—

- (a) for the word “SHYDO”, the word “PEDO” shall be substituted; and
- (b) the expression “generation, transmission or distribution” shall be omitted.

30. **Amendment of section 25, Act XL of 1997.**—In the said Act, in section 25,—

- (a) in sub-section (1),—
 - (i) after the words “grant licences”, the words “or registration under this Act” shall be inserted;
 - (ii) the expression “for generation, transmission and distribution of electric power” shall be omitted; and
 - (iii) after the words “more licensees”, the words “or registered persons” shall be inserted;

- (b) in sub-section (3), after the words "a licensee", the words "or registered person" shall be inserted and the expression "for generation, transmission and distribution of electric power, as the case may be" shall be omitted.

31. **Insertion of section 25A, Act XL of 1997.**—In the said Act, after section 25, amended as aforesaid, the following new section 25A shall be inserted, namely:—

"25A. **Registration.**—(1) Any person providing electric power services, other than generation under Chapter IIA or an electric power service requiring a licence under this Act, shall be registered with the Authority in the manner and subject to such conditions as may be prescribed.

- (2) Without prejudice to the generality of sub-section (1), a person registered under this section shall, at all times,—

- (a) maintain the prescribed minimum capital requirement;
- (b) maintain adequate facilities to ensure efficient provision of the service it is registered to provide; and
- (c) comply with the provisions of this Act and the rules and regulations made hereunder."

32. **Amendment of section 26, Act XL of 1997.**—In the said Act, in section 26, after the word "issued", the words "or registration granted" shall be inserted.

33. **Amendment of section 27, Act XL of 1997.**—In the said Act, in section 27,—

- (a) for the words "for generation, transmission and distribution of electric power", the words "or a registered person, as the case may be" shall be substituted; and
- (b) after the word "licence", the words "or registration" shall be inserted.

34. **Insertion of Chapter IIIA, Act XL of 1997.**—In the said Act, after section 27, amended as aforesaid, the following new Chapter IIIA shall be inserted, namely:—

"CHAPTER III A**ENFORCEMENT**

27A. Investigation and proceedings by the Authority.—(1) The Authority may appoint not less than two officers to conduct investigations in respect of any matter that is a violation of this Act, the rules, regulations and codes made thereunder or the conditions of a licence issued or registration granted under this Act, as the case may be.

(2) The Authority, in the notice of appointment of investigation officers under sub-section (1), shall specify—

- (a) the reason for initiation of investigation;
- (b) the possible violations which are to be investigated; and
- (c) the time frame within which the investigation is to be completed:

Provided that a copy of the notice of investigation shall be provided to the persons under investigation, who shall be bound to facilitate the investigation officers in all aspects of the investigation.

(3) When an investigation has been ordered under sub-section (1), an investigating officer may, by notice in writing, require any person to produce before him such books, registers or documents as are in custody or under control of that person.

(4) A person who obstructs or hinders an investigating officer while exercising any of the powers under this section or deliberately fails to produce any such books, registers or documents as are required by the Authority or an investigating officer, shall be liable to—

- (a) proceedings under sections 27B and 28, where the Authority is of the view that non-compliance with the investigation would adversely affect the interest of the consumers of the person under investigation and where the person under investigation is a licensee or a registered person; and
- (b) imposition of penalty under section 27B, in all other cases.

(5) Any person aggrieved by the conduct of an investigating officer may lodge a complaint in respect thereof to the Authority.

(6) The Authority shall, within fifteen days of receipt of the complaint under sub-section (5), commence a hearing to determine the veracity of such complaint in accordance with the specified procedure.

27B. Penalty for default or contravention.—Any person who acts in contravention of this Act or the rules and regulations made thereunder or fails to comply with the conditions of a licence issued or registration granted to that person and such person is a party to such contravention shall be punishable in case of—

- (a) a company, with a minimum fine of ten million Rupees which may extend to two hundred million Rupees and, in the case of a continuing default, with an additional fine which may extend to one hundred thousand Rupees for every day during which the contravention continues; and
- (b) an individual, with a minimum fine of one million Rupees which may extend to ten million Rupees and, in the case of a continuing default, with an additional fine which may extend to ten thousand Rupees for every day during which the contravention continues:

Provided that a fine shall only be imposed under this section after providing a reasonable opportunity of being heard to the person alleged to be in contravention:

Provided further that where the person is a generation company, a licensee or a person registered under this Act, a penalty imposed under this section shall not be treated as a cost for the purposes of tariff determination by the Authority.

27C. Prohibition order.—(1) The Authority may, after recording reasons in writing, for continuing violations of this Act or the rules or regulations made thereunder—

- (a) prohibit a generation company, a licensee or a registered person, from providing electric power services; or
- (b) in the case of a generation company, prohibit any or all persons from purchasing electricity from such generation company; or
- (c) require a generation company, a licensee or a registered person, to improve the provision of electric power services so as to ensure compliance with this Act and the rules and regulations made thereunder.

(2) The Authority may, either on its own motion or on the application of a generation company, a licensee or a registered person, against whom a prohibition or requirement has been imposed under sub-section (1), rescind or vary such prohibition or requirement if the Authority is satisfied that no violation of this Act or rules or the regulations made thereunder exists to that extent.”

35. Amendment of section 28, Act XL of 1997.—In the said Act, in section 28,—

(a) for sub-section (1), the following shall be substituted, namely:—

“(1) Notwithstanding anything contained in section 27B, the Authority may suspend or revoke any licence issued or registration granted under this Act for consistent failure of the licensee or registered person to comply with the conditions of the licence or registration:

Provided that before taking action under this section, the Authority shall issue a notice to show cause and may provide an opportunity to rectify the omission subject to such conditions as the Authority may specify.”;

(b) in sub-section (2),—

(i) after the word “licence”, occurring twice, the words “or registration” shall be inserted; and

(ii) in clause (a), after the word “licensee”, the words “or registered person” shall be inserted;

(c) in sub-section (3),—

(i) after the word “licensee”, occurring twice, the words “or registered person” shall be inserted; and

(ii) after the words “whose licence”, the words “or registration” shall be inserted.

36. Omission of section 29, Act XL of 1997.—In the said Act, section 29 shall be omitted.

37. Amendment to section 30, Act XL of 1997.—In the said Act, in section 30, for the expression “SHYDO”, wherever occurring, the expression “PEDO” shall be substituted.

38. **Insertion of Chapter IIIB, Act XL of 1997.**—In the said Act, after section 30, amended as aforesaid, the following expression shall be inserted, namely:—

“CHAPTER IIIB

TARIFF”

39. **Substitution of section 31, Act XL of 1997.**—In the said Act, for section 31, the following shall be substituted, namely:—

“31. **Tariff.**—(1) The Authority shall, in the determination, modification or revision of rates, charges and terms and conditions for the provision of electric power services, be guided by the national electricity policy, the national electricity plan and such guidelines as may be issued by the Federal Government in order to give effect to the national electricity policy and national electricity plan.

(2) The Authority, in the determination, modification or revision of rates, charges and terms and conditions for the provision of electric power services shall keep in view—

- (a) the protection of consumers against monopolistic and oligopolistic prices;
- (b) the research, development and capital investment programme costs of licensees;
- (c) the encouragement of efficiency in licensees, operations and quality of service;
- (d) the encouragement of economic efficiency in the electric power industry;
- (e) the economic and social policy objectives of the Federal Government; and
- (f) the elimination of exploitation and minimization of economic distortions.

(3) Without prejudice to the generality of sub-section (2), the following general guidelines shall be applicable to the Authority in the determination, modification or revision of rates, charges and terms and conditions for provision of electric power services, namely:—

- (a) tariffs should allow licensees the recovery of any and all cost prudently incurred to meet the demonstrated needs of their customers:

Provided that assessments of licensees' prudence may not be required where tariffs are set on other than cost of service basis, such as formula based tariffs that are designed to be in place for more than one year;

- (b) tariffs should generally be calculated by including a depreciation charge and a rate of return on the capital investment of each licensee commensurate to that earned by other investments of comparable risk;
- (c) tariffs should allow licensees a rate of return which promotes continued reasonable investment in equipment and facilities for improved and efficient service;
- (d) tariffs should include a mechanism to allow licensees a benefit from and penalties for failure to achieve the efficiencies in the cost of providing the service and the quality of service;
- (e) tariffs should reflect marginal cost principles to the extent feasible, keeping in view the financial stability of the sector;
- (f) the Authority shall have a preference for competition rather than regulation and shall adopt policies and establish tariffs towards that end;
- (g) tariffs may be set below the level of cost of providing the service to consumer categories consuming electric power below such consumption levels as may be prescribed, as long as such tariffs are financially sustainable;
- (h) tariffs should, to the extent feasible, reflect the full cost of service to consumer categories with similar service requirements;
- (i) tariffs should seek to provide stability and predictability for customers; and
- (j) tariffs should be comprehensible, free of misinterpretation and shall state explicitly each component thereof;

Provided that the Authority shall strike a balance to the extent possible, among the general guidelines in order to optimize the benefits to all persons likely to be affected by the determination, modification or revision of rates, charges and terms and conditions.

- (4) Subject to sub-sections (2) and (3), the Authority shall, in the public consumer interest, determine a uniform tariff for distribution licensees wholly owned and controlled by a common shareholder, on the basis of their consolidated accounts.
- (5) The Authority may specify procedures for determination, modification or revision of rates, charges and terms and conditions for provision of electric power services, including without

the time frame for decisions by the Authority on tariff applications;

- a) opportunity for customers and other interested parties to participate meaningfully in the tariff approval process; and
- (c) protection for refund, if any, to customers while tariff decisions are pending.

The time frame for determination by the Authority on tariff petition shall not exceed four months after the date of admission of the tariff petition:

Provided that this time frame shall commence after the applicant has complied with all requirements of rules and regulations and the Authority has admitted the tariff petition.

- (7) Notification of the Authority's approved tariff, rates, charges and other terms and conditions for the supply of electric power services by generation, transmission and distribution companies shall be made by the Federal Government in the official Gazette, within fifteen days of intimation of the final tariff by the Authority:

Provided that the Authority may, on a monthly basis and not later than a period of seven days, make adjustments in the approved tariff on account of any variations in the fuel charges and policy guidelines as the Federal Government may issue and notify the tariff so adjusted in the official Gazette.”

40. **Amendment of section 32, Act XL of 1997.**—In the said Act, in section 32,—

- (a) in sub-section (1), for the word “prescribe”, the word “specify” shall be substituted;
- (b) in sub-section (2),—
 - (i) for the word “prescribed”, the word “specified” shall be substituted; and
 - (ii) after the word “company”, the expression “, the provincial grid companies” shall be inserted.

41. **Insertion of Chapter IIIC, Act XL of 1997.**—In the said Act, after section 32, amended as aforesaid, the following shall be inserted, namely:—

“CHAPTER IIIC

PERFORMANCE AND STANDARDS”

42. **Amendment of section 34, Act XL of 1997.**—In the said Act, in section 34, for the word “prescribe”, the word “specify” shall be substituted.

43. **Amendment of section 35, Act XL of 1997.**—In the said Act, in section 35,—

- (a) for the words “encourage the development of”, the word “specify” shall be substituted;
- (b) after clause (a), the following new clauses shall be inserted, namely:—
 - “(aa) technical standards for construction of electrical plants, electric lines and connectivity to the grid;
 - (ab) grid standards for operation and maintenance of transmission lines.”

44. **Insertion of section 35A, Act XL of 1997.**—In the said Act, after section 35, amended as aforesaid, the following new section 35A shall be inserted, namely:—

35A. Offices of complaints regarding over-billing etc.—(1)
Notwithstanding anything contained in section 38 or section 39, the

Authority may establish district level complaint offices to hear and decide complaints regarding overbilling, non-compliance of instructions respecting metering and collection of approved charges, disconnection in case of non-payment of charges, electric power theft and use of energy for purposes other than for which it was supplied.

- (2) The manner and procedure whereby consumers and licensees may make complaints under this section shall be specified:

Provided that the office of complaints shall, on receipt of a complaint and before taking any action thereon, give notice to the licensee or any other person against whom such complaint has been made to show cause and provide such licensee or such other person an opportunity of being heard.

- (3) If, on inspection by an office of complaints, a willful contravention against a licensee or any other person is established, a licensee person and any such anyother person that is party to the contravention shall be punishable in case of—

- (a) a licensee, with a fine under section 27B;
- (b) an employee of a licensee who is found to be party to the contravention complained of, to imprisonment for a term which may extend to three years or to a fine which may extend to ten million Rupees or to both;
- (c) a consumer that is a company, with a fine under section 27B; and
- (d) any other individual who is found to be party to the contravention complained of, to imprisonment for a term which may extend to three years or to a fine which may extend to ten million Rupees or to both.

45. **Amendment of section 36, Act XL of 1997.**—In the said Act, in section 36, for the words “prescribe” and “prescribed”, the words “specify” and “specified” shall respectively be substituted.

46. **Amendment of section 38, Act XL of 1997.**—In the said Act, in section 38, in sub-section (3), for the word “prescribed”, the word “specified” shall be substituted.

47. **Insertion of Chapter IV A, Act XL of 1997.**—In the said Act, after section 39, the following shall be inserted, namely:—

“CHAPTER IVA

MISCELLANEOUS”

48. **Amendment of section 44, Act XL of 1997.**—In the said Act, in section 44,—

- (a) the word “prescribed”, occurring for the first time, shall be omitted;
- (b) the words “fine or other” shall be omitted; and
- (c) for the expression “as prescribed from time to time”, the words “under this Act” shall be substituted.

49. **Substitution of sections 46 and 47, Act XL of 1997.**—In the said Act, for sections 46 and 47, the following shall be substituted, namely:—

“46. **Rules.**—1) The Federal Government may, either on its own motion or on recommendation of the Authority and by notification in the official Gazette, make rules for matters required to be prescribed under this Act:

Provided that the power to make rules conferred by this section shall be subject to consultation with the Authority and the Provincial Governments and be subject to previous publication for eliciting public opinion thereon within a period of not less than fourteen days from the date of publication:

Provided further that in case of a disagreement between the Federal Government and the Provincial Governments, such rules shall be referred to the Council of Common Interests for a decision thereon.

(2) Without prejudice to the generality of the foregoing powers, such rules may provide for—

- (a) procedure for seeking nominations of members of the Authority and the Appellate Tribunal from the Provincial Governments;
- (b) publication of rates and charges of electricity consumption;

- (c) procedure for submission of various reports to the Council of Common Interests or to the Federal Government and the manner of preparation of such reports;
- (d) procedure for inquiry and investigation into affairs of an applicant for a licence and for any contravention of any provision of this Act;
- (e) seeking of information; and
- (f) any other matter incidental or consequential.

47. **Regulations.**—(1) The Authority may, for performance of its functions under this Act and by notification in the official Gazette, make regulations not inconsistent with the provisions of this Act and the rules.

(2) Without prejudice to the foregoing powers, such regulations may provide for—

- (a) appointment of officers, members of staff and such other persons and the terms and conditions of their service;
- (b) the form and manner of applications to be made for a licence for generation, transmission or distribution facilities;
- (c) the fees and documents to be accompanied with the applications for licences;
- (d) procedure for metering, billing and collection of electric power charges by the licensees;
- (e) procedure for resolving disputes amongst the licensees and consumers;
- (f) manner and procedure of show cause notices; and
- (g) any other matter incidental or consequential.

(3) The power to make regulations conferred by this section shall be subject to the condition of previous publication and before making any regulations the draft thereof shall be published in two newspapers of wide circulation for eliciting public opinion thereon within a period of not less than thirty days from the date of its publication.”

50. **Addition of sections 48, 49, 50 and 51, Act XL of 1997.**—In the said Act, after section 47, substituted as aforesaid, the following new sections shall be added, namely:—

- “48. **Power of the Authority to issue directives, circulars, guidelines, etc.**—The Authority shall have the power to issue such directives, codes, guidelines, circulars or notifications as are necessary to carry out the purposes of this Act and the rules and regulations made hereunder.
49. **Cognizance of offences.**—Notwithstanding anything contained in the Code of Criminal Procedure, 1898 (Act V of 1898), no court other than the court of sessions shall take cognizance of an offence under this Act except on a complaint by an officer authorized in this behalf by the Authority.
50. **Savings.**—(1) Notwithstanding anything contained in the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018 or any repeal effected thereby, nothing shall affect or be deemed to affect anything done or any action taken or purported to have been taken, including any rule, regulation, notification, determination, order or notice made or issued, any approval, appointment or declaration made, any operation undertaken or direction given, any proceedings taken or any penalty, punishment or fine imposed under this Act before the commencement of the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018.
- (2) Subject to sub-section (1), any order, rule, notification, regulation, appointment, conveyance, deed, document or direction made, fee directed, determination given, proceedings taken, instrument executed or issued or thing done under or in pursuance of any provision of the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018 shall, if in force before the commencement of the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018, continue to be in force and shall have effect as if made, directed, passed, given, taken, executed, issued or done under or in pursuance of this Act:

Provided that, pursuant to the coming into effect of the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018, the rules and regulations issued under this Act shall be brought into conformity with the amended provisions of this Act, wherever required, within a period of one

year from the date of coming into effect of the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018.

- (3) Any person appointed to any office prior to the coming into force of the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018 shall be deemed to have been appointed to that office under and by virtue of this Act and any condition or term of service or employment modified through the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018 shall not have retrospective application or effect."

51. **Validation.**—Anything done, actions taken, orders passed, instruments made, notifications issued, agreements made, proceedings initiated, processes or communications issued, powers conferred, assumed or exercised by the Federal Government in terms of sub-section (5) of section 31 on or after the first day of July, 2008 till the coming into force of the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018 shall be deemed to have been validly done, made, issued, taken, initiated, conferred, assumed and exercised and shall be deemed to have effect accordingly."

TAHIR HUSSAIN,
Secretary.



GOVERNMENT OF KHYBER PAKHTUNKHWA
ENERGY & POWER DEPARTMENT

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No.SO(Power-II)/E&P/3-

Dated Peshawar the, 06.10.2020

TO WHOM IT MAY CONCERN

WHEREAS, the Government of Khyber Pakhtunkhwa (GoKP) has incorporated Khyber Pakhtunkhwa Transmission & Grid System Company (Private) Limited.

WHEREAS, the KPT&GSC requires a license under section 18-A of the regulation of Generation, Transmission & Distribution of Electric Power Act 1997 from NEPRA authorizing it to engage in transmission of electric power within the territorial limits of Khyber Pakhtunkhwa.

NOW THEREFORE, Government of Khyber Pakhtunkhwa, being the owner of KPT&GSC, further undertakes to provide minimum solvency requirements of KPT&GSC are required for being eligible for grant of license as a provincial Grid Company within the province of Khyber Pakhtunkhwa as required under the regulation of Generation, Transmission & Distribution of Electric Power Act 1997, as amended by Act No. XII of 2018 (NEPRA ACT).

(Muhammad Zubair)
Secretary, Energy & Power Department
Government of Khyber Pakhtunkhwa

HUMAN RESOURCE MANUAL
FOR
KHYBER PAKHTUNKHWA TRANSMISSION &
GRID SYSTEM COMPANY

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1 Background & Introduction

1.1 Objectives and Scope

This Human Resources Manual (HRM) outlines the policies and procedures to be followed by Khyber Pakhtunkhwa Transmission & Grid System Company (KPTGC or the Company).

The HRM is used in conjunction with the memorandum and articles of association and rules and regulations of KPTGC.

The purpose of this manual is to define HR policies and procedures of KPTGC. The manual provides a statement of applicable KPTGC policies and procedures; further clarifications are issued from time to time and incorporated in this manual. It governs the legal and ethical relationship between KPTGC and its staff, thereby setting the rights and obligations for both.

The HRM specifies the terms and conditions of service of employees (permanent, fixed term and consultants) based at KPTGC office.

The HRM is periodically amended and it is the responsibility of the GM-HR or his/her designate to update the manual, have it approved by the concerned authorities and place a readable copy on the server to ensure an easy access for all the employees.

Approving authority has to be Board of Directors - BoD or a subcommittee duly authorized by the BoD and comprising Board members. The suggestions for approval or otherwise will be placed before the Board for final decision.

1.2 Introduction

This manual is designed to acquaint staff with the Human Resource policies and procedures of KPTGC and provide information about working conditions, general employment guidelines, and employee benefits. KPTGC has developed this manual within the context of local conditions, international best practices, and the Government of KPK laws and regulations. The manual will serve as an on-going reference and guide for KPTGC employees in carrying out their duties and responsibilities and the services offered by Human Resource Unit to facilitate the employees.

The policies and procedures in this manual have been established to assist employees in understanding what is expected of them during their employment with KPTGC. This manual contains confidential information that the staff must not publish or distribute without prior written approval of the Managing Director of

KPTGC.

Human Resource manual once approved by the BoD must be reviewed at least once in every two years

At the time of its review the following process will be followed.

- a. The HR Manual will be circulated by the Human Resource Unit to all staff and a time of, not less than, 15 working days will be given to suggest amendments in the same, if any.
- b. Each staff member will submit their comments/suggestions, if any, to their respective Head of Departments within the time period.
- c. At the end of the stipulated time a meeting of HODs will be called and the changes proposed by the different staff members will be discussed
- d. All office orders/official memos/notifications released, related to Human Resource/ Human Resource manual, during the preceding two years will also be brought to the forum for discussion and debate
- e. All suggestions/propositions/recommendations by the Head of Departments ("HODs" means General Manager of each department) will be duly recorded by the HR Unit and presented to the MD.
- f. The MD along with GM-HR will present the suggestions/ recommendations to the Board in the next meeting.
- g. The amendments approved by the Board of Directors will be incorporated in the manual by the HR unit and will be considered effective from the date of approval.

1.3 Values of the Organization

1. Core values of KPTGC are of pivotal significance as they define organizational culture.
2. These values determine whether people work in an open and trusting environment where opinions are valued and are not tainted by suspicion and tension.
3. The Company has a set of five values aimed at clear expectations of personal interaction and setting boundaries beyond which behavior becomes objectionable. Positive core values allow KPTGC employees and volunteers to identify with the organization. They tell them where they stand in relation to the goals of the organization and empower them to ensure the credibility of

KPTGC as an organization in the eyes of customers/donors.

4. KPTGC staff is expected to abide by the following five values and these values should reflect in all aspects of their work and conduct.
5. These simple, but extremely meaningful values are an integral part of our daily lives and an essential part of Company's Evaluation System. New colleagues are expected to take it upon themselves to develop through detailed discussions with colleagues; a deeper and shared understanding of how these five values should be interpreted. The Company challenges your ability to think of innovative ways of creating daily examples.
6. We, at KPTGC respect and adhere to our following core values and expect the same from our new team members:

1.3.1 Value People

Respect people we work with: Male and female colleagues, clients, partners and stakeholders. Listen to and value the ideas and opinions of others to provide and listen to constructive feedback. Work together as a team and respond to special needs of everyone we work with.

1.3.2 Value Integrity

- i. Build Trust
- ii. Follow open and transparent procedures
- iii. Work for the greater good of the Company and its stakeholders
- iv. Discuss difficult ideas openly
- v. Adhere to the highest ethical values
- vi. No conflict of interest situations
- vii. Zero tolerance for corruption

1.3.3 Value Relationships

- i. Commit to value diversity and difference
- ii. Commit to build relationships and partnerships based on mutual benefit
- iii. Commit to be aware of our impact on others
- iv. Commit to be ready to learn from others
- v. Benchmark best practices

1.3.4 Value Creativity

- i. Feel empowered to take work related decisions
- ii. Take personal initiative
- iii. learn from experiences
- iv. Respond flexibly to new challenges and opportunities
- v. Express our feelings
- vi. Share knowledge
- vii. Believe in improving ability to retain, motivate, develop and reward team members
- viii. Deliver on promises to internal and external clients and stakeholders
- ix. Comply with organization and client requirements
- x. Account for our actions
- xi. Continuously improve upon our professional standards, ensuring better trained and more versatile teams in the development sector and beyond.
- xii. Invest in capacity-building of our colleagues, improving the organization's relationship with its team members through improved communication channels facilitating improved and informed decision making and operations by means of effective articulation of goals and strategies.

1.3.5 Equal Opportunity Policy

The Company believes that equal opportunity helps to ensure that there is no discrimination in the recruitment, retention, training and development of staff on the basis of gender, marital status, religion and belief, political opinion, race, age, disability, socio-economic or cultural background, on the basis of having or not having dependents, or any other. As an organization we are committed to equality of opportunity and inclusion. Efforts shall be made that men and women staff members have equal access to opportunities at all levels of the organization through ensuring gender sensitive selection processes for appointments, promotion and training. The Company will ensure to increase the proportion of women staff members at all levels where they are under-represented. Until gender balance is achieved at all levels, affirmative action will be taken at all levels (Official/Employee), priority will be given to men and women candidates when equally qualified in a gender imbalanced environment.

We also believe that our merit-based Equal Opportunity Policy benefits employees, potential employees, partners, clients and stakeholders and helps achieve dignity at work as well as contributing to providing the best possible service to all stakeholders.

As a member of the KPTGC team, the employees are responsible to fully subscribe to this core value and point out whenever they identify a failure, in full adherence or compliance or recommend change or addition to the procedures that need to be followed in order to enhance professional environment of the organization.

1.4 General Guidelines

1.4.1 Identity Cards

All employees are provided with identity cards. Those on temporary appointment get temporary documents, while those on permanent appointment will acquire sealed identity cards. These remain the property of the organization and must be returned on termination of appointment before terminal benefits are paid.

1.4.2 Personal files

1. For each employee (temporary or permanent) a personal file is prepared. The HR Manager/ Officer is responsible for maintenance of the personal files.
2. He/she will ensure that the employee files are kept up to date with maximum safety and confidentiality (he/she can ask the Admin Officer to do the executive work for this but then has to control the files on a regular basis, remaining the finally responsible person for the accuracy of these files).
3. The following persons can access the personal files:
 - i. Managing Director
 - ii. Relevant Head of Departments
 - iii. Project Manager
 - iv. Human Resource Unit
4. The employee will access his/her personal file if seeking for some specific document. This is done in the presence of the Personnel of Human Resource Unit after permission of their Head of Department/Incharge.

1.4.3 Politics & religion

1. The organization is a private limited company owned by Government of Khyber Pakhtunkhwa, which exists to engage in the business of Transmission and Dispatch of electricity throughout the province of Khyber Pakhtunkhwa.

(regardless of tribe, religion or political color), in order that they may access opportunities for sustained improvement in their lives. Therefore, the organization has no political/religious affiliation.

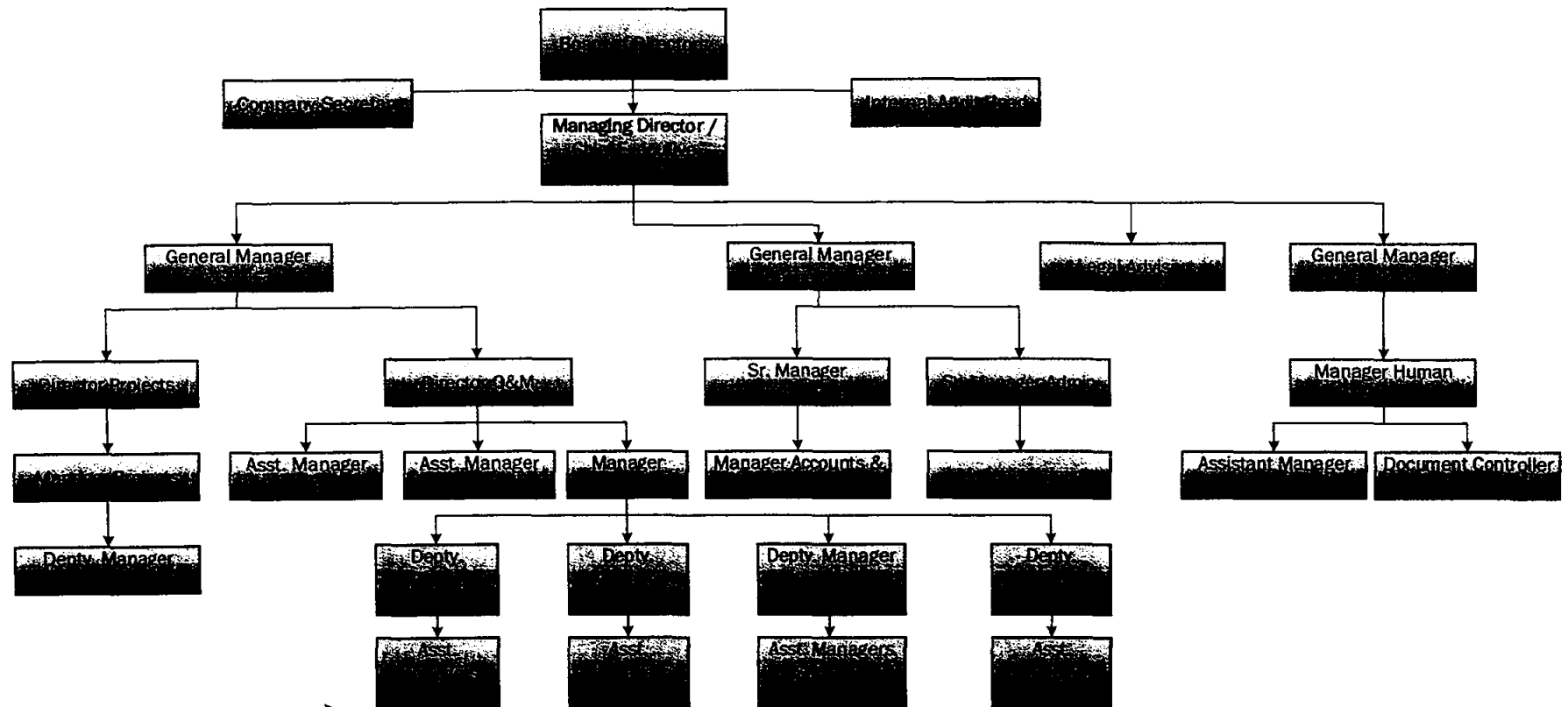
2. The properties and facilities of the organization shall not be used for any political or religious purpose.
3. Employees should express their personal political/religious beliefs without in any way involving the organization directly or indirectly. If the organization feels that religious or political involvement is conflicting the interests of the organization, the employees can be disciplined.

1.4.4 Suggestion/Complaint Box

1. A suggestion or complaint box to be placed in every department so that employees can freely communicate with the management through it without hesitation.
2. It should be opened fortnightly; making sure that complaint box of each department is opened by the representative of any other department and not by the respective department themselves.
3. Managers to conduct an initial meeting on the suggestions made and filter down those which are in best interest of the whole organization.
4. Managers that are to be involved in the meeting shall be from all departments.
5. Any suggestion or complaint that is considered shall be moved up the hierarchy till it can get its final approval/disapproval from BoD.

2 Organizational Structure

The initially proposed organizational structure of Khyber Pakhtunkhwa Transmission & Grid System Company is as follows:



2.1 HR Requirement

S. No.	Designation	Proposed No. of Position
1.	Managing Director	1
2.	Company Secretary	1
3.	Internal Audit Head	1
4.	General Manager – Technical	1
5.	General Manager Finance & Procurement	1
6.	General Manager Human Resource & Admin	1
7.	Legal Advisor	1
8.	Director Projects	1
9.	Director O&M	1
10.	Manager Projects	1
11.	Depty. Manager Projects	1
12.	Manager O&M	1
13.	Depty. Manager (Grid)	1
14.	Depty. Manager (T/L)	1
15.	Depty. Manager SCADA & Telecom	1
16.	Depty. Manager P&I	1
17.	Asst. Manager Technical	10
18.	Asst. Manager Civil	1
19.	Sr. Manager Accounts & Finance	1
20.	Manager Accounts & Finance	1
21.	Sr. Manager Procurement	1
22.	Manager Human Resource & Admin	1
23.	Asst. Manager HR & Admin	1
24.	Document Controller Officer	1
25.	Computer Operator	1
26.	Office Boy	2
27.	Drivers	4
28.	Receptionist	1
29.	Janitor	2
30.	Security Guard	4

3 Conditions of Employment

3.1 Working Hours

The standard working day will be of 8 hours (40 hours per week) while the KPTGC management will announce duty hours from time to time. Duty hours for each individual employee will be specified in his/her contract and may differ from the standard working hours. Staff may be required to adjust their daily schedules to accommodate meetings, travel or business obligations. With the approval of competent authority, flexible hours may be adopted during the month of Ramadan. In support of the policy on Work/Family Responsibilities, both men and women single parents may be allowed flexible hours to help them in childcare.

3.2 Attendance

Company successful operation depends in large part on regular and timely attendance of each of its staff as each job fits into a pattern of operation.

3.3 Dress Code

1. The Company expects all office staff (other than staff who are given uniforms) to wear office attire at all times when working.
2. This can be either Western or Pakistani national dress, which will not cause offence to other staff, clients and stakeholders.
3. The precise nature of this attire is not specified but staff should at all time have a professional appearance and should dress neatly and tidily.

3.4 Contract

1. No one at KPTGC works without a formal contract.
2. All our contracts specify agreed upon roles, responsibilities and compensation.
3. This is employees' professional obligation to honor all their commitments and obligations in the contracts with the Company
4. All staff positions at KPTGC are initiated by the HOD concerned against pre-approved positions and budgets.
5. Generally, the Company issues the following types of contracts:
 - i. Permanent Employment
 - ii. Consultant
 - iii. Fixed Term Contract/Trainee/Intern

3.5 Contract Preparation

1. The issuance of contract is centralized at KPTGC and Managing Director/General Manager HR signs all employment contracts.
2. HR unit will prepare all contracts on receipt of a completed/signed of the contract preparation request.
3. Employee's contract supersedes all prior verbal or written understanding and specifies his/her initial department/unit of work, Terms of Reference (TOR), starting salary, allowances and benefits.
4. The contract is a confidential document. Each contract will be made out in two original sets, one for the employee, and the other for Human Resource Unit (HRU) record keeping.
5. All the new employees falling under the category of permanent and fixed term basis will be given an offer letter before joining KPTGC.
6. Upon joining, a Contract Letter will be issued, which would specify his/her category of employment.
7. A joining report from the employee would be required on the first day. An employee on fixed-term contract can be extended or changed to the status of permanent employee depending on performance, organizational needs and available resources. Such employee may not require completing three months probationary period unless specified by the (Head of Department).
8. Since Human Resource Unit (HRU) maintains a depository of all contracts, HRU will maintain his/her personal file. HRU will update a record of any subsequent changes in designation, salary, TOR, or performance appraisals etc.
9. Employees are also required to inform the HRU if there are any subsequent changes in individual's details or status.

3.6 Probation

1. All permanent employees will be required to complete three/six months and contractual staff will be required the probation period as per contract unless waived by the Managing Director at the time of issuing a contract. However, the Managing Director, may, if necessary, extend the probation for another period.
2. During the probationary period, the appointment might be terminated with one-week notice by either side, unless specified differently in contract.

3. Permanent/Contractual staff on probation will not be entitled to annual leave.
4. The Company encourages the employee to discuss and agree with his/her Manager to set targets and deliverables for first 90 days and the achievement of the set criteria will result in the employee's confirmation.
5. On satisfactory completion of probation, and on recommendation of the Line Manager, the Human Resource Unit will issue a confirmation letter of appointment.

3.7 Non-Disclosure and Duty of Disclosure Policy

1. It is pertinent to conform and comply with the non-disclosure policy of the organization in order to observe confidentiality with regard to financial information, operational activities, administrative or any other function of the organization. Revealing of any organizational practices for personal gains is strictly prohibited and will have disciplinary action.
2. It is the duty of every employee to disclose outside business interests or activities where these may be in conflict with or detrimental to the interests of KPTGC. If the employee is in doubt about disclosure one should discuss the matter with Line Manager or senior management.
3. Legal Proceedings/Criminal Record: If the applicant had been involved in legal proceedings, or have record of any criminal convictions, which may discredit the KPTGC or bring it adverse publicity, he/she must disclose the details at the time of joining. Failure to do so will be treated as concealment that can and will be a major cause of termination of services without any benefits. In such cases the final decision rests with the competent authority.

3.8 Treatment of Disclosure

All disclosures will be treated as confidential by the Line Managers (Immediate incharge) or senior management and they will only disclose the information further on a strict need basis.

3.9 Services Provided and joining Date

1. Employee service period for the purpose of calculating annual leave begins from the date of joining the service against a permanent position subject to the successful completion of probationary period.
2. In case of Trainees (Interns) or contract employment, if KPTGC offers permanent employment, the First Day of temporary employment will be considered as the Employment Date for all purposes except, Provident Fund

and Annual leaves.

3.10 Relocation

1. Employee can be relocated in different cities subject to approval of Managing Director. The purpose of relocation might be to accomplish specific projects, reduce accommodation and staff cost or enhancement of operational efficiency. Relocation of individual must be approved and documented.
2. Relocation notice must be provided in time in advance.

3.11 Working from Home

1. The organization, in principle, does not prefer working from home option unless the situation is unavoidable.
2. Situations in which working from home may be allowed include:
 - a. General Strikes
 - b. Riots
 - c. Security Threats
 - d. Or any other situations in which traveling from home to office and back is considered impossible or too dangerous.

3.12 Change to Another Position

If an employee is transferred or promoted to another position in the organization, his/her salary will be reviewed according to the salary group of the new position.

3.13 Overtime

Management and professional staff might be required to work overtime and/or work outside standard work hours from time to time. There is no extra compensation for overtime worked except for the lower staff. Line Manager will try to coordinate the employee's schedule so as to maintain overtime within reasonable limits. While determining the overtime schedule, due consideration shall be given to nursing mothers and single parents to cater for their child bearing responsibilities.

4 Recruitment / Induction Procedure

4.1 Recruitment Policy / Procedure

1. It is KPTGC policy to select employees based on a thorough screening for clearly defined selection criteria which will be determined by the Selection Committee. All candidates nominated for positions are interviewed by the Selection Committee to ensure that they fulfill all the requirements of the position. KPTGC will develop special recruitment measures that incorporate gender in the selection process for all candidates and at all levels.
2. A thorough reference check of all candidates nominated for assignments is conducted. This can be done verbally or in a written form KPTGC will verify the given information with the applicant's references and has the right to not offer employment based on negative reference checks or misstatement of previous salaries.

The following procedures are followed for the recruitment of all employees irrespective of the duration of their employment or category.

- a) Request for Recruitment of Staff Member

4.2 Number of Positions

1. Each department will forecast its workload according to the budgets prepared/ allocated and the amount of work to be performed by designated personnel.
2. The Managing Director for each financial year approves the number of positions for each department/unit based on the existing and expected workload.

The Managing Director on behalf of the BoD confirms all appointments in writing.

4.3 Staff Requisition

Recruitment process is initiated for a new vacancy either due to staff resignation, workload or skill requirements and the Head of Departments requests hiring through a Staff Requisition Request (Annex-1) to the Human Resource Unit.

4.4 Requisition Approval

The Human Resource Unit initiates the Recruitment Process on receipt of the Staff Requisition Request.

1. All recruitments are announced, both internally and externally, with the basic Selection Criteria determined by the Human Resource Unit will include the

following:

- a. Responsibilities/ Job description
 - b. Job Specification.
 - c. Competence
 - d. Qualifications
2. The Head of Department (HOD) will initiate the request to HR unit for undertaking recruitment for a certain job/ position.

The HR Head should check the request to ensure that the recruitment is budgeted and duly approved by the competent authority.

3. HR unit on receiving the request will start the process of finding relevant potential applicant through any or all of the following measures:
 - a. Searching the database with HR Unit.
 - b. Placing vacancy notice on organizational Web site's and job portals.
 - c. Circulate the vacancy amongst all Staff for internal recruitment.
 - d. Placing the vacancy in the national newspaper.
 - e. Announcement in educational and technical training institutes.
 - f. Referral sources: may include other business and public organizations.
 - g. Resource pool: The HR Unit should try to identify the talented individuals of the industry and database of these potential candidates should be maintained.
4. Vacancy notice will include the selection criteria, job description, and preferred qualifications. The vacancy advertisement will clearly indicate the equal opportunity policy of the organization to encourage both men/women candidates.
5. The HR unit will screen the CVs to the criteria and then present CVs to HODs.
6. The Human Resource Unit will short list and identify the candidates for written test and interview in consultation with the concerned department.

4.4.1 Selection Criteria and Guidelines

Short-listing Criteria: In short-listing candidates for written test and/or interview, the Selection Committee considers factors such as a) academic, professional and technical qualifications; b) working experience; c) job knowledge and technical

know-how; and d) management experience for managerial positions. A Short-listing Summary is prepared for all applications.

Final Selection Criteria: Based on the information gathered during the interview, the final selection criteria including desirable personal attributes, potential for further development, past performance, job expectation and career aspiration are applied to further evaluate the suitability of the candidates to the job.

4.4.2 Request for Candidates Information

The potential candidates would be requested to fill the Employment Application form and submit the following documents:

- a. Salary Slip (if applicable)
- b. Photocopy of educational certificates
- c. Photocopy of experience certificate (if applicable)
- d. Photograph
- e. NIC copy
- f. Medical fitness certificate
- g. Reference

4.4.3 Written Test

1. Concerned Head of Department (HOD) will design and review the questionnaire for each position (if deemed necessary) and forward it to HR unit for written test purposes.
2. The candidate should have the opportunity to appear for the test well before the interview so that the management has the time to review the test and do the necessary scoring. Any candidate appearing in written test should be provided with notice, five working days prior to the test.
3. The written test will be assessed for the following:
 - i. **Clarity:** Ability to organize thoughts and argue the case persuasively and convincingly
 - ii. **Proficiency:** Familiarity with relevant literature, studies, authors and organizations working on the issue.
 - iii. **Creativity:** Originality of ideas and concepts, ability to link concepts from various fields to demonstrate the multicultural grasp.

- iv. **Competence:** Ability to invoke and relate to previous work.
- v. **Language:** The use of language correctly and appropriately
- 4. The HoD concerned will mark the answer sheets and communicate the results to HR unit
- 5. The HR unit will compile the score and apply the weight age to prepare a ranking sheet showing ranking of the candidate in the relevant format.
- 6. **Skills Assessment Test:** A further testing may be necessary if the position requires specific skills of a technical nature e.g. computer related skills, operation of certain software and equipment/machine, driving skills etc.

4.4.4 Interviews

- 1. The panel for conducting interviews will preferably consist of three individuals comprising of at least one woman.
 - i. Head of Department or nominee
 - ii. MD or nominee
 - iii. Manager HR or nominee
- 2. The HR unit will schedule time and date with the candidates for the meeting/interview.
- 3. There will be primarily two rounds of interviews with the candidates although it is not mandatory. For relatively senior positions or as required by the HOD/management two interviews can be arranged.
- 4. The HR unit will prepare the folders for the panelist before the interview starts with the following documents.
 - i. Personal History Form
 - ii. Interview Result Form
 - iii. CV of the candidate
 - iv. Written test results
 - v. Final ranking sheet
- 5. Selection committee shall treat all candidates equally and their assessment shall be based on relevant skills/ competence (as reflected in the position description)
- 6. Selection Committee reserves the right to hire a candidate, or not. Selection

Committee's proceedings shall remain confidential to the members of the panel and shall not be disclosed to persons other than Managing Director.

7. Human Resource Unit will notify the candidates regarding the decision of the selection process.

Information Gathering during Interview: During the interview, the Selection Committee only asks questions that relate directly to the job requirements. It is unlawful to request medical information for the purpose of discriminating against applicant on the basis of disability. Assessment of the candidates and due recommendation of the Selection Committee are properly documented after interviews. All forms and documents containing personal data of applicants are returned to the Human Resource Department for record keeping, whether the applicants are selected or not.

4.5 Emergency Recruitment Procedures / Waiver:

In case of emergency situations, such as natural disasters including earthquake, floods and other unforeseen circumstances where emergency relief services are to be provided by the organization on an immediate basis, an exemption or waiver to above mentioned recruitment procedures can be obtained from the Managing Director/ BoD

4.6 Offer of Employment

The Selection Committee will make a merit list for hiring the most suitable candidate. The Human Resource Unit will finalize the terms and conditions of employment. In determining the starting salary of a prospective employee, the Human Resource Unit will consider factors such as: a) academic, professional and technical qualifications and working experience; b) recent earnings; d) market rate of the vacant position; e) availability of suitable candidates in the market; and f) KPTGC budget.

Once all details are finalized, the Human Resource Department will send an Offer of Employment (Annex 2) to the selected candidate who is required to sign the offer letter and submit it to the HR Department. The Offer of Employment will mention the job title for which the candidate is selected, a summary of the nature of work, the salary package, the expected start date and any basic terms and conditions of employment. In case the selected candidate refuses to accept the Offer of Employment, KPTGC may offer the position to the second and then the third best candidates or may restart the recruitment process.

4.7 Employment Facilities

1. Before the confirmation of appointment, the Human Resource Unit will ensure that the selected candidate fulfills the legal requirements of recruitment.
2. The selected candidate may be asked to certify his/her qualifications and working experience by producing the original copies of his/her academic and professional credentials, reference letters from previous employers and other relevant documentation.
3. If an employee provides false information or misrepresentation of facts KPTGC reserves the right to withdraw the Offer of Employment immediately, unless the employee can give a satisfactory explanation.

4.8 Contract of Employment

If the candidate accepts the offer of employment, the Human Resource Department will issue a Contract of Employment, which is signed by the Managing Director; the contract clearly mentions the detailed job description, salary package and all employment terms and conditions. Generally, the Company issues the following types of contracts:

- a. Permanent Employment
- b. Consultant (Long term & Short term)

4.9 Permanent Employment Contract

1. Employee who is appointed for an unlimited period of time, governed by the contents of the appointment letter, Terms of reference, and any additional responsibilities that may be assigned to him/her.
2. This category includes all employees except those on probation, a trainee, or a consultant.
3. The candidate, on successful completion of his/her probationary period (90 days from the date of joining) is entitled to all the benefits as per rules of the organization.
4. A permanent employee has all the leave (annual, sick and casual) entitlement on his/her avail.
5. A permanent employee will not render his/her services as part time or full time with any other organization or business entity or working as a freelance.
6. Employees are entitled for subsidized lunch as per the terms and conditions offered to any regular employee.

4.10 Contract for (long and short term) Consultants:

1. This category is for consultants and their contract is governed by the agreed terms of reference. An individual or a group of associates with specialized expertise employed by the organization for a limited period to accomplish specific services will also be included in this category. The terms of engagement shall be governed by a written contract in accordance with the policy of the organization.
2. The payment shall be based on deliverables/outputs of defined work as mutually agreed in the contract and only against an invoice (approved by HOD) charged to the organization.
3. These payments will not be made on monthly basis as a salary package. The consultant will neither be entitled to any benefits in terms of perks as defined for permanent employee nor to the leave structure (casual, sick and annual) as prescribed in the rules of the organization unless specified in the contract.
4. The consultant shall not attend any of the staff meetings without the prior approval of the Line Manager/Project Manager.

4.11 Induction & Orientation

The HRU will organize induction of new employees, which will include detailed orientation about the organization, its mission, vision, and values, its programs and projects, and key management and operational policies, procedures and systems. The induction will further include briefings by the heads of major programs and functions as well as a debriefing meeting with the Managing Director.

4.12 Human Resource / Personnel Records

The HRU will maintain personnel files of all KPTGC staff members. Each personnel file, will contain the following information:

- CV/ Resume of personal information
- At least three short listed candidates' CVs and their Interview Assessment/Feedback Forms
- Offer of Employment and acceptance
- Appointment Letter/Employment Contract
- Joining Letter
- An employment record containing position, department, responsibilities, pay rate and any other changes thereafter

- Authorization of payroll deductions
- Record of leave entitlement and utilization (Annual Records)
- Termination/Resignation data, when applicable
- Relocation approvals, if any

5 Salary / Compensation & Fringe Benefits

5.1 Salary Structure

1. KPTGC believes in the policy of equal wages for equal work for both men and women working in the organization.
2. General Manager in consultation with the Managing Director and the Human Resource Unit will approve the starting salaries for staff. KPTGC follows a multi slab salary structure for each grade/position as approved by the Board.

5.2 Monthly Salary

KPTGC will offer a competitive salary, which is according to responsibility. This will be determined on the basis of organizational budget, educational qualification, overall competencies, skills and the experience required to fulfill the requirements of the position. The minimum monthly salary shall be in accordance with the labor laws.

Salaries will be paid after submission of a complete timesheet that has been approved by a supervisor/incharge. The period covered for monthly salary payments is from the first day of the previous month until the last of the previous month. The monthly Salary is paid on or before the 5th day of the following month. Salary payment for all employees is made directly into the employee's bank accounts through written instructions to the bank.

The following forms must be filled out and attached with an employee's monthly pay record:

- a. Attendance sheet or timesheet of staff (Annex 3) and
- b. Leave balance sheet of staff

5.3 Salary Deduction

The following deductions are made from the monthly salary

1. Income tax as applicable under the prevailing laws in Pakistan. KPTGC is required to deduct income tax at source and provide a copy of the tax receipt to the concerned employee on a regular basis.
2. Advances or loan installment (if any)
3. Employee share of EOBI contribution if applicable
4. Any other cost sharing expenses
5. Any incidentals

5.4 Salary Increments

Annual salary increase (if any) are to be recommended by the relevant HODs as per the performance of the employees, which may be approved by the Managing Direction with the consultation of GM-HR and GM-Finance .

1. Increments and performance rewards shall be subject to satisfactory performance evaluations.
2. The increments in salary shall be determined annually, on merit and aimed at encouraging top performers.
3. Based on performance appraisals by respective Line Managers, the Managing Director requests the Board of Directors to approve annual increments and individual performance reward.
4. In determining increments the Board also reviews the changes in cost of living/ inflation. It is important that the Line Manager clarifies the specific performance targets and key deliverables, in consultation with the employee, either monthly or quarterly basis.
5. The annual performance appraisal will be in December for each preceding year.
6. Minimum of six months service is mandatory to become eligible for the salary increments and performance rewards.

5.5 Salary Payment

1. Salaries at KPTGC are normally paid by the 5th day of the following month to the employee's bank account.
2. Direct transfer to bank account helps to avoid any transactional delays.
3. Newly inducted employees are expected to open a bank account at the commercial bank recommended by KPTGC for purposes of salary transfer.
4. Finance Unit or designate will further advice and assist the individual in opening the account at the recommended commercial bank.

5.6 Relocation Expenses

1. Staff required to relocate in different cities within Province for six months or longer can claim travel costs of family as per actual provided the travel expenses conform to organization's travel policy. The staff will be entitled to the relocation/disturbance allowance which will be an one month salary.
2. In addition to claiming travel and baggage costs, staff will be entitled to claim

hotel room cost for up to 7 nights on relocation (as per the entitlement of the staff) between any offices that are in different cities within Province. This is to facilitate them to find long-term accommodation, only if they were unable to do so prior to being relocated.

5.7 Employee Old-Age Benefit

All employees whether regular or fixed term (excluding Trainees/interns) will be registered under the Employees Old Age Benefit Act, 1976 and their contribution/deductions will be made as required under the law.

5.8 Other Fringe Benefits

KPTGC, with the approval of BoD, may provide other fringe benefits may include the followings:

- Health insurance policy
- Group Life insurance policy
- Personal loans
- Gratuity
- Any other benefit

6 Human Resource Development and Staff Trainings

The main objective of training policy of the KPTGC is to help develop key competencies which enable individuals to perform current or future jobs successfully. Efforts will be made in providing following mandatory trainings to newly recruited individuals;

- i. Gender awareness session
- ii. Service rules orientation session
- iii. Orientation on Sexual harassment policy of the organization
- iv. Orientation on the history of the organization
- v. Job description related session

In the next phase, which may take place latter in coming years of their employment the employee may receive the following trainings/ courses?

- i. Specialized training (Job related)
- ii. Any other course/training recommended by supervisor or desired by employee her/himself.

Building the capacity of human resource is one of the key strategies that is included in the vision of an organization. KPTGC has a responsibility to support and nurture the learning/ development of its employees.

Individual training needs analysis, planning and delivery is based on broader organizational goals and employees job description. Since training and development involves investment of time as well as finances of the company, KPTGC will ensure that all trainings are meaningful and cost effective, and that the employees are provided training opportunities which will enable them to contribute towards improvement of the quality of work and productivity of the organization.

6.1 Performance Management Related Training

At the end of each calendar year, a planning process will be initiated to prepare a training strategy with plan for the next calendar year. Staff development activities will be identified to facilitate career advancement for both women and men. In addition, the performance appraisal Forms of all employees will be examined to identify common areas of training that can improve employee performance.

Following this, the HR Unit will work with the Finance Department and the Senior Management to identify the training areas that can be financed from the budget or for which donor support can be organized. An operational plan for organizational

capacity development for the calendar year will be developed which will include:

- a. List of areas where there is need of capacity development.
- b. Identification of organizations and programs- local or international that suit the training needs of KPTGC in the most cost effective manner.
- c. Schedule of training for men/women employees of various categories without affecting achievement of targets and completion of activities in time.
- d. Funding arrangements

Feedback from employees about the training and from the trainer about the trainees will be analyzed by the HR Department for future reference. Training and capacity building can take place effectively only through active collaboration between employees, their supervisors, management and the HR Unit. All training records will be maintained in the employees personnel file.

6.2 Mentoring

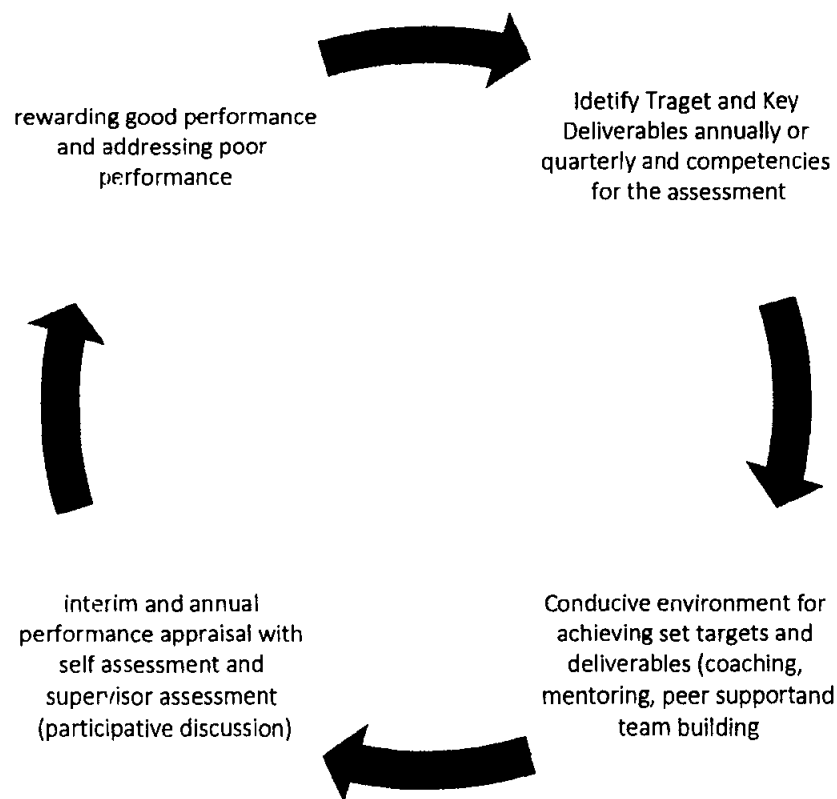
Continuing professional development includes maintaining, improving and broadening relevant knowledge and skills in any specific subject, so that it has a positive impact on practice and the learner experience. Best human resource practices have shown that coaching, mentoring, shadowing and peer support make a great deal of contribution towards professional development and growth of staff. KPTGC will establish a system of coaching for men and women staff with mentors identified at the appropriate levels.

7 Evaluation & Performance Analysis

7.1 Purpose

Performance appraisal is a continuous process of reviewing or discussing employees' job and aims at improvement of performance in the current job. Purposes of performance appraisal are:

- To review the performance of the employee as per the given work plan with comparison of actual achievement versus approved plan
- To satisfy the individual's needs for feedback on performance and motivation
- To strengthen manager - employee relationships.
- Strengthen the organization as a whole to perform better¹
- To diagnose and assess training needs for capacity building.



7.2 Performance Appraisal Approach

- Performance appraisal form will be used to assess performance training needs, career development paths, rewards, bonuses and promotions/ transfer.
- All performance evaluations will be conducted within a time frame of 6

months and annually which means that the performance appraisal form will be utilized as mentioned below:

- i. Employees goal setting period will result in agreement of key performance indicators agreement between Line Manager and employee
- ii. Interim performance appraisal interviews will be scheduled at least once in every six months.
- iii. Annual performance appraisal will be the basis for rewards, promotions and transfer as well as remedial action for poor performance.

The Human Resource Unit will ensure that the performance appraisal criteria and procedures are clearly explained to all employees in order to help them understand their roles and to know what exactly is expected from them.

The supervisor in consultation with the employee will complete the performance appraisal form. After this, the Annual Appraisal Forms will be passed on to the Managing Director for review and approval. The appraisal form of the Managing Director will be reviewed and approved by a committee of the governing body.

7.3 Appraisal Criteria

1. Key Performance Indicators:

Key Performance Indicators (KPI) will be the concrete and quantitative statements for which weightage can be allotted for verification purposes.

2. Competencies:

All staff is appraised for the following competencies and criteria:

During the appraisal interviews, gender will be given due weightage to ensure accountability for gender sensitivity.

- Technical/Professional Knowledge and Understanding.
- Problem Solving and Decision-making.
- Planning and Forecasting of Work-Related Tasks.
- Team Building and Developing Others.
- Meeting Deadlines and Commitments;
- Delegation of Responsibilities;
- Communication with Others;
- Attitude Towards Others;

- Creativity and Initiative;
- Leadership and Integrity;
- Adaptability, Flexibility and Mobility;
- Time Management;
- Dependability; and
- Personal Appearance and Image.
- Gender and cultural sensitivity.

7.4 Rewarding Good Performance

All employees depicting good and consistent performance will be rewarded. The reward can be a simple 'Acknowledgement', a 'Commendation Certificate' or an increment/ bonus added to the monthly salary depending on the budgetary allowance.

7.5 Addressing Bad Performance

If an employee is not performing at the level appropriate for his/her position then s/he will be informed and helped to overcome the poor performance through training, coaching, mentoring and close supervision. However, if there is no improvement, then continued poor performance may attract disciplinary action and may even lead to termination of the employee.

The whole procedure will be handled in a sensitive, objective and fair manner. The normal sequence of actions is as follows:

- Training and Coaching – customized but short training focused on employee's particular weaknesses.
- Supervision – employee is supervised and monitored closely to see if his/her performance improves.
- Counseling – employee is constantly reminded of the areas where he/she needs to improve and how this should be achieved; and
- Retention - if employee improves performance, he/she will be retained.

However, if he/she does not respond to the above efforts and continues to perform poorly, the formal process of written warning followed by termination will be followed as mentioned in the Disciplinary Policy.

8 Holidays, Leaves and Employee Administration

8.1 Annual Leave

1. Staff members under fixed term contract will be entitled to annual leaves.
2. Interns, trainees, employees in probation and consultants will not be entitled to annual leaves.
3. Annual leave is calculated on the basis of 1.5 days per month, or 18 working days per year.
4. The leave year is from 1st January to 31st December or prorated accordingly.
5. Annual leave cannot be claimed as a matter of right and the employee requires prior approval of leave from the line Manager/Supervisor.
6. Annual leave will be calculated from the date of joining.
7. The annual leaves cannot be encashed.
8. Annual leaves to a maximum of 9 days can be carried forward to the next year for permanent employees.
9. The total annual leaves carried forward shall be credited to the individuals at the beginning of the next year.
10. The annual leave has to be approved by the relevant line manager.
11. Advance annual leaves are generally discouraged. But for extraordinary circumstances, advance annual leaves need to be endorsed by the respective Line manager and approved by the Managing Director.
12. All pending tasks of the employee availing annual leave will be assigned to his/her substitute.
13. Non-working days (Gazetted holidays) falling within the period of leave will not be counted as part of the annual leave.
14. During the notice period of employee's separation from service, the employee can avail from the balance of his/her earned leave to a maximum of his annual leave balance subject to prior approval of the line manager.

8.2 Sick Leave

1. Employees will be allowed a total of eight (8) workings days of paid sick leave in a year.
2. Any sick leave availed without medical certification will be restricted to two

consecutive working days.

3. Sick leave not availed cannot be carried forward to the next year.
4. Staff who is absent because of illness should notify their Line Manager immediately.
5. In case of absence due to sickness for more than two consecutive days, the employee will have to get a sickness certificate (stating the illness and the period recommended) from a registered medical practitioner.
6. Any uncertified absence of longer than 3 consecutive days may be treated as a disciplinary issue.
7. The sick leave for more than eight (8) days will be adjusted against the "Annual Leaves" account
8. Interns/trainees will be entitled to sick leave prorated on the number of months of internship contract and all other rules and procedures for sick leave will be applicable upon them.
9. Employees on probationary period are entitled for sick leave as per rules.

8.3 Casual Leave

1. All employees will be entitled to casual Leave of 10 working days in one year (prorated accordingly from the date of joining).
2. Casual leave will be granted only for urgent and important reasons.
3. Casual leave will be allowed only for one (1) working day at a time, unless otherwise allowed by the Managing Director.
4. A Holiday cannot be combined in between two casual leaves.
5. Interns/Trainees will be entitled to casual leave.
6. Casual leave cannot be combined with any other leave nor will it be carried forward to next year or en-cashed.
7. If an employee exhausts all his/her casual leaves, any additional leaves availed by the employee in this category will be treated as unpaid leaves.

8.4 Statutory Leave

Employees will observe official provincial public holidays as designated by the Government of Khyber Pakhtunkhwa. The list of official holidays will be provided to employees at the beginning of each calendar year. Employees must work normally as per scheduled hours the day before and after the holiday. If a holiday

falls during an employee's previously authorized annual leave, that day shall not be charged to annual leave.

8.5 Maternity Leave

1. Female members of staff will be entitled to 60 days maternity leave with full pay, provided they have completed the probationary period (This facility could be limited to two number of deliveries to be decided by the BoD after thorough deliberations at all levels)
2. Paid maternity leave does not affect the annual leave entitlement.
3. A member of staff who becomes pregnant will notify her Line Manager and apply for maternity leave at least two months prior to expected confinement.
4. Leave can be taken anytime from 2 weeks prior to the expected delivery date.

8.6 Paternity Leave

1. Male members of staff will be entitled to 05 working days of paternity leave with full pay provided that they have successfully completed their probationary period.
2. Leave can be taken from anytime between 2 weeks before the expected date of birth to two weeks after the birth of the child.

8.7 Unpaid Leaves

1. Special leave without pay will only be granted when exceptional grounds exist.
2. It may be granted when a member of staff has exhausted his/her accrued entitlement of annual leave.
3. MD/GM-HR will take the final decisions on all requests for unpaid or special leave and can refuse any requests which are judged to be detrimental in any way to company's interests.
4. All requests for unpaid and special leave should be sent to the Line Manager.
5. Unpaid and special leave will not be granted to anyone who has not completed a year of service or is under formal disciplinary proceeding, or who was given a transitional rating on their last assessment.
6. Unpaid leave cannot be granted in case a person has an outstanding amount payable to the organization unless the MD issues a special waiver.

8.8 Hajj / Minority Leave

Hajj leave may be granted to employees after completion of five years in the

organization. Hajj leave will be allowed only once during the service period and is to be approved by the MD. Religious leaves for non-Muslims and minorities will be dealt with the laid down management policies as approved by the competent authority.

8.9 Sickness Before and After Annual Leave

1. Annual leave may not be taken as an alternative to sickness absence.
2. Staff who fall ill immediately before or during annual leave should inform their Line Manager accordingly on the first day of illness or as soon as possible afterwards.
3. On provision of a doctor's statement certifying the illness and duration of the illness, the annual leave missed due to the illness may be re-instated.

8.10 Compensatory Leave

Compensatory leave will only be allowed to the employees for any work done on weekends or on public holidays with the recommendation of HOD and approval of the GM-HR. Leave form is exhibited in Annex 4

9 Office Travel and Entitlements

9.1 Travel Away from Office

1. If the employees are required to work away from their normal work location/headquarter town, all arrangements for boarding lodging of the employees are made by the Company.
2. If, arrangements cannot be made by the Company, the employee can claim reasonable actual (boarding, lodging, and transport) plus the agreed residential rate for the location on providing actual bills approved by the project manager.
3. This rate will be the same for all staff staying in that city/location.

9.2 Approval

Travel Approval Form (**Annex 5**) is to be filled and approved by the concerned manager/supervisor prior to making a business trip.

9.3 Travel Advance

Employees might be paid advance payments prior to official travel. Advances will only be made when absolutely necessary or when failure to make an advance might make a staff member go through undue hardship. Travel advance is made only with

prior approval of the concerned manager/supervisor. A request for travel advance is to be completed and approved before any advance is made.

9.4 Travel Entitlements

1. The rules and rates as announced by KPTGC will apply to all KPTGC staff (where appropriate), its consultants or guests traveling anywhere in Pakistan.
2. The amounts are calculated to cover all costs incurred to travel on official business.

9.5 Domestic Travel

1. Head of Departments have the delegated authority to approve, from their respective budgets, any domestic travel request from their team members. This delegated authority allows the Managers to incur expenditure from the budgets they manage on travelling of their team for official purposes.
2. Travel on business by air will be in the economy class or as approved by the HoD

9.6 International Travel

International travel of staff can be undertaken only after prior written approval of the MD.

9.7 Travel Procedure

1. The authorization of using personal vehicle must be pre-approved by the Line manager and can be claimed, on the basis of the table of distances.
2. The concerned department/unit will generate the activity approval form and attach travel authorization form if applicable at least 5 days in advance in case of domestic travel and at least one month in advance in case of international travel.
3. Once the forms are complete and dully signed by all concerned department/authorities, they will be forwarded to Admin unit for reservations and bookings in hotels etc. as stated in the activity form.
4. On completion of the travel the person responsible in the authorization form will furnish the boarding passes within three days of completion of the travel.
5. In case where the boarding passes have been lost or misplaced a letter signed by the line manager will be provided as waiver.
6. Requests for travel advances must be made at least 5 working days before the

date of collection of an advance.

7. Receipts (where necessary) must be provided with the claim.
8. If receipts are not available, an explanation should be noted either on the claim or on an attached memo and countersigned by the authorized line manager.
9. If a cash advance was issued and it has not been cleared within one week the travel/activity, the cash advance will be recovered through the payroll of the individual.
10. No further advances will be made until the previous advance is cleared.

10 Separation from Employment

10.1 Resignation

1. Employee must notify the respective line manager if he/she intends to resign from service. Such notice must be served one month in advance or as specified in the agreement/contract in writing.
2. Action will not be taken until the employee confirms this in writing, but once such resignation has been confirmed in writing, KPTGC is not obliged to accept a subsequent withdrawal.
3. The employee terminating the contract without a notice period shall have to pay a 30 days (or as specified notice period in the contract) salary as compensation to KPTGC.
4. In the event of such notice of resignation by an employee, he/she will remain liable to serve the Company for one month and to hand over the charge of all the responsibilities assigned to him/her.

10.1.1 Notice Period

The notice period for resignation starts from the date of receipt of resignation, if approved by the MD. Employees will not be allowed to extend their notice period to take advantage of public holidays falling immediately after the expiry of their required notice period.

The notice period can only be waived in special circumstances either of a personal nature or due to a professional obligation. The right to waive a notice period is exclusively reserved by the MD.

10.1.2 Exit Interview

Documented exit interview will be conducted with the employee leaving in order to determine the reason. The exit interview detail shall be forwarded to the Head of Department and will be recorded in the personnel file.

10.1.3 Return of Organization Property

Upon leaving KPTGC service, the employee hands over to his/her concerned supervisor, all the accounts, contacts, data, records and documents, whether in paper, tape, diskette or electronic form, related to his/her job. Company reserves the right to deduct from the resigned employee's final payment an amount equivalent to the value of any property, which is not returned or is damaged.

10.1.4 Final Payment

An employee, who resigns, is entitled to all the accrued benefits till the date of resignation. Final payment is not made unless and until the concerned supervisor confirms that the resigning employee has returned all assets and records in his/her possession. The final payment including basic salary, job related payments or reimbursements, payment in lieu of accrued unused annual leave and money due to the employee, if any, is paid to the resigned employee by cheque within 14 days from his/her effective date of resignation.

10.1.5 Confidentiality

The leaving employee is bound ethically and professionally not to disclose any information that he/she has about the organization or about staff member once he/she leaves the organization. The scope of the information can be about projects, planning, or of individual nature.

10.2 Redundancy/ Termination

1. Redundancy means terminating an employee when his/her services are no longer required or when there is an excess of employees working in the KPTGC. The criteria for redundancy are based on a number of factors e.g. performance review, length of service, attitude at work, recommendations of concerned /supervisor etc. However, in the absence of sufficient information, the 'last in, first out' basis is used. Efforts are made to reassign the staff member who is under consideration for redundancy to another position within the KPTGC, if he/she meets the job requirement. Upon being redundant, an employee is given one-month notice or salary in lieu of the notice. Redundant employee is entitled to all the accrued benefits till the date of termination. Redundant employee is considered for re-employment, should a suitable position become available. Only the MD/BoD approves redundancy of an employee.
2. If an employee is terminated due to code of conduct violation or due to any other reason he/she will not receive any end of service benefits.
3. If an employee's performance is unsatisfactory or not up to the required standard;; or under any other circumstances other than those specified for disciplinary action below, KPTGC may lawfully terminate his/her contract of employment with notice in writing or payment in lieu as specified in the contract of employment.

An employee can be terminated from service by KPTGC without notice if the employee;

- Willfully disobeys a lawful and reasonable order;
- Misconducts himself, such misconduct being inconsistent with the due and faithful discharge of his/her duties;
- Is guilty of theft, fraud, corruption or dishonesty;
- Is habitually neglectful in his/her duties;
- Becomes involved in improper transactions, or without approval discloses to a third party any confidential information obtained from his/her employment; or
- On any other grounds which would entitle KPTGC to terminate the employment without notice.
- Does not comply with the Code of Conduct

An employee who is terminated has the right to appeal for a hearing by a panel constituted for this purpose by KPTGC. (The employee is entitled to be accompanied to the panel hearing by a colleague, friend, lawyer or other person whom he/she wishes to. The decision of the panel is final.

10.3 Retirement Age

1. The normal age of retirement is 70 years.
2. Service may be extended beyond that age at Company discretion and the decision of extension may be reviewed. The extended period shall be considered as a Consultancy contract and not an extension of permanent employment.

11 Code of Conduct

11.1 General

Standards of work performance, conduct and attendance have an important impact on success. Code of conduct policy covers misconduct, health and safety of employees, drug abuse, sexual harassment and conflict of interest.

11.2 Gross Misconduct

1. Gross misconduct is defined as behavior so unacceptable as to warrant dismissal. This may include:
 - i. Stealing or attempting to steal property.
 - ii. Frequent absenteeism.
 - iii. Committing a fraud including incurring expenditure for personal benefit.
 - iv. Misusing a computer system, including the internet, which might include viewing or attempting to view pornographic sites, chatting, listening to loud music and other misuse which affects the employee's productivity.
 - v. Putting the safety or health of colleagues in danger.
 - vi. Willfully misusing status and position for personal advantage.
 - vii. Showing serious insubordination to Line Manager, e.g. by persistently refusing to follow a reasonable instruction.
 - viii. Disclosing without prior permission/approval in writing of the Company, or threatening to disclose information within the knowledge in confidence during the exercise of her / his duties and by virtue of the position held by the employee whether such disclosure or threat to disclose be in private or public or in any forum of whatsoever nature.
 - ix. Not taking reasonable precaution to safeguard of organization's property to prevent accident or damage to it.
 - x. Unauthorized collection or attempt to collect records or documents of the Company
 - xi. Interfering with, tampering, altering, or fabricating records of the Company
 - xii. Possession of any lethal weapon within the premises of the Company

- xiii. Consumption of any intoxicant or drugs while on duty.
 - xiv. Soliciting or accepting any gift or grant from any person having official business with the Company without prior approval of the Managing Director.
 - xv. Refusal to appear or to cooperate in any inquiry ordered by the Management in accordance with the rules enforced when summoned by the Ethics Committee.
 - xvi. Threatening, intimating or manhandling any employee.
 - xvii. Committing sexual harassment or violence against a man or woman colleague.
 - xviii. Drug and alcohol abuse.
2. If a member of staff is suspected of gross misconduct the matter will be referred to Line Manager, who will conduct an investigation if necessary.
 3. The member of staff may be suspended on half pay until the matter is resolved.
 4. As part of the investigation the Ethics Committee will interview the member of staff.
 5. The committee will outline in writing the reason for suspecting misconduct and allow the member of staff to respond in writing.
 - a. The member of staff has the right to be accompanied at the disciplinary meetings by a colleague or representative of the staff association recognized by the Company
 6. If at the end of the investigation gross misconduct has been established, the committee will hold a meeting with the member of staff and outline the reason for concluding that the member of staff has committed gross misconduct and give further opportunity for the member of staff to present his/her defense. .
 7. If the committee finds the staff member guilty as charged, it will recommend dismissal of the staff member to MD or, if there are very strong mitigating circumstances, issuance of a letter giving final written warning and/or a fine, or both.
 8. This letter will become part of the individual's personal record.
 9. Should the concerned staff member choose to resign during this time, management reserves the right to accept or reject the resignation.

11.3 Drug/Alcohol-Free Workplace:

KPTGC is committed to providing a safe work environment and to promoting and protecting the health, safety, and wellbeing of its employees. This commitment is endangered when any employee engages in use, possession, sale, conveyance, distribution or manufacture of illegal drugs, intoxicants, controlled substances or abuses prescription drugs or alcohol.

Therefore, KPTGC has established the following policy:-

- It is a violation of the company's policy for any employee to use, possess, sell, convey, distribute, or manufacture illegal drugs, intoxicants, or controlled substances, or to attempt to do the same.
- It is a violation of the company's policy to be impaired or under the influence of legal or illegal drugs or alcohol in the company or client premises, if such impairment or influence adversely affects the employee's work performance, the safety of the employee or of others, or puts at risk the company's reputation.
- It is a violation of the company's policy for anyone to use prescription drugs illegally. It is the responsibility of the employee to report the use of prescribed drugs that may (per warning labels provided by the pharmacy) affects the employee's judgment, performance, or behavior.
- Any employee convicted of a violation of a criminal drug statute must inform the management in writing within 5 calendar days after the conviction.

Random Testing: Employees may be selected at random for drug and/or alcohol testing at any time.

Post-Accident Testing: Any employee involved in an on-the-job accident or injury under circumstances that suggest possible use or influence of drugs or alcohol in the accident or injury event may be asked to submit to a drug and/or alcohol test. "Involved in an on-the-job accident or injury" means not only the one who was or could have been injured, but also any employee who potentially contributed to the accident or injury event in any way

12 Conflict of Interest

From time to time Company staff members and or the governing body members may encounter conflicts of interest when participating in company decision-making processes, as their professional or personal roles intersect. Potential areas where a conflict of interest may arise include:

- Recruitment of staff.
- Procurement of goods and services.
- Undertaking new projects or entering into new partnerships.
- Representing in other forums.

In general, a conflict of interest can arise if:

- It is likely that the performance of a person's duties as a KPTGC employee or governing body member could be prejudicially influenced by that person's other interests (private, personal or professional), or that a reasonable person would believe that the person could be so influenced; or
- A person's participation as an employee of a KPTGC or a governing body member could be prejudicially influenced by the interests of organization that the person is representing, or that a reasonable person would believe that the person could be so influenced.

KPTGC expects that staff and governing body members will be mindful of potential conflicts of interest (or the likely perception of a conflict), and declare a conflict of interest before it arises. Appropriate action can then be taken in consultation with colleagues. For instance, the concerned individual will usually be expected to withdraw from a particular selection panel or absent him/her from discussion about particular issues if it presents a conflict of interest. Minutes of the meeting should note the conflict of interest.

All staff and governing body members must declare in advance, any relationship with persons, firms or companies, which have dealings with KPTGC. They must also declare in advance if: a) they are directors or partners in a firm or company, which propose to have any dealing with KPTGC; b) if their immediate family members (spouse, parent, child, brother and sister) hold directorship or partnership in firms or companies, which propose to have any dealing with the KPTGC if to their knowledge, a member of their immediate family has any financial interest in any matter being considered by KPTGC Individuals who fail to make declaration of a

conflict of interests as explained above are liable to account to KPTGC for any profit made or benefit received from or in respect of the failure or violation.

12.1 Private Trade

No employee shall, except with the previous sanction of the MD, engage in any trade or undertake any employment or work other than his official duties, provided that s/he may, without such sanction undertake any honorary work of a religious, social or charitable nature or occasional work of a literary or artistic character, subject to the condition that his/her official duties do not thereby suffer and that the occupation of undertaking does not conflict or is not inconsistent with his opinion or obligation as an employee but he shall not undertake or shall discontinue such work if so directed by the MD.

12.2 Discrimination

Discrimination means treating a person less favorably than another person in comparable circumstances because of age, sex, marital status, pregnancy, family status, disability, race, color, descent, national or ethnic origins, nationality or religion etc.

It is against KPTGC policies to discriminate with respect to the hiring or promotion of individuals, conditions of employment, disciplinary and discharge practices, or any other aspect of employment on the grounds of the employee's age, sex, marital status, pregnancy, sexual orientation, gender identity, family status, disability, race, color, descent, national or ethnic origins, nationality or religion.

In preventing discrimination, employment related decisions such as recruitment, promotion, transfer, training, dismissal and redundancy as well as terms and conditions of employment are based on consistent selection criteria. Individuals are assessed according to their ability to carry out a given job and are not judged by irrelevant considerations. Employees who make employment related decisions should not assume that persons of a particular age, sex, marital status, gender identity, family status, race, color, descent, national or ethnic origin, nationality or religion, or who are pregnant or have a disability are only able to do certain kinds of work, and should ensure that these factors are not used as grounds for making decisions. Records of notes of employment related decisions are made and filed with the Human Resource Department, which serve as a valuable explanation and defense against any unfounded suggestion of discrimination. Employees who fail to abide by the guidelines explained above are liable to account to KPTGC which may take disciplinary actions against such employees.

12.3 Workplace Conflict

1. Workplace conflict is a time-consuming and costly problem that can have a severe impact on the bottom line.
2. Workplace relationship problems can arise as the result of
 - i. Clashing personalities.
 - ii. Miscommunication.
 - iii. Perceived backbiting.
 - iv. Negative politics
 - v. Perception of hidden agendas.
3. These factors create bad relations between people, and are generally the result of not following proper communication practices, or of grudges built from the outset of a relationship where initial problems were not addressed.
4. Conflict in the workplace is can also result from serious disagreement over official matters, and can result in behaviors such as gossip, avoidance, verbal abuse, passive/aggressive communication and hostility. This can in turn lead to a drop in company's productivity, a focus on problems rather than solutions and a slump in creativity and innovation.
5. While tensions and misunderstandings are normal and inevitable, if left unresolved they result in hostility, stress and wasted resources.

12.3.1 Resolving Workplace Conflict:

Once the management have been made aware of a relationship problem, it will meet with both parties and try to find out the real causes of the problem. Once the causes are identified, the management will take appropriate actions to address these causes to the extent possible. In parallel, the management will mediate between the two parties so as to help them develop a healthy working relationship. However, if the issues is not resolved even after these efforts, the matter will be reported to the MD who may take suitable steps to resolve the issue, ignore it or even terminate one or both the employees as he/she deems fit.

12.4 Ethical Conduct

Ethical conduct requires more than knowledge and observance of laws, regulations, and policies. Respecting colleagues, understanding and practicing the organizations' standards and values as well as policies, are the keys to ethical conduct and decisions made with confidence.

Reporting criminal conduct and unethical behavior is the responsibility of all employees. An employee suspecting non-compliance with the organizations' policies and procedures should speak with his/her supervisor. If the supervisor is involved in the misconduct, the employee should speak with his/her next level of supervision. This information will be kept confidential to the extent permitted by law.

12.5 Sexual Harassment/ Exploitation

The Company believes strongly in the human dignity of each individual. Therefore, KPTGC strongly condemns and prohibits any behavior on the part of an KPTGC employee which constitutes any form of sexual misconduct, including sexual harassment, sexual exploitation, and sexual violence towards any other staff member, client patient, beneficiary, or other individual participating in an KPTGC activity. Retaliation for reports of sexual misconduct is strictly prohibited and will not be tolerated; Sexual misconduct and/or retaliation of any kind will result in termination of employment. For the purposes of this policy, KPTGC employees include international staff, national staff, volunteers, interns' consultants, temporary employees, field staff or temporary contractors. KPTGC is committed to providing a work environment that is free of discrimination and unlawful harassment. Actions, words, jokes, or comments based on an individual's sex, race ethnicity, age, religion, or any other legally protected characteristics are not acceptable. As an example, sexual conduct (both overt and subtle) is a form of employee misconduct that is demeaning to another person, undermines the integrity of the employment relationship, and is strictly prohibited.

KPTGC fully complies with the Protection Against Harassment of Women at Workplace Act, 2010. As per Clause 1 (i) of this act, Sexual Harassment is defined as any unwelcome sexual advance, request for sexual favors or other verbal or written communication or physical conduct of a sexual nature or sexually demeaning attitudes, causing interference with work performance or creating an intimidating, hostile or offensive work environment, or the attempt to punish the complainant for refusal to comply to such a request or is made a condition for employment, is unacceptable behavior in the workplace, including any interaction or situation that is linked to official work or official activity outside the office. All such acts are a violation of this Act.

Sexual Harassment includes any unwelcome sexual advance, request for sexual favors or the other verbal or physical conduct of sexual nature, causing interference with work performance, is made a condition of employment or creates an intimidating, hostile or offensive work environment, or the attempt to punish the

refusal to comply with such a request. The intimidating behavior or act can be of a person in authority, who controls conditions of the complainant's employment or from a co-worker, who as a result of intimidation can make the work enjoyment hostile for the complainant. Under this code of conduct, sexual harassment is prohibited regardless of the sexual orientation of the parties.

12.6 Reporting and Resolution of Sexual Harassment

As per Clause 1 (M) of this Act, the Management of KPTGC is required to incorporate this act as part of its Work place policy. Abiding by the following points will ensure compliance with this act:

1. The Responsibilities of Management include
 - a. Management will be responsible to follow the HR Manual in true letter and spirit, and to ensure that all staff members read it.
 - b. Each complaint of employee of organization is addressed responsibly.
 - c. The Management will be impartial in the process and facilitate a just and fair inquiry process without retaliation
 - d. The management will not victimize the complainants or the witnesses in the case.
 - e. The management will conduct awareness sessions about the Code and the consequence of such harassment at workplace for both the affected person and the accused as a regular part of their training.
 - f. Display copies of this Manual to employees in English or Urdu.
 - g. Recurring acts, which may have a cumulative effect or even a single incident, would be considered enough to establish sexual or gender based harassment.
 - h. The complainant should inform the accused about conduct constituting sexual harassment. That will be recorded and should be maintained in writing all incidents, noting dates, places. Descriptions of act, notification to accused and names of those to whom the incident may have been mentioned.

12.7 Workplace Harassment

KPTGC expects every employee and person to be treated with fairness, respect, and dignity. Accordingly, any form of harassment based on an individual's race, color, sex, religion, national origin, age, or disability is a violation of this policy and will be

treated as a disciplinary matter.

KPTGC is committed to maintaining a safe and healthy work environment and takes all appropriate health and safety precautions consistent with current medical knowledge. Accordingly, employees may not refuse to work with or cooperate with, withhold services from, or otherwise harass, intimidate, demean, or isolate a coworker because of a known or suspected disability or disease, or because of a coworker's association with a person with a disability or disease.

12.8 Work place violence

KPTGC is committed to providing a safe work environment. Any form of violence, threats of violence, intimidation of others or attempts to instill fear in others will not be tolerated. The possession of a weapon in the workplace, or while conducting company business, menacing behavior or "stalking" is all prohibited actions. Violations of this policy may lead to disciplinary action up to and including termination and the involvement of appropriate law enforcement authorities.

Any person who exhibits threatening behavior or threatens or commits a violent act on property, or on company business or is found or suspected to be carrying a concealed or open weapon on KPTGC premises may be removed from the work site as investigation. KPTGC will attempt to resolve the complaint within a reasonable period of time while preserving the confidentiality to report situations that may have a risk of violence.

13 Health, Environment and Safety

13.1 Work Safety

KPTGC aims to provide a safe and environmentally healthy working condition for the staff. The Company will take measures to protect the safety and health of workers of both genders, including the protection of their reproductive health. The company will promote mechanisms for delivery of occupational safety and health education and training, in particular for management, supervisors and workers. KPTGC will take measures to ensure assessment of any workplace risks related to the safety and health of the pregnant or nursing woman and her child. The results of the assessment will be made available to the woman concerned.

Employees have a part to play by ensuring that:

- i. Personal belongings are kept safely and they never block the passage or exits.
- ii. All visitors, contractors and temporary staff are issued with security passes where required.
- iii. Employees are expected to stop and point out if they ever find anyone in the building either unattended or without a security pass.
- iv. To the extent possible, procure environmentally friendly and energy saving equipment.
- v. Employee's Line Manager should be informed about any actual or potential health, safety or environmental problems or risks.
- vi. All accidents at workplace should be notified to the respective Line Manager or the next responsible person as soon as possible.
- vii. Employees should not engage in behavior, which is hazardous to the health and safety of themselves or others. If an employee engages in activities that create a safety hazard, the employee's supervisor may take disciplinary action, ranging from a reprimand to dismissal.
- viii. Employees have the right to refuse work where it poses a safety hazard to themselves or others. However, employees should make safety concerns immediately known to their supervisor.
- ix. Coordinate and cooperate with your coworkers to identify hazards and to prevent potential accidents.
- x. Offer safety suggestions that contribute to safer work within your environment.

13.2 Security Inspections

KPTGC wishes to maintain a work environment that is free of illegal drugs, alcohol, firearms, explosives, or other improper or inappropriate materials. To this end, company prohibits the possession, transfer, sale, or use of such materials on its premises. The Company requires the cooperation of all employees in administering this policy.

Desks, lockers, computers, and other storage devices may be provided for the conveniences of employees but remain the sole property of the company. Accordingly, they, as well as any articles found within them, including computer files, can be inspected by any duly authorized agent or representative of the company at any time, either with or without prior notice.

13.3 Fire and Incident Control

It is important that the employees understand the fire and incident control procedures and they should:

1. Routinely check the safety of electrical wiring.
2. Identify all possible sources of potential ignition and combustible materials and minimize these where possible.
3. Know the names and locations of the First Aid Officer and Fire Warden. A staff member, for each floor, must be nominated as a First Aid Officer and Fire Warden. Fire extinguishers should be placed at prominent places, preferably in every room. Occasional, safety drills might also be a good idea.
4. Be familiar with evacuation procedures.
5. Recognize and respond to the sound of fire alarms.
6. Know where designated assembly points are, and never leave the assembly point before the body count is complete and all are given permission to leave in periodic fire drills.
7. In case of fire:
 - a. Point out any fire or safety hazard whenever one observes.
 - b. Gently but firmly encourage people to leave the area.
 - c. Bang loudly on locked doors, and shout to occupants to evacuate. Do not spend unnecessary time waiting at a locked door for a response.
 - d. Do not use elevators.

- e. Try to keep occupants calm during and after the evacuation.
 - f. Do not allow anyone to return to the building, even if the alarm stops.
You will be directed to return by a Security officer or the Fire department.
8. A visible first aid box is available at the reception / or each floor, as the case may be.

13.4 Infectious Diseases

1. A staff member who is in contact with any infectious disease should not report for duty if a doctor has advised against it, and they should inform their Line Manager of the position.
2. If a member of staff has been in contact with infectious diseases, a clearance certificate is necessary prior to returning to work.
3. In either case, absence would be treated as sick leave with pay.

13.5 Threatening Illness at Workplace

Employees with life-threatening illnesses, such as cancer, heart disease, and HIV/AIDS, often wish to continue their normal pursuits, including work, to the extent allowed by their condition. KPTGC supports these endeavors as long as employees are able to meet acceptable performance standards. As in the case of other disabilities, company will make reasonable accommodations in accordance with all legal requirements, to allow qualified employees with life-threatening illnesses to perform the essential functions of their jobs.

Medical information on individual employees is treated confidentially. Company will take reasonable precautions to protect such information from inappropriate disclosure. Managers and other employees have a responsibility to respect and maintain the confidentiality of employee medical information. Anyone inappropriately disclosing such information is subject to disciplinary action, up to and including termination of employment.

Employees with questions or concerns about life-threatening illnesses are encouraged to contact their supervisor and/or the MD for information and referral to appropriate services and resources.

13.6 Smoke-free Workplace

In keeping with KPTGC intent to provide a safe and healthful work environment, smoking is prohibited throughout the workplace, including company vehicles.

14 Generic Job Description

Generic Job Descriptions (for illustrative purposes) of a core team for management of an organization are outlined below. Job Description should include accountability for ensuring gender sensitivity in the scope of work.

14.1 Managing Director

Responsibilities:

- Developing and executing business strategies to achieve short and long-term goals.
- Reporting to the board, providing market insights and strategic advice.
- Developing and implementing business plans to improve cost-efficiency.
- Maintaining positive and trust-based relations with business partners, shareholders, and authorities.
- Overseeing the company's business operations, financial performance, investments, and ventures.
- Supervising, guiding, and delegating executives in their duties.
- Ensuring company policies and legal guidelines are clearly communicated.
- Assessing, managing, and resolving problematic developments and situations.
- Building and enhancing the company's public profile at events, speaking engagements, etc.

Qualification:

- Master's Degree in business, marketing, engineering or a related field.
- Extensive experience as a Managing Director or in a similar role.
- Experience in developing and implementing strategic and business plans.
- Excellent communication, negotiation, and presentation skills.
- Strong analytical, critical thinking, and problem-solving skills.
- Able to excel in high-pressure situations.
- Excellent organizational and leadership skills.

14.2 Company Secretary

Responsibilities:

Secretarial Duties:

- To ensure compliance of the provisions of Ordinance and rules made thereunder and other statutes and byelaws of the company.

- To ensure that business of the company is conducted in accordance with its objects as contained in its memorandum of association.
- To ensure that affairs of the company are managed in accordance with its objects contained in the articles of association and the provisions of the Ordinance.
- To prepare the agenda in consultation with the Chairman and the other documents for all the meetings of the board of directors.
- To arrange with and to call and hold meetings of the board and to prepare a correct record of proceedings.
- To attend the board meetings in order to ensure that the legal requirements are fulfilled, and provide such information as are necessary.
- To prepare, in consultation with the chairman, the agenda and other documents for the general meetings.
- To arrange with the consultation of chairman the annual and extraordinary general meetings of the company and to attend such meetings in order to ensure compliance with the legal requirements and to make correct record thereof.
- To carry out all matters concerned with the allotment of shares, and issuance of share certificates including maintenance of statutory Share Register and conducting the appropriate activities connected with share transfers.
- To prepare, approve, sign and seal agreements leases, legal forms, and other official documents on the company's behalf, when authorized by the broad of the directors or the executive responsible.
- To advise, in conjunctions with the company's solicitors, the managing director or other executive, in respect of the legal matters, as required.
- To engage legal advisors and defend the rights of the company in Courts of Law.
- To have custody of the seal of the company.

Legal Obligations:

- Filling of various documents/returns with the Registrar / Commission as required under the provisions of the Ordinance. .
- Proper maintenance of books and registers of the company as required under the provisions of the Ordinance.
- To see whether legal requirements of the allotment, issuance and transfer of share certificates, mortgages and charges, have been complied with.

- To convene/arrange the meetings of directors, on their advise.
- To issue notice and agenda of board meetings to every director of the company.
- To carry on correspondence with the directors of the company on various matters.
- To record the minutes of the proceedings of the meetings of the directors.
- To implement the policies formulated by the directors.
- To deal with all correspondence between the company and the shareholders.
- To issues notice and agenda of the general meetings to the shareholders.
- To keep the record of the proceedings of all general meetings.
- To make arrangement for the payment of the dividend within prescribed period as provided under the provisions of the Ordinance.

Other Duties:

- Ensuring that statutory forms are filed promptly
- Providing members and auditors with notice of meeting
- Sending the Registrar copy of special resolutions
- Supplying a copy of the accounts to every member of the company, and every person who is entitled to receive notice of general meetings.
- Keeping or arranging for the having of minutes of directors meetings and general meetings
- Ensuring that people entitled to do so, can inspect company record.

Qualification:

- Master's Degree in Business Administration, Law or Commerce
- Excellent communication, negotiation, and presentation skills.
- Excellent organizational and leadership skills.

14.3 General Manager – Technical

Responsibilities:

- Development ~~and overall supervision of O&M~~ of KP-transmission line system.
- Potential projects for development by the Government or under PPP mode selection and monitoring of consultants, contractors and or developers/private partners.
- Development of KP-Grid Code, if required.
- Represent the company at various forums.

- Liaison relevant authorities on laying of transmission lines from the proposed power generating units to the National Grid.
- Overall supervision of Operation and Maintenance (O&M) of KP Transmission Lines System.
- Identify performance targets for the employees.
- carrying out technical review of proposals of transmission projects.
- Perform any other task relating to official duty assigned by Managing Director and Higher-ups.

Qualification:

- Degree in Electrical Engineering from HEC Recognized University
- Ten Years of Successful Verifiable and Relevant Experience in Power Sector or Transmission Line Construction Company. ~~Consumption~~
- Experience in developing and implementing strategic and business plans.
- Excellent communication, negotiation, and presentation skills.
- Strong analytical, critical thinking, and problem-solving skills.
- Able to excel in high-pressure situations.
- Excellent organizational and leadership skills.

14.4 Internal Audit Head

Responsibilities:

- Perform and control the full audit cycle including risk management and control management over operations' effectiveness, financial reliability and compliance with all applicable directives and regulations
- Determine internal audit scope and develop annual plans
- Obtain, analyse and evaluate accounting documentation, previous reports, data, flowcharts etc
- Prepare and present reports that reflect audit's results and document process
- Act as an objective source of independent advice to ensure validity, legality and goal achievement
- Identify loopholes and recommend risk aversion measures and cost savings
- Maintain open communication with management and audit committee
- Document process and prepare audit findings memorandum
- Conduct follow up audits to monitor management's interventions
- Engage to continuous knowledge development regarding sector's rules,

regulations, best practices, tools, techniques and performance standards

Qualification:

- Advance degree in Accounting, Finance ACA, ACCA, CIMA
- Proven working experience of 10 years as Internal Auditor or Senior Auditor
- Advanced computer skills on MS Office, accounting software and databases
- Ability to manipulate large amounts of data and to compile detailed reports
- Proven knowledge of auditing standards and procedures, laws, rules and regulations
- High attention to detail and excellent analytical skills
- Sound independent judgement
- BS degree in Accounting or Finance

14.5 General Manager – Finance

Responsibilities:

Financial Management: Responsible for all systems and procedures for the collection of revenue, payment of bills and purchasing to ensure the integrity of financial information including:

- Verifying and posting transactions to journals, ledgers and other records, and preparing supporting account reconciliations.
- Clearly preparing, analyzing and communicate monthly and annual financial statements and reports for all stakeholders.
- Coordinating and leading the annual audit process including liaising with external auditors and the Finance Committee of the Board of Trustees.
- Overseeing and leading the annual budgeting and planning process in conjunction with the Senior Leadership Team.
- Administering and reviewing all financial plans and budgets; monitor progress and changes and keeping the Senior Leadership Team abreast of the organization's financial status.
- Managing organizational cash flow and forecasting and oversight of all bank accounts and investment vehicles to maintain adequate working capital and return.
- Managing the day to day investments in conjunction with the MD and the BOD.
- Implementing a robust contracts management and financial management/reporting system.

- Ensuring compliance with Federal, local and any other financial, tax reporting and regulatory requirements.
- Updating, documenting and implementing all necessary business policies and accounting practices to improve the finance department's efficiency and financial controls.
- Providing financial information to meet the needs of managers including producing customized financial reports, costing templates, trend analysis on an as needed, monthly, quarterly and annual basis.
- Preparing the Annual Report and Treasurer's narrative for Board meetings and the Outlook mailing.
- Preparing, communicating and presenting critical financial matters to the MD and the Board of Directors.

Qualification:

- Advance degree in Accounting, Finance ACA, ACCA, CIMA
- A minimum of 10 years' experience in financial administration with progressive growth in responsibility
- Prior experience supervising, coaching and x environment
- Prior experience with grants management is a plus.
- Advanced computer skills on MS Office, accounting software and databases
- Proven knowledge of accounting standards and procedures, laws, rules and regulations
- High attention to detail and excellent analytical skills

14.6 General Manager – Human Resource & Admin

Responsibilities:

- Oversee day-to-day operations
- Design strategy and set goals for growth
- Maintain budgets and optimize expenses
- Set policies and processes
- Ensure employees work productively and develop professionally
- Oversee recruitment and training of new employees
- Evaluate and improve operations and financial performance
- Direct the employee assessment process
- Prepare regular reports for upper management

- Ensure staff follows health and safety regulations
- Provide solutions to issues (e.g. profit decline, employee conflicts, loss of business to competitors)

Administration: Responsible for the overall administrative functions to ensure efficient and consistent operations as the organization grows including:

- Working closely and transparently with all external partners including third-party vendors and consultants.
- Supervising the Accounting Assistant and Administrative Consultants.
- Reviewing and ensuring compliance with all contracts entered into by KPTGC.
- Evaluating and maintaining adequate insurance coverage to meet the changing needs of the organization. Ensuring that policies are timely renewed or replaced, claims are filed and resolved and managing the relationship with the insurance carriers and agents.
- Performing other duties as assigned.

Qualification:

- Proven experience as a General Manager or similar executive role
- Experience in Planning and Budgeting
- Knowledge of business process and functions (finance, HR, procurement, operations etc.)
- Strong analytical ability
- Proven working experience of minimum 10 years in similar field
- MSc/MA degree in Human Resource

14.7 Project Manager

Responsibilities:

The Project Manager will manage, direct and coordinate all aspects of work related to greenfield and brownfield projects at substations, switching stations and transmission lines. The Project Manager will report directly to the General Manager (Technical) and is responsible for the successful completion of projects within specified dates, and establishing and maintaining a professional and satisfactory relationship with the Owner, subcontractors, regulatory agencies and other project stakeholders. Major responsibilities for the Project Manager will include:

- Prepare proposals, assist in presentations, and participate in contract negotiations;

- Provide overall management of projects from concept to completion including siting, environmental, permitting, planning, estimating, engineering, right-of-way acquisition, project controls, bid phase services, procurement, constructability reviews, material management, construction management, and closeout.
- Develop and monitor project schedules, manage scope, and control project costs.
- Assist with internal project financials, staffing, legal coordination, risk management, change management, and human resource issues.
- Serve as primary point of contact with General Manager (technical) and Managing Director of the Company.
- Ensure coordination between Contractor, Project Consultant and other relevant organizations/Departments.
- , Responsible for strategic planning, master scope management, budget finances, subcontracting, project staffing, environmental compliance, facility support and schedule attainment.
- Manage all aspects of project communication
- Develop and implement project policies and procedures, establish project controls systems and implement the project execution plan.
- Work closely with the Project Team to ensure deliverables and services are being provided to client's satisfaction and that projects are following internal QA/QC guidelines.
- Report regularly on progress, cost and schedule metrics, procurement issues, safety or environmental concerns, design questions, potential impacts, and any issues requiring office support.

Qualification:

- Bachelor's degree in engineering
- Minimum 10 years of experience with 5 years related project management experience in Transmission Lines
- Project Management Professional certification preferred

14.8 Manager O&M

Responsibilities:

Overall scope of responsibilities for Manager O&M is to supervise and perform operation and maintenance duties related to transmission network as per the

processes and procedures ensuring the network stability according to the National/ KP Grid Code. The position role will also be tasked with ensuring to meet ~~that~~ optimum Transmission Lines network performance standard at all times. To prepare SOPs compliant to National Grid Code/ KP Grid Code and Company Policies

- Network events and alarms identification, isolation and clearance.
- Provide 2nd tier technical support to operations teams with regards to transmission networks.-
- Periodic monitoring and proactive analysis of the network performance and logs, act against abnormalities as per the method of procedures and operations guidelines and propose guidelines for enhancements.
- Develop and perform preventive maintenance tasks as per the plan covering the network elements and network facilities in the sites (in coordination with the field services team).
- Submit, supervise and perform planned works and activities (upgrades, restorations etc) in the network in coordination with the field services team and change management procedures.
- Product reports about the routine activities and network performance including running circuits, and capacity utilization.
- Lead and perform transmission circuits' implementation covering the circuit design, installations, provisioning, testing and handover. Document complete records of these circuits with activation dates.
- Handover transmission sites and network elements from field services as per the handover procedures. Assist the field services team if needed for the network installation and integration with operational network.
- Coordination with other transmission providers, customers, contractors, etc to ensure proper control over the operations of the networks
- Maintain up-to-date documentation and records of the network covering the network design, drawings, as-built documents, contacts, circuits, fibers, etc
- Ensure processes and procedure are strictly followed and met
- Provide 24x7 emergency call-outs to field team and other teams for critical and urgent activities in coordination with the deputy managers and other engineers.
- Provide on-job training to other staff as needed
- Assist the General Manager Technical whenever needed to carry out the duties.

Qualification:

- Bachelor's degree in engineering
- Minimum 10 years of experience with 5 years related experience in O&M of Transmission Lines
- Project Management Professional certification preferred

14.9 Deputy. Manager Protection & Instrumentation (P&I)

Responsibilities:

- Testing and commissioning of newly installed Grid Station in KP Province including but limited to all types of Protective Relays, switch yard equipment such as Current Transformer, Capacitive Voltage Transformer, Circuit Breaker, Isolator, Earth Switch & Lightning Arrestors, Power Transformers, Capacitor Banks, Motor (VFD Checking of schemes for transformer protection, motor protection, differential protections capacitor bank stage controls and interlocks other control and interlocks other circuit schemes with various systems.
- Testing of various protection relays.
- Conducting HV test for power cables and Bus Bars rated up to 400 KV.
- DC and AC drives (VFD-Variable Frequency Drive) installation, testing and commissioning.
- Testing and commissioning of power control center and Motor control center.
- Testing, Calibration and Commission of Energy Meters and Metering Systems.
- Providing technical assistance to integrate design commissioning and construction based implementation.
- Perform routine testing on regular basis of Transformer protection, Transformer differential protection & REF protection, Bus Bar protection, motor protection and synchronizing scheme after commissioning of Grid Stations.
- Perform regular checking/ testing of Energy Meters and Metering Systems installed at Common Delivery Points and Grid Stations.

Attend all faults pertaining to the protection systems installed the Grid Stations.

Analyze all indiscriminate tripping's happening on Transmission Lines/ Grid System.

- Perform any other task relating to duty assigned by top management. Assist the manager whenever needed to carry out the duties.

Qualification:

- Degree in Electrical Engineering from HEC recognized university

- Registration with Pakistan Engineering Council
- Minimum 5 years of experience in operation & maintenance in relevant field

14.10 Health, Safety & Environment

Responsibilities:

To be responsible for managing the Health Safety & Environment (HSE) protocols at site at all times.

- Conduct trainings, on regular bases, to the Operations & Maintenance field staff focusing on the HS&E procedures, as per the applicable laws, pertaining to transmission tower, poles, hardware and fire safety.
- Lead, supervise, and train employees of HS&E department on all projects through knowledge of HS&E standards, program and goals.
- Develop and review HS&E policies, including but not limited to, for electrical equipment and materials, from both design and execution point of view.
- Develop and review HS&E plan, procedure, method statement, risk assessment and all health safety & Environment related documents to ensure compliance with best practices and standards.
- Implement, oversees and ensure the effective communication and implementation of Health Safety & Environment Management System (HSEMS)
- Perform any other task relating to duty assigned by top management.

Qualification:

- Degree in Environmental Sciences / Engineering from HEC recognized university
- Minimum 5 years of experience in environment of relevant field

14.11 Deputy. Manager Transmission Line

Responsibilities:

- Responsible for operation and maintenance of transmission lines in accordance with relevant Grid Codes, SOPs and Company's guidelines.
- Ensure Strict Compliance of all the safety protocols at site prior to start of work.
- Assign work to technical staff and implement work to:
 - Periodic cleaning of transmission line insulators.
 - Foot-patrol transmission line routes for monitoring of transmission towers, poles, insulators, hardware and foundations.

- Repair/replace broken conductor.
- Construct diversion lines of tubular poles, if required.
- Replace corroded braces and cross-arms.
- Keep transmission line route clear of wild bushes and jungles.
- Prune the tree-branches in vicinity of transmission lines.
- Implement contractual work of painting of transmission towers and poles.
- Implement contractual work of replacement of braces and foundation repair.
- Patrol transmission lines during late night hours for monitoring the condition of insulators chattering due to contamination.
- Interact and co-ordinate with KP Load Dispatch Center (as and when established) for preventive maintenance shutdowns and post-fault shutdowns.
- Perform any other task relating to official duty assigned by Manager O& M.

Qualification:

- Degree in Electrical Engineering from HEC recognized university
- Minimum 5 years' experience of operation & maintenance in relevant field

14.12 Deputy. Manager Grid Stations

Responsibilities:

- Responsible for operation and maintenance of Grid Stations in accordance with relevant Grid Codes, SOPs and Company's guidelines.
- Supervise the grid station(s). staff for effective operation and maintenance of grid stations.
- Developing and regular updating of equipment maintenance procedures supervise the technicians during maintenance of grid station equipment.
- Ensure compliance with relevant Grid Codes SOPs and prescribed procedures
- Inspects and maintains electric systems.
- Reviews electrical drawings and monitors electrical work activities that are to be executed as per relevant Grid Codes.
- Equipment failure analysis and tracking
- Assisting the Deputy Manager (P&I) as needed
- Prepare comprehensive written and oral reports of technical problems, investigative findings and engineering recommendations.

- Tag-in Tag-out, Padlock system, Hot permit and Cold permit for safety formalities for all kind of electrical work held in Grid Station.
- Carrying out Planned Preventative Maintenance tasks as per manufacturer's recommendations, relevant SOPs, and company policy guidelines on Grid Station Equipment including but not limited to working on Power Transformers, HV Circuit Breakers, LV Circuit Breaker, Isolators, LT Transformers, CTs, PTs, controllers, Insulation system and HV-LV distribution.
- Ensure regular testing of Power Transformer Oil Samples as Manufacturer's recommendations.
- Ensure regular testing of resistance of Grid Stations' earthing system.
- To ensure adequate stock of spare parts, consumables and other essential items for all equipment under responsibility.
- To supervise the work of subordinates to ensure that operation, maintenance and repairs are carried out smoothly and efficiently.
- To be responsible for all relevant technical documentation of plant, electrical/electromechanical and control systems, machinery and ancillary equipment.
- To follow up and monitor works assigned to Contractors.

Qualification:

- Degree in Electrical Engineering from HEC recognized university
- Registration with Pakistan Engineering Council
- Minimum 5 years' experience of operation & maintenance in relevant field

14.13 Assistant Manager - Civil

Responsibilities:

- Responsible for managing, professional/technical engineering works, engineering design and review, survey works, inspections, Public Service GIS supervision and applications, CAD pavement management and other engineering software applications.
- Preparing designs for engineering projects in accordance with the slandered engineering practices and principals, determines scope, designs, prepare drawings, specifications, cost estimates; conducts, supervise and coordinates design and construction surveying and provide construction plans.
- Assist in drafting agreements for land / right of way acquisitions,
- Meeting with property owners to discuss right of way purchases for projects.

- Preparation / supervisor of design data for surveying, and engineering applications using Computer-Aided (CAD); word processing; spread sheet; Geographic Information System (GIS); responsible for the data input and production of digital maps, surveys, engineering drawings and special database reports.
- Conduct studies to support all compliances.
- Perform any other task relating to official duty assigned by Higher-ups.

Qualification:

- Degree in civil engineering from HEC recognized institution
- Registration with Pakistan Engineering Council
- Minimum 3-5 years' experience
- Hand on experience of Geographic Information System (GIS) and Autocad in power systems is preferred

14.14 Manager HR & Admin

Responsibilities:

- Maintain and update personal record of regular employees.
- Maintain personal files of Outsourced employees.
- Maintain attendance and leave record on daily basis.
- Maintain employees' personal record, attendance and leave record.
- Preparation of monthly attendance for payroll.
- Assist in Recruitment/Separation process.
- Conduct employee's orientation.
- Routine internal and external correspondence.
- Disseminate necessary information to employees verbally or through e-mail.
- Maintain Log book of applicants to fulfill recruitment need when required.
- Monthly head count reporting to the Supervisor.
- Bi-annual/Quarterly Gratuity Statements preparation and reporting to the Supervisor.
- Looking after all recruitment activities such as Ad writing, advertising job, screening CVs, preparing comparative statements, short listing eligible candidates, conducting tests (if required), scheduling interviews, hiring selected candidates, checking academic and service certificates/documents, and verification of past employers.

- Issuing letters (appointment, contract/probation end, transfer, warning and termination)
- Issuing employment cards to the new hires.
- Writing tender notices, circulars, office orders and other official drafts.
- Handling Head office employees' issues and grievances.
- Perform any other task relating to official duty assigned by Higher-ups.

Qualification:

- MBA/MPA Degree in Human Resource from HEC recognized institution
- Minimum 3-5 years' experience

14.15 Document Control Officer

Responsibilities:

- Responsible to provide general administrative, clerical support and office work, including but not limited to, mailing, scanning, faxing, copying for management, arranging letters, memoranda, invoices and other indexed documents according to an established system.
- Other administrative responsibilities shall include maintaining directories / contact lists, order office supplies, book and coordinate all travel arrangements.
- Produce and distribute correspondence memos, letters, faxes and forms.
- Responsible for the processing and maintenance of all office documents including coordination with vendors, staff, billing representatives etc.
- Responsible to develop and maintain both electronic and hard copy filing systems.
- Prioritizes and batches material for data entry.
- Knowledge of office management systems and procedures.
- Responsible for proper time management through multi- tasking and prioritizing work.
- Perform any other task relating to official duty assigned by Higher-ups.

Qualification:

- BBA / BA / BCOM from HEC recognized institution
- Minimum 3 years' experience

14.16 Manager Accounts

Responsibilities:

- To maintain the books of accounts (accounting cycle) and other financial records.
- To reconcile the bank statements, Working with Auditors on preparing the books/records for audits. Specifically ensure compliance with all finance requirements.
- Preparation of monthly management accounts.
- To produce draft and final statutory accounts.
- Management of the organization's debtors and creditors accounts.
- Ensuring preparation and filling of regular tax returns.
- To monitor and keep records of petty cash by ensuring that the cash book and petty cash are updated on daily basis.
- To liaise with the bank on matter relating to the account.
- Preparation and Monitoring of the payroll system.
- To ensure the prompt and accurate processing of income and expenditure.
- To ensure that the purchases and payments and credit control systems are kept under regular review and to recommend and implement improvements.
- To ensure that the organization's income is promptly collected, accounted for and secured and payable's accounts are settled in accordance with agreed terms.
- To oversee the purchase of supplies for the office keeping with agreed budgets.
- To prepare monthly, quarterly financial monitoring management reports which are concise but analytical and informative enough to advise senior management of the financial position to enable their decision making.
- To ensure that the organizations financial reporting is kept up to date with changes in legislation; regulatory requirements financial reporting standards, and taking prompt action to effect any changes necessary to achieve compliance.
- Perform any other task relating to official duty assigned by GM – Finance and Higher-ups.

Qualification:

- M.Com/MBA/ACCA
- Shall be well-versed with International Accounting Standards
- Minimum 3 years' experience in maintaining Books of Accounts

14.17 Procurement Manager

Responsibilities:

- Development of Procurement policy and guidelines in consultation with departmental heads and getting this document approved by the competent authority for implementation.
- Work closely with all departmental heads and other functions and the business areas of the company to support the growth of the organization.
- Manage a designated group of products and suppliers to ensure a secure and sustainable supply chain is developed and maximum value is achieved for the business.
- Work closely with the all departments to introduce and apply professional procurement tools and techniques to support the effective working of the organization.
- Ensure professional supplier management is applied across the supply base, taking responsibility for a number of suppliers assigned and ensuring their performance is maintained and where possible improved.
- Negotiate with suppliers to deliver best value to the company.
- Prepare and present supply strategies for products, which ensure an ongoing delivery of Quality Product with a secure but cost competitive supply.
- Act as the external face of the organization with the supply community and ensure the company is well represented in a professional and competent manner at all times.
- Take complete responsibility for all of suppliers/ vendors and ensure a structured and professionally applied Supplier Management Program is implemented and maintained.
- As per laid down procurement guidelines, ensure and run professional tender processes to ensure the objective and secure selection of best suppliers for goods and services to the company.
- Analyze, interpret and where required present the results of market analysis, tender results and
- Strategic recommendations to colleagues and senior management. This will take the form of written reports and actual presentations.
- Work closely with other disciplines to create and deliver Supply Strategies, which support the aims and aspirations of the organization.
- Develop and formulate supply strategies which ensure continued Compliant, High Quality, Secure and Cost, Competitive products and services are supplied to the organization.

- Possess market knowledge for products and suppliers to become an "expert" to whom others can turn for advice for key products / suppliers under your management..

Qualification:

- Bachelor's degree in supply chain management, engineer or business administration
- Shall be well-versed with Khyber Pakhtunkhwa Public Procurement Rules
- Minimum 3 years' experience in procurement

15 Annexures

15.1 Employee Requisition Form

<i>This form is used for initiating recruitment for a vacant position. The concerned department is requested to submit this form to the HR department.</i>			
1. Position Information			
Designation Title:		No of Vacancies:	
Department Name:		Date of Vacancy to be Filled:	
Salary Range (Monthly):			
Is this position a NEW position? <input type="checkbox"/> Yes			
<input type="checkbox"/> No, Name of employee replaced:			
Reason of replacement:			
2. Recruitment Contact Information			
Immediate Supervisor-Name:		Department Head-Name:	
Summary of Essential Duties and Responsibilities:			
Where would you like advertising for this position? <input type="checkbox"/> Newspapers <input type="checkbox"/> Online		Requisition Close Date:	
Supervisor and Department Head signature		Date	
MD Signature		Date	
For HR Use Only			
Date Received in HR:	Approved for Recruitment:		

15.2 Employment Offer Form

Employment Offer

Dear,

The GM-HR is very pleased to extend to you an offer of employment as _____ at the rate of pay of ___ per _____ beginning on _____. In addition to this wage, you are eligible for the following benefits:

You retain the right to resign by submitting a minimum of one-month advance written notice of your resignation. If there is no written notice or the advance notice is of less than one month, an amount equal to your salary for the number of days of notice not given is deducted from his/her final payment.

The Company has the same right with respect to termination. Company also retains the right to lawfully terminate a contract of employment without notice or payment in lieu. This approach of termination of employment by an employer is only applied to cases where an employee has committed very serious misconduct or fails to improve himself/herself after the employer's repeated warnings.

If you understand and accept these terms, please sign this letter and return it to our office. Again, we are pleased that you will be working for the company. We look forward to you joining our team!

Sincerely,

I accept employment with the Company under the terms described above:

Signature:

15.3 Leave Record Form

Name: _____ Position: _____ Month: _____

Key Tasks	Total Time	Number of days											
Leave Aailed													
Statutory Holidays													
GRAND TOTAL		-			-	-		-	-	-	-	-	

15.4 Leave Request Form

Leave Form	
PART 1 (Employee)	
Name of Employee	
No. of working days requested for	
Dates of requested leaves period	
Type of leave requested	
Reason for requesting leave (provide proof where possible, plus as many details as possible if required)	
<div>Employee Signature: _____ Date _____</div>	
Part 2 (Immediate Supervisor)	
Leave has been discussed with employee and suits within the work planning	
_____ Immediate Supervisor (Name)	_____ Signature
	Date

15.5 Travel Authorization Form

Please fill out Travel Authorization Form & obtain approval prior to making reservations

Estimated Cost of Trip (PKR): _____

Traveller's Name		Designation	
Duty Station		Contact number during travel	
FROM	TO	DATE	DEPARTURE TIME
OFFICE VEHICLE REQUIRED? YES NO (please complete information below)			
CITY	NUMBER OF DAYS	SPECIAL INFORMATION	
OVER NIGHT STAY REQUIRED? YES NO (yes please complete information Below)			
CITY	DATE(S)	SPECIAL INFORMATION	
Employee Signature		Supervisor Signature	
Date		Date	

15.6 Performance Appraisal Form

Annual Staff Appraisal Form

Name: _____ Job Title: _____

Supervisor: _____ Location: _____

Hire Date: _____ Last Appraiser Date: _____

DEFINITION OF RATINGS

EXCEPTIONAL (5): Consistently exceeds all relevant performance standards. Provides leadership, fosters teamwork, is highly productive, innovative, responsive and generates top quality work.

EXCEEDS EXPECTATIONS (4): Consistently meets and often exceeds all relevant performance standards. Shows initiative and versatility, works collaboratively, has strong technical & interpersonal skills or has achieved significant improvement in these areas.

MEETS EXPECTATIONS (3): Meets all relevant performance standards. Seldom exceeds or falls short of desired results or objectives. Lacks appropriate level of skills or is inexperienced/still learning the requirements of the job.

BELOW EXPECTATIONS (2): Sometimes meets the performance standards. Seldom exceeds and often falls short of desired results. Performance has declined significantly, or employee has not sustained adequate improvement, as required since the last performance review or performance improvement plan.

NEEDS IMPROVEMENT (1): Consistently falls short of performance standards.

The Appraiser is required to describe the employee's contributions in each of the performance categories below:

Personal Attributes (Matrix Form)

	<p>Key Performance Indicators (Please specify concrete targets and goals set on an annual basis and agreed with the employees in advance. These goals should be set through the SMART objectives which means Specific, Measurable, Attainable, Relevant and Time Oriented during the goal setting period)</p> <p>Self-Assessment Supervisors Assessment</p> <p>1.</p> <p>2.</p> <p>3.</p> <p>4.</p> <p>5.</p>		
Criteria	Interim Self-Assessment	Interim Supervisors Assessment	Comments
1. Professional Competence:			
1.1 Understanding job requirements			
1.2 Technical knowledge and skills			
1.3 Problem solving/decision making			
1.4 Planning and organization			
1.5 Team building/delegation			
1.6 Meeting deadlines/commitments			
1.7 Quality of outputs and results			
2. Initiative:			
2.1 Striving to learn and improve			
2.2 Taking new challenges/responsibilities			
2.3 Motivation and enthusiasm			
2.4 Creative thinking			
3. Communication Skills			

3.1 Organization/expression of ideas			
3.2 Communication with stakeholders			
3.3 Active listening			
4. Interpersonal Skills:			
4.1 Sensitivity to others' needs/feelings			
4.2 Team work			
4.3 Adaptability and flexibility			
Overall Rating			
Concluding Appraiser Comments Year-end or interim			
Appraise Comments:			

Appraisee Signature: _____

Appraiser Signature: _____

Date:

15.7 Sexual Harassment Policy

SIGNATURE FORM

The sexual misconduct policy is an integral part of the HR manual. PLEASE READ IT CAREFULLY. Upon completion of your review of the policy, please sign the statement below, and return to your supervisor within the first week of your employment.

I, _____ have received and read a copy of company's sexual Harassment policy

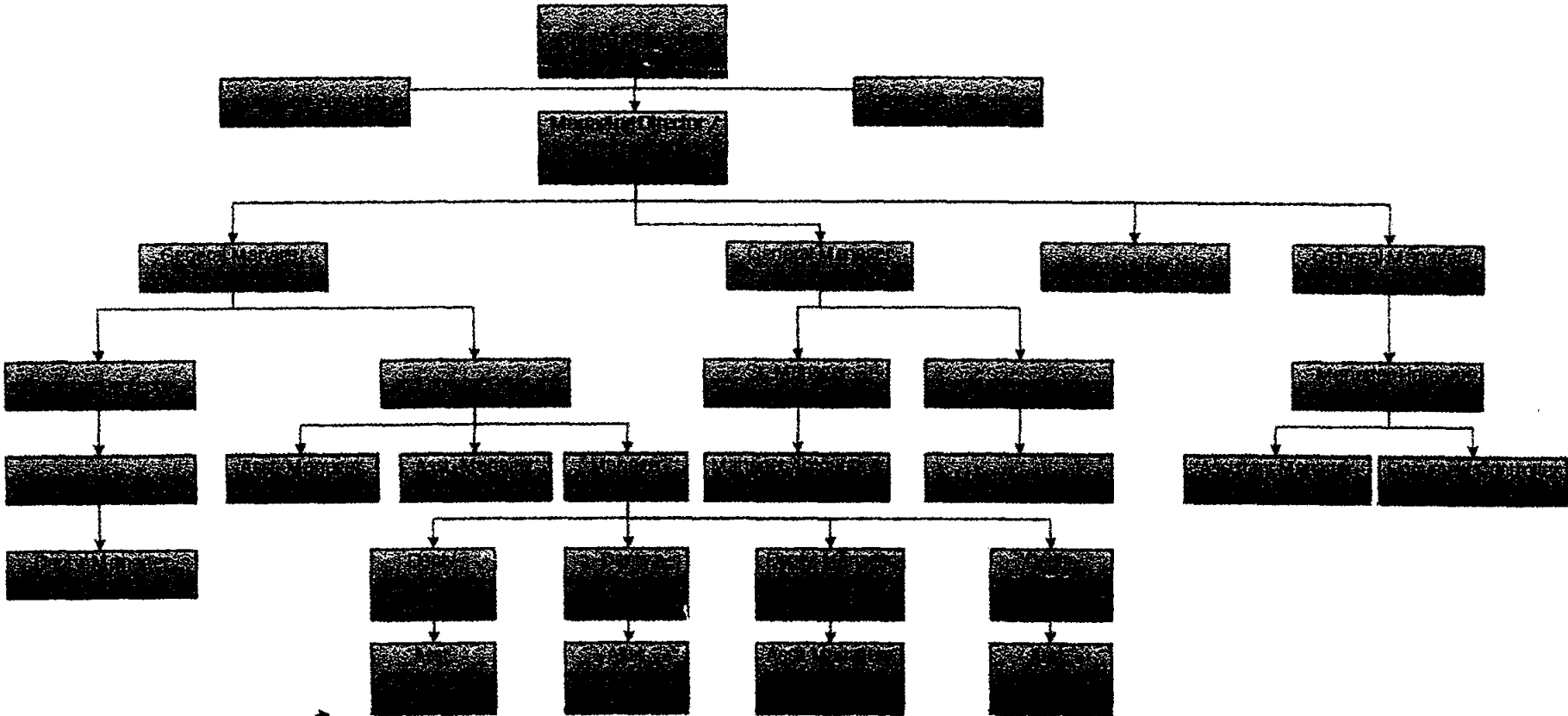
I am aware of the contents of this policy. By my signature below, I acknowledge, understand, accept, and agree to comply with the information contained in the policy.

I understand that any violation in part or in whole of the policies may result in my immediate dismissal from employment.

Employees Signature _____

Date _____

PROPOSED ORGANIZATIONAL STRUCTURE



Full Name: **Engr. Maqsood Anwar Khan**
 Father Name: **Mr. Sikandar Khan**
 Date of Birth: **13th March 1968**
 Domicile: **Peshawar**
 Religion: **Islam**
 Official Address: **PEDO House, Plot No 38-Sector B-2, Phase V, Hayatabad Peshawar**
 Contact No Official: **+92-91-9217446**
 Contact No. Mob: **+923325446596**
 Highest Academic: **BSc. Electrical Engineering**
 Qualification:
 Present Position: **Chief Engineer (Operation & Commercial) PEDO**
 Overall Experience: **27 Years+**
 Membership in Professional Societies: **Pakistan Engineering Council**

ACADEMIC RECORD:

DEGREE	BOARD/UNIVERSITY	PASSING YEAR	DIVISION
BSc Electrical Engineering	Manuel L. Quezon University (MLQU) Manila	1989	1st Division
FSC. Pre Engineering	Peshawar Board	1984	2nd Division
SSC. Science	Peshawar Board	1883	1st Division

OBJECTIVE:

To continue my career with an organization that will utilize my management, technical and administrative skills to benefit mutual growth and success.

Professional Experience:

I am Professional Electrical Engineer joined Pakhtunkhwa Energy Development Organization previously known as Sarhad Hydel Development Organization in 1993 and since then I worked at various challenging positions in the organization including executed wheeling arrangement from Pehur Hydropower Complex to the industrial consumers of Khyber Pakhtunkhwa which is the first successful wheeling arrangement in the Khyber Pakhtunkhwa and now possess well over approximately 27 years of relevant experience in this organization.

- Chief Engineer Operation & Commercial (BPS-19)
 PEDO, Peshawar Govt: of Khyber Pakhtunkhwa
 Till Date

Main Responsibilities:

1. Worked as General Manager (Technical) in Fata Development Authority on Deputation basis from 2015 to 2019
2. Worked as a Director Operation & Commercial PEDO
3. Worked as a Resident Engineer of 81 MW Malakand-III Hydropower Complex
4. Conducted a Feasibility Study of Mujigram HPP (60 MW)
5. Conducted a Feasibility Study of Istaro Booni HPP (90 MW)
6. Conducted a Feasibility Study of Arkari Gol HPP (70 MW)
7. Construction of Transmission & Operation of 33 KV Line from 4.2 MW Reshun HPP upper Chitral.
8. Upgradation of Reshun Hydropower Project from 2.8 MW to 4.2 MW by successful installation of third unit of 1.4 MW

Job Competencies:

1. Project Management
2. Transmission Line and Substation design
3. Construction of Power Transmission and Distribution Network

Languages:

- Pushtu (Fluent)
- Urdu (Fluent)
- English (Fluent)



Address: Village & PO Badizai, Nasir
Bagh Road Badizai stop
Tehsil and District
Peshawar

Phones: 03339109846,
03319119571

E-mail: amin.khalil9@gmail.com

SUMMARY

Name: Muhammad Amin Khalil
Profile: Male, 64 years and 04 months, Married
Date of Birth: 08.03.1955
CNIC: 17301-1289022-1
Nationality: Pakistani
Current Location: Pakistan
Present position: **ADVISOR (O&M /E&M) for PEDO Hydel Projects KPK**
Overall Experience: 40 Years +
Highest Qualification: **MSc. Engineering (Mechanical) Design**
Membership in
Professional Societies: Member of Pakistan Engineering Council

CAREER PROFILE

- An Engineering Executive with over 38 years of experience in **Operation, Maintenance and Management of Hydro Power Plants, Project Management & Construction supervision of Hydro Power Projects, Procurement and Inventory Management, Human Resource Management, Rehabilitation of Old Hydro Power Plants, Negotiation with International Donor Agencies for Project Funding, Coordination with Various Ministries for Development Projects, Capacity Development of Organization, Strategic and Financial Planning.**
- High performing executive with a proven track record of accomplishments in Power Sector, smooth running of 20 Hydro Power Stations along with rehabilitation of old hydro plants to regain the efficiency, availability and capacity to meet the growing needs of Electricity of the Country.
- Ability to develop strategic long term planning for Rehabilitation of Old / Ageing Hydro Power Plants and communicate effectively with all levels of decision makers.
- Fluent in four languages - English, Urdu and Pashto

PROFESSIONAL EXPERIENCE

PRESENT ASSIGNMENT:

Working as ADVISOR (O&M / E&M) TO CHEIE EXECUTIVE PAKHTUNKHWA ENERGY DEVELOPMENT ORGANIZATION (**PEDO**) , since 12th Feb 2018.

As an Advisor I am also looking after Design review and specifications of E&M Equipment for future and ongoing Hydel Projects of PEDO, review of CFD Analysis, FEM and Physical Model Testing of Turbines for projects under construction and Factory Acceptance Tests of

E&M equipment. I am also responsible for carrying out Technical Audit of the O&M contractors engaged by PEDO for Malakand –III HPP 81 MW, PEHURE HPP 18MW, Ranolia HPP17 MW and Machai HPP 2.6 MW.

In addition to working as ADVISOR, I am also a Member of the Panel of Experts (POE) for construction of New Hydel Power Projects of PEDO in Private and Public Private sectors..

HISTORY

1. Retired from WAPDA as General Manager (Hydel) on 7th March 2015 . Worked as as ADVISOR to WAPDA Authority for Tarbela T-4 HPP 1410 MW and NEELUM JHELM HPP 969 MW , Golen Gol Hydel HPP106 MW, **Rehabilitation of Two Units of Khan Khwar HPP, 2 X 38 MW** and O&M of all other 19 Hydel Power Stations owned and operated by WAPDA , with effect from 8th March 2015 to 11th Feb 2018. (about three years).

As Advisor to WAPDA, visited Andritz Hydro Hydraulic Laboratory in Zurich Switzerland, in Dec 2015 for carrying out CFD Analysis and Mathematical Modeling of Spare Turbine Runners for Warsak Power Station.

Visited M/s IZIK ANKARA TURKEY , for carrying out Factory Assembly Tests of the components for Rehabilitation of 200 Tons EOT overhead cranes of Mangla Power Station , in July 2016.

Also acted as Engineer for Package-II (Power House Cranes Refurbishment) of Mangla Rehabilitation Project .

Directly supervised Rehabilitation of damaged Units of Khan Khwar HPP 81 MW.

2. **From:** September 2014 to March 2015
Employer: Pakistan Water and Power Development Authority, WAPDA.
Position Held: General Manager (Hydel) Operation
Responsibilities: **Included:**
 - ✚ Management, Planning, O&M administration and financial control of WAPDA's Nineteen (19) Hydel Power Plants with a total installed capacity of 6902 MW.
 - ✚ As GM (Hydel) Operation , witnessed and participated in Model Testing of Turbines for Tarbela T-4 Hydel Project at VOITH Hydraulic Laboratory in HIDDENHIEM GERMANY in November 2014.
 - ✚ As GM (Hydel) Operation, Carried out Factory Assembly Testing of Turbine Components for NEELUM JHELM Hydel Project at Harbin Engineering Co HARBIN CHINA, in January 2015.
3. **From:** June2013 to August 2014
Employer: Pakistan Water and Power Development Authority, WAPDA.
Position Held: General Manager (Hydel) Development
Responsibilities:
 - ✚ I was responsible for monitoring of the under construction Hydel Development Projects, planning & implementation,

Rehabilitation of old Hydel Power Stations, Revision of Feasibility Reports / Pre-feasibility Reports , prequalification of contactors for Mangla Rehabilitation Project, Preparation of PC-I /PC II , Technical specifications , Review of Design and Tender documents of newly proposed Hydropower Projects, including Golen Gol, DASU (4200MW), Kiyal Khwar (131 MW), Rehabilitation of Mangla and Warsak Power Stations.

4. **From:** May 2011 to May 2013
Employer: Pakistan Water and Power Development Authority, WAPDA.
Position Held: Chief Engineer (Hydel) - North WAPDA Warsak.
Responsibilities:
 - ✚ Worked as Chief Engineer (Hydel) - North WAPDA Warsak. I was responsible for O&M Administration and Financial control of 243 MW Warsak Power Station along with small Hydel stations including Dargai (20MW) , Kurrum Garhi (4 MW) and Chitral (1MW). Also looked after Contract Administration for Rehabilitation Project of 22 MW Jabban Hydro Electric Power Station.

5. **From:** January 2008 to May 2011
Employer: Pakistan Water and Power Development Authority, WAPDA.
Position Held: Resident Engineer (Mechanical), Power Station Tarbela.
Responsibilities:
 - ✚ As Resident Engineer (Mechanical), I was engaged for the overall Management of Power Plant Static and Rotating equipment, Maintenance Engineering & Plants Services at Power Plant Tarbela (10X175 & 4X432 = 3478 MW).
 - ✚ My responsibilities were to:
 - ✚ To review all Method Statements regarding major repair and modification works in the ageing Turbine and Generator components for improvement in performance and efficiency of the plant.
 - ✚ Monitoring of O&M activities of Tarbela Hydel Power Generating Units 1-14, using Maintenance Management Program and scheduling through M.S Project software.
 - ✚ To prepare a business plan for maintenance and major overhauling of Tarbela Units 1-10.
 - ✚ Planning for major modification in Turbine and Generator components Units 1-14 , including Turbine Inlet valves, shaft sealing system, Governing system, cooling water system, service water system, station drainage system and Turbine dewatering system etc, required for enhancing efficiency, safety and reliability of the Power Station.
 - ✚ As Resident Engineer (Mechanical) I was deputed to witness and participate in Model Testing of Turbines for Neelum

Jhelum Hydro Power Project ,at HARBIN ENGG CO HARBIN CHINA, in March 2009.

6. **From:** Year 2001 to 2007
Employer: Pakistan Water and Power Development Authority, WAPDA.
Position Held: Technical Representative / Field Project Manager of M/s SNC – LAVALINE, the Canadian Consultants for Warsak Rehabilitation Project.
Responsibilities:
 - ✚ To direct the procurement of permanent and non-permanent materials required for the proper completion of the work on schedule.
 - ✚ Reviewing all engineering design drawings of the project before passing them for use to by project group and the contractor.
 - ✚ To direct and supervise senior engineers in the performance of all aspects of their work.
 - ✚ To exercise strict control over costs of construction particularly the use of labor, materials and equipment. This included reviewing variances from budget expenditure and recommending /initiating action to bring them under control.
 - ✚ Participated in the Subcontract bid analysis and award process and remained signatory to the final proposed Subcontractors selection documentation.
 - ✚ Participation in discussion of all contractual matters related to Sub-contractors employed on the project.
 - ✚ Checking and authorizing all claims for payment from Sub-contractors involved in his section of the project to assure accuracy and meeting proper contractual obligations, thereafter passing them to the Commercial Manager/Control Manager for payment.
 - ✚ To Schedule the mobilization (and subsequent de-mobilization) of the Construction resources, manage and supervise the construction team including performance appraisals, training development and establishment of personnel performance goals and targets.
 - ✚ To Manage the Site Office Administration and documentation.
 - ✚ To Manage and participate in the Post-Award Subcontract administration process, including kick-off and Contract meetings.
 - ✚ Participation in the Project Steering Committee meetings used to be attended by Canadian Representatives from M/s SNC-Lavaline, and CIDA and Chaired by Chairman WAPDA and Member (Power).
7. **From:** Year 1995 to 2000
Employer: Pakistan Water and Power Development Authority, WAPDA.
Position Held: Senior Engineer on deputation with M/s SNC –

LAVALINE, the Canadian Consultants for Warsak Rehabilitation Project.

Responsibilities:

- ✚ Preparation of Contract documents for various Mechanical and Civil works involved in the rehabilitation of Warsak Power station. Preparation of specifications and scope of work for modifications for 6m diameter Butterfly type Turbine inlet valves (90 ton each) for all the six units.
- ✚ Preparation of conceptual design for modifications in various Turbine components including Head covers, Bottom Rings, Guide vanes, Shaft sealing system, Generators thrust bearings, HP oil injection system, Generators air cooling system, 40 x 40 feet spillway gates (radial type each having a discharge capacity of 60,000 Cusecs), Power tunnel intake gates, draft tube gates and fabrication of new modified Head covers for all the six units.
- ✚ Direct supervision and monitoring of the following activities at site:
- ✚ Installation of two new EOT Cranes (each having a capacity of 70 tons) for lifting of 120 ton rotor and 29 ton Turbine runner, Major overhaul of Turbines and Generators, Installation of Vibro system, Installation of instruments for recording and monitoring of structural deformation, monitoring rehabilitation of spillway gates, Power tunnel intake gates, installation and commissioning of Water treatment plant, cutting of Turbine and Generator Floors along with Slabs and beams using diamond wire Hydraulic cutting machine and transfer of load to mechanical brackets / columns , so as to relieve the stresses induced in the building structure due AAR (Alkali Aggregate Reactivity) phenomena.
- ✚ Installation of floating bulkhead gate in front of the draft tube outlets of all the six Turbines, for replacement of the damaged guide channels, lintel and sill beams.

8. **From:** **Year 1988 to 1994**
 Employer: Pakistan Water and Power Development Authority, WAPDA.
 Position Held: Senior Mechanical Engineer (Plants) WARSAK Power Station
 Responsibilities:
- ✚ To lead a team of engineers, supervisors and technician during major overhaul of Turbines, carrying out NDT of rehabilitated components for Turbines and Generators.
 - ✚ Major overhauling of Turbines and Generators, Rehabilitation and Balancing of Turbine Runners for Warsak and small Hydel stations of WAPDA.

- ✚ Preventive maintenance of stationary and Rotating equipment such as heat exchangers, turbines, compressors, Pumping machinery, Turbine governing system, Hydraulic actuators, Hydro pneumatic system for governing system, gear pumps, screw type pumps, rotary vane type pumps over head and mobile cranes, Rotary Lathe machine & 6 m Vertical Turning and Boring Mill.
- ✚ Shut down planning of plant and its timely execution.
- ✚ Preparation of Technical Reports. Budgeting for Plant Mechanical Equipment in accordance with yearly schedule. Planning for procurement of Spare Parts for Turbines and Generators and their Inspection.
- ✚ Shaft system alignment of 40 MW Turbines and Generators of Warsak Power station, badly off set due to structural deformation in Power House building.
- ✚ Management of Warsak Mechanical workshop that is equipped with latest machines for repair and Major overhauling of turbines and generator components, rebabiting of bearings. Each Turbine of Warsak is required to be Major overhauled after every 35,000 hours of operation. Execution and monitoring of Shop Fabrication (alignment, Fit up & welding), carrying out NDT, Pressure Testing of Piping and Heat Exchangers. Design and fabrication of Static Balancing device for balancing of Turbine Runners for Warsak Generators, each having 13 feet diameter and 28 ton weight.

9. **From:** Year 1985 to 1987
Employer: Royal Saudi Navel Force, Ministry of Defense and Aviation, Port of RAS-ALMISHAB, Kingdom of Saudi Arabia.
Position Held: Chief Engineer (Mechanical) Utility Department
Responsibilities:
- ✚ Maintenance and operation of Caterpillar Diesel Generators, 8 units, 900 KW each, and Detroit Diesel Generators, 3 units 700 KW each.
 - ✚ Maintenance and operation of DESALINATION PLANTS, distillation type, two units, each having a capacity of 850000 Gallons per day. (MAXIMUM MODEL 24B-16MSF).
 - ✚ Maintenance and operation of REVERSE OSMOSIS WATER DESALINATION PLANTS, 2 units, each having a capacity of 22000 litres / sec, Model K- 13 E 90 POLYMETRICS U.S.A.
 - ✚ Maintenance and operation of Neptune Microfloc SEWAGE WATER TREATMENT PLANTS with a capacity of 50,000 Gallons per day.

- ✚ Maintenance and operation of DAVCO SEWAGE WATER TREATMENT PLANT, with a capacity of 100,000 Gallons per day. Maintenance and operation of Sewage Water Lift Stations.
- ✚ Maintenance of Potable Water Distribution System, consisting of a network of Centrifugal Pumps, Elevated Water tanks provided with Cathodic Protection against corrosion.
- ✚ Maintenance and operation of 250 KVA Mobile Diesel Generators (Cummins).
- ✚ Maintenance and operation of RUSTON GAS TURBINES, 3 units each having a capacity of 5 MW.

10. **From:** Nov 1978 to 1984
Employer: Pakistan Water and Power Development Authority, WAPDA.
Position Held: Mechanical Engineer (Plant Construction), TARBELA
2nd Extension Project Units 5- 10 (6 x 175 MW)

Responsibilities:

- ✚ To ensure construction activities are undertaken in accordance with Project needs in general and compatible with project schedule and cost objectives in particular.
 - ✚ Construction, Installation and Co-ordination for pre-commissioning tests, and start-up of turbines, generators & associated drives to ensure compliance with job specifications.
 - ✚ Participation with contractor in resolution of equipment commissioning problems to meet functional and safety objectives.
 - ✚ Associated with Consultants for carrying out commissioning tests of Turbines and Generators.
 - ✚ To make changes in the Plant components and make recommendations to Engineering management concerning the technical necessity of the changes.
 - ✚ Training Support to new Engineers in preparing method Statements for execution of Project. Box-up inspection of static equipment, Hydro testing, Punch listing, Preservation and maintenance of static equipment.
 - ✚ Supervised installation of HVAC system, Station drainage and dewatering Pumps, Cooling water system, Raw & Service Water Systems in the plant, Generator CO₂ Fire Fighting system, and Deluge/Sprinkle System for fire protection of Power Transformers..
 - ✚ Carried out Index Tests of Units 5-10, using Winter Kennedy method for measuring relative efficiency of Turbines at site.
 - ✚ Also worked as Mechanical Maintenance Engineer for Routine Preventive Maintenance of Units 1-10 Tarbela, 175 MW each.
-

**KEY QUALIFICATIONS:
EDUCATION**

✦ MSc. Mechanical Engineering:	2004-2005	NWFP University of Engineering and Technology Peshawar.
✦ BSc. Mechanical Engineering:	1978	Faculty of Engineering , N.W.F.P University of Peshawar

IT SKILLS

Windows & Office tools

- ✦ MS Project
- ✦ MS Office
- ✦ Auto CAD 2007
- ✦ MATLAB
- ✦ Pro E

PROFESSIONAL COURSES & TESTS

- ✦ MS Project Training received from M/S SNC-Lavaline, Canadian Consultants
- ✦ Maintenance management and inventory Management of plants (Pak)
- ✦ Twelve weeks training with Canadian Consultants M/S BELT, SNC Shawinigan Montreal Canada, on Maintenance Management, Design and Operation of Hydro Power plants. (Canada)
- ✦ Training received from M/S SNC-Lavaline, Canadian Consultants on using M.S Project, Microsoft Word, Excel and Power Point.

REFRESHER COURSES

- COMPLETED FIVE WEEKS COURSE ON HYDROPOWER PROJECTS, CONDUCTED BY GTZ GERMANY AT WAPDA ACADEMY FAISALABAD W.E.F 25th September 2000 to 28th October 2000 and obtained FIRST POSITION.
- COMPLETED FOUR WEEKS REFRESHER COURSE FOR SENIOR ENGINEERS (GENERATION) W.E.F 16th January 2006 to 11th Feb 2006, at WAPDA ENGINEERING ACADEMY FAISALABAD and obtained FIRST POSTION.

INTERNATIONAL SEMINARS AND CONFERENCES

- Accompanied Minister of Water and Power and Chairman WAPDA for holding Conference with European Manufacturers and Austria Bank regarding Development of Hydro Projects in Pakistan, at **Vienna Austria**, in Dec 2010.
- Attended Global Conference in Seoul Korea in May 2014 and gave presentation about the prospects of Hydel Projects in Pakistan.

MANAGEMENT COURSES

- COMPLETED SENIOR MANAGEMENT COURSE FROM WAPDA STAFF COLLEGE ISLAMABAD W.E.F 24th March 2009 to 06th June 2009
- COMPLETED MIDDLE MANAGEMENT COURSE FROM WAPDA STAFF COLLEGE ISLAMABAD W.E.F 9th July 2007 to 8th September 2007.

LANGUAGES

• English	Fluent
• Urdu	Fluent
• Pashto	Fluent

SUMMARY OF FOREIGN VISITS IN CONNECTION WITH MODEL TESTING AND INSPECTION OF E& M EQUIPMENT OF HYDEL TURBINES / GENERATORS AND FACTORY ASSEMBLING TESTS (FATS) OF TURBINE COMPONENTS OF VARIOUS HYDEL POWER PROJECTS

Sr. No	COUNTRY VISITED	PURPOSE	PERIOD	REMARKS
1	CANADA	12 weeks training with RSWI /Belt , Montreal and GE Canada , on : 1- Hydroelectric generation equipment Design and manufacturing. 2- Hydroelectric Equipment maintenance and overhauling. 3- Hydroelectric Power Plant Civil design.	Sept 1990 –Dec 1990.	Also witnessed practical demonstration of Model Testing of Hydel Turbines in GE Hydraulic Lab at Lachine Montreal Canada. Carried out FAT of Turbine components for Warsak Rehab Project
2	JAPAN	Witnessing Factory Assembling Testing of Turbine components for Units 4&5 Chashma HPP , at Fuji Electric KAWASAKI Japan	January 1997	
3	JAPAN	Factory Assembling Tests of Turbine components for Chashma HPP Unit 6 and Static Balancing of Turbine Runner	March 1998	
4	CHINA	<ul style="list-style-type: none">- MODEL TESTING OF TURBINE FOR NEELUM JHELM HPP 4X 242.25 MW- FAT OF E& M EQUIPMENT FOR NEELUM JHELM HPP 969 MW- FAT of E&M Equipment for Jabori HPP 11MW- General survey / assessment of various Chinese Manufacturers for E&M equipment- FAT of Jabori E&M equipment- Assessment of the capability and inspection of works of different Chinese manufacturers, for E&M equipment of GORKIN MATILTAN	<div>March 2009</div> <div>2015</div> <div>2017</div> <div>2017</div> <div>2018</div> <div>2018</div>	

		HPP 84 MW		
5	GERMANY and Switzerland	Visits to the works of Andritz Hydro in Kriens and Ravensburg	Dec 2010	After attending the seminar and meetings of Minister of Water and Power and Chairman WAPDA with European Turbine Manufacturers and Austria Bank, I was allowed to visit the works of Andritz Hydro in Austria, Germany and Switzerland.
6	AUSTRIA AND SWITZERLAND	Visits to Andritz Hydro in Krien and Techno Lab Luzern for checking their facilities and assessing their capabilities for hard coating on Turbine Runners for resistance against sand erosion.	June 2014	
7	GERMANY	MODEL TESTING OF TURBINES FOR TARBELA T-4 HYDEL PROJECT AT VOITH HYDRAULIC LABORATORY IN HIDENTHIEM GERMANY	November 2014	
8	CHINA	Factory Assembling Testing of Turbine components for Neelum Jhelum HPP 968 MW at Harbin Engineering company Harbin	January 2015	
9	TURKEY	FAT of Components for 200 Ton EOT Cranes of Mangla Rehabilitation project	July 2016	
10	SWITZERLAND	Visited Andritz Hydro Hydraulic Laboratory in Zurich Switzerland, in Dec 2015 for carrying out CFD Analysis and Mathematical Modeling of Spare Turbine Runners for Warsak Power Station.	DEC 2015	
11	CHINA	Visits to SGE, Allonward, Seri Machinery and Misc other Companies in China for manufacturing of Turbines & Generators and E&M equipment.	September 2017	The visit was conducted as per directive of Chief Executive officer of PEDO for assessing capabilities of the sub contractors for Gorkin Matiltan HPP, proposed by EPC contractor and recommending the one who has the required facilities and experience for

				Design and manufacturing of Turbines, Generators and other E&M equipment.
		MODEL TESTING OF SMALLER UNIT OF GORKIN MATILTAN 15.7 MW	Jan 2019	
		MODEL TESTING OF TURBINE FOR LARGER UNITS OF GORKIN MATILTAN 2X 36.5 MW	April 2019	



Engr. MUHAMMAD AMIN KHALIL

PRE-FEASIBILITY STUDY FOR TRANSMISSION LINE OF
KHYBER PAKHTUNKHWA TRANSMISSION AND GRID
SYSTEM COMPANY

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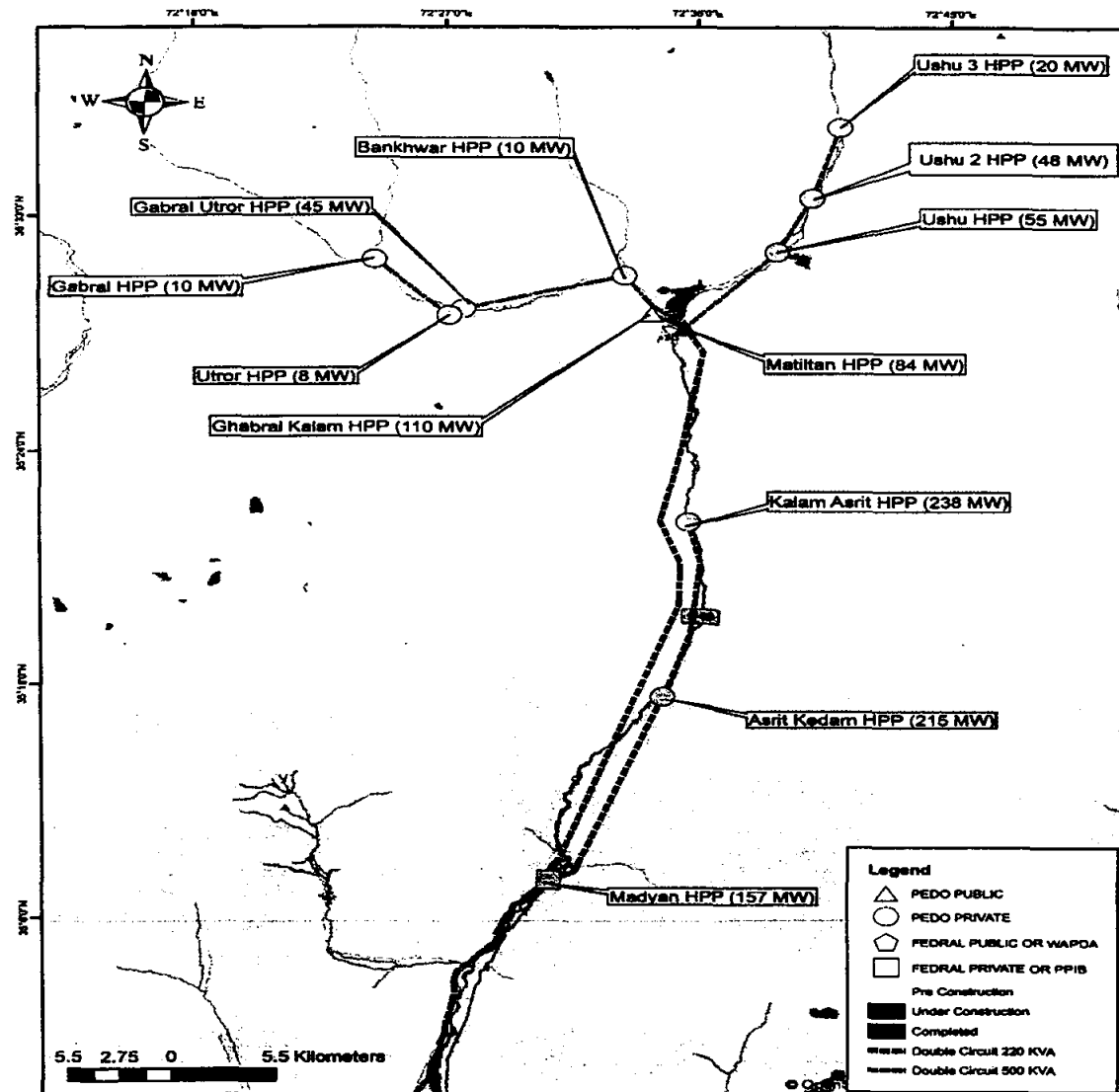


Figure 7-5: Transmission Corridor Map of Swat Region

8 Planned Economic Zones

Government of KPK has planned the following economic zones:

Sr. No.	Economic Zone / Small Industrial Estate	Power Requirement (MW)	Possible Power Feeding Arrangement	Status of Economic Zone
1.	Chitral Ez	5-10	69MW, Lawi HPP	Land measuring 40 acres identified, CEZ planned to be completed by 2022
2.	Lower Dir Ez	15-20	40MW, Koto HPP	Land measuring 1500 canals identified near Koto HPP, CEZ planned to be completed by 2024
3.	Dargai Ez	20-25	81MW, Malakand HPP	Established in the year 2015 by SIDB, can be improved with cheap energy through wheeling
4.	Swat Ez	10-15	37MW, Darai Khwar HPP	Land measuring 1200 canals identified, CEZ planned to be completed by 2022
5.	Rashakai Special Economic (SEZ) Zone	210	Direct Transmission line / Wheeling from various plants	Rashakai SEZ is under the CPEC umbrella, Land acquired is 1000acres, Scheduled for development by 2022
6.	Ghazi EZ	15-20	Direct Transmission line / Wheeling from various plants	Ghazi SEZ with acquired land of 89acres, being inaugurated shortly and planned for completion during 2020
7.	Jalozai EZ	40-60	Direct Transmission line / Wheeling from various plants	Jalozai EZ with acquired land of 257 acres, development work will be completed in 2021
8.	Buner Marble City	10	No nearby HPP, Wheeling Arrangement	Land measuring 100 acres identified, planned to be completed by 2023
9.	Daraband DIK, SEZ	40-60	No nearby HPP, Wheeling Arrangement	Land measuring 3000 acres identified, SEZ planned to be completed by 2023

10.	Hattar, SEZ	24	No nearby HPP, Wheeling Arrangement	424 acre Land acquired, SEZ planned to be completed by 2022
11.	Nowshera Industrial Estate Extention	10	No nearby HPP, Wheeling Arrangement	67 acre Land acquired, SEZ planned to be completed by 2021
12.	Mohmand Marble City	15	No nearby HPP, Wheeling Arrangement	Industrial Estate completed

9 Future Action

Under the mandate newly established Transmission and Grid System Company of Khyber Pakhtunkhwa, the feasibility study and construction of power lines of corridors will be carried out in stages. The construction shall be carried out as per the detail design, once developed.

The feasibility study shall identify and confirm availability of corridors for transmission lines for evacuation of power from hydro power projects in KPK to develop power transmission alternatives, to determine the most feasible option to carry out detailed survey of the selected corridor, to design and engineer the selected transmission option, to study environmental & social impact of transmission system and to carry out economic and financial analysis of the selected option. It comprises all the valleys in northern mountainous areas of Khyber Pakhtunkhwa such as Chitral, Dir, Swat, Kaghan, Kohistan where PEDO has identified hydropower potential sites and under construction projects.

KPTGC will engage professionals/ consultants for the feasibility studies. The objective methodology and scope of work is given below:

A. Objectives

The objective of the feasibility study to be carried out:

1. to identify and confirm availability of corridors for transmission lines for evacuation of power from the above-mentioned hydro power plants;
2. to develop power transmission alternatives;
3. to determine the most feasible option;
4. to carry out detailed survey of the selected corridor(s);
5. to design and engineer the selected transmission option;
6. to study the environmental & social impact of the transmission system and
7. to carry out the economic & financial analysis of the selected option. The feasibility study needs to be in accordance with the requirements of National Grid.

B. Methodology

Essentially the consultant will carry out studies in phases and it will include identification of corridors, system study of transmission alternatives, initial environmental examination, techno-economic assessment of the alternatives and recommendations for selected option(s) with definition of further studies (including staging of development) and design/engineering. Thereafter, detailed system study of selected options(s), detailed survey, plan & profile drawing, design/engineering and environmental aspects will be carried out.

The feasibility study also aims at collection of data/information through field visits/surveys, collection of sub-meter resolution satellite imageries from SUPARCO with an objective to explore & select the transmission line route etc.

C. Scope of Work

The Consultant is expected to be an association of international and domestic firm(s) with the appropriate capabilities and experience of 220kV and 500kV to execute the services. The Consultant will be solely responsible for the proper performance of the consulting services.

The scope of work consists of carrying out a detailed feasibility study for evacuation of power from Hydro Power Projects on rivers and their tributaries in KPK based on technical, economic and environmental factors. The feasibility study will establish availability & size of the corridor(s) for construction of transmission lines and the space available for substation and for dispersal of power. Type and technology of 220 kV / 500 kV HVAC lines, requirement of reactive power compensation, transmission lines route/profile, design parameters, cost estimates, environmental & socio-economic impact assessment etc., technical, financial, environmental, and economic viability of the project will be established. The work/study shall be executed in two phases as under:

Phase-I:

Identification of corridors, system study of transmission alternatives, initial environmental examination, techno-economic assessment of the alternatives and recommendations selected option(s) with definition of further studies (including staging of development) and design/engineering. Identify and evaluate potential corridors in order to prepare an effective power dispersal scheme for the listed power projects. Review previous studies and information available with WAPDA/NTDC/PEDO regarding identification and evaluation of transmission line corridors, technical and EIA investigation, surveys and geo-technical investigation. Determine the transmission system requirement to evacuate the generated power to major load centers. The task to include GIS/satellite imageries, aerial survey, review of available topographic surveys and detailed constraint and opportunity mapping of the major corridors and the several sub-corridor option within the main corridors.

Phase-II:

Detailed system study of selected options(s), Transmission Line route survey, plan & profile drawing, feasibility level design/engineering and environmental aspects, which shall include but not limited to the following:

Feasibility Level Design/Engineering:

- a. Carry out design studies

- b. Prepare feasibility level for EPC tendering engineering design, drawings and technical specifications of transmission lines, including towers, conductors, insulators, hardware/accessories, shield wires/OPGW and grounding materials etc. in accordance with relevant technical standards.
- c. Prepare feasibility level for EPC tendering engineering design, drawings and technical specifications of substations in accordance with relevant technical standards.
- d. Prepare bill of quantities for all major required materials based on the engineering design and prepare detailed cost estimates. The design should be sufficient in details for tendering on EPC basis. The detailed quantities shall be calculated by EPC Contractor.
- e. Prepare detailed project implementation schedule showing anticipated progress of works.
- f. The Consultants shall be responsible for carrying out the necessary design studies which will include but not be limited to:
 - i. Lightning & Switching Surge performance studies.
 - ii. TOV studies
 - iii. Insulation coordination studies
 - iv. Conductor optimization studies
 - v. Substation & Tower Grounding studies.
- g. The Feasibility report shall be used as a major input to the design and technical specification work by the EPC Contractor.

Environmental Aspects:

Conduct an environmental examination for the transmission line and substations, taking into account the likely impacts associated with their locations, designs, and construction activities, as well as the long-term impacts during operation, including identification of environmental issues from activities directly induced by the Project. The ESIA Report shall be as per IFC standards and requirements.

Involuntary Resettlement and Indigenous Projects:

Review national laws and policies on land acquisition and involuntary resettlement to verify their adequacy and consistency with the loan giving agencies and assist PEDO to design the project so as to eliminate/minimize the resettlement effects. The RAP report shall also be as per IFC standards.

ADDENDUM TO PRE-FEASIBILITY STUDY

KHYBER PAKHTUNKHWA PROVINCIAL GRID COMPANY

WHEREAS, the Province of Khyber Pakhtunkhwa (**KP Province**) comprises of mountainous terrain and vast sweeps of barren land where the renewable sources for generation of electric power are located. The consumers are also scattered in various localities of mountains and remote villages. So far the National Grid has not been able to penetrate into the far flung area which on one hand has deprived the Province from realizing its full generation potential and on the other hand deprived the population from access to electricity. The Government of Khyber Pakhtunkhwa (**GoKP**) intends to aggressively tap its potential of hydroelectric power, solar and wind power renewables as well as indigenously produced gas based power generation.

1. That the Khyber Pakhtunkhwa Transmission & Grid System Company (Private) Limited (**KPTGCL**) intends to construct, operate and maintain transmission lines and grid facilities including the construction, operation and maintenance high and extra high voltage transmission lines, transmission facilities, grid systems and the grid stations allied with system operations with dispatch facilities all within the KP Province.
2. That the KPTGCL shall ensure safe and reliable operations of the transmission and grid system through adherence to the performance standards prescribed by the NEPRA Authority. The KPTGCL shall operate and maintain the transmission and grid system consistent with the requirements of the Grid Code or as the case may be the Distribution Code.
3. That initially six corridors have been identified in regions of Chitral, Dir, Mansehra, Kohistan, DI Khan and Swat (the "**Transmission Corridors**") for the transmission of electric power services and provision of the grid related activities.

I. EVACUATION STRATEGY

1. The proposed strategy is envisaged for power evacuation of nearly 7,320 MW, which will be available in KP Province in the next 5-10 years from various Hydro Power Project (**HPP Projects**) located at Chitral, Dir, Swat, Kohistan and Mansehra regions.
2. The available power from various HPP Projects under Pakhtunkhwa Energy Development Organization ("**PEDO**") in the next 5-10 years is detailed below.
 - (i). Chitral Region: 2946 MW

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- (ii). Dir region: 508 MW
 - (iii). Kohistan Region: 2054 MW
 - (iv). Swat Region: 1076 MW
 - (v). Mansehra Region: MW 736
3. The above available MWs demands a transmission network of 500 KV, 220 KV and 132 KV rings to connect these HPP Projects in the most optimal and integrated fashion in a bid to evacuate this power to reach the potential load centres.
4. The evacuation strategy has been divided into three (3) stages and each stage further divided into various phases, which will be planned, designed and executed accordingly and under a priority list contemplated to meet needs and requirements of various stock holders. The region wise transmission strategy of power evacuations will be streamlined as under.
- (a). **DIR and Chitral Region**
1. As evident from the figures provided above, a total of 3,454 MW will be available from these two regions, which according to the transmission capacity acquired through various voltage levels will require two Double Circuit 500 KV Transmission lines including requirements of contingency plans running in parallel.
2. It is forecasted that One Double Circuit 500 KV Transmission Line will be required immediately from Chitral to Chakdara to evacuate part of the available MW along with two (2) terminal 500/220/132 KV grid station at each end located at Chitral and Chakdara. The Transmission and Grid Projects are planned to be executed under Stage-01, Phase- I with a time line falling under 1-5 years.
3. The MWs available from various HPP Projects in Chitral and Dir Regions will be linked through a sub transmission system of 132 KV network and linked to the two Major stations of 500/220/132 KV at Chitral and Dir according to the most technically and financially viable international practices.
4. It will be appropriate to mention here that PEDO has already finalized consultant for an evacuation study of 3100 MW from various HPP Projects located in Chitral and Dir Regions.
- (b). **Swat Region**
5. That 220/132 KV Grid station is proposed at Swat Region with a 220 KV transmission link both to Chakdara 500/220/132 KV grid station and 220/132 KV Kohistan Grid Station. The 220 KV transmissions will be adequate enough to handle for the available 1076 MW available from Swat region.

6. Furthermore, the MWs available from various HPP Projects in Swat Regions will be linked through a sub transmission system of 132 KV to be connected to the main 220/132 KV Grid Station (GS). The Transmission and Grid Projects are planned to be executed under Stage-01, Phase-I with a time line falling under 1-5 years.

(c). **Kohistan Region**

7. That 220/132 KV Grid station is proposed at Kohistan Region with a 220 KV transmission link both to Swat 220/132 KV grid station and 220/132 KV Mansehra Grid Station. In order to handle 2054 MW of power, from various HPP Projects in Kohistan Region, the HPP Projects will be linked through a sub transmission system of 132 KV to the main 220/132 KV GS at Kohistan. The 220 KV Transmission line(s) will establish the required link between Mansehra Region and Swat Region. The Transmission and Grid Projects are planned to be executed under Stage-01; Phase-II with a time line falling under 5-10 years.

(d). **Mansehra Region**

8. That 220/132 KV Grid station is proposed at Mansehra Region with a 220 KV transmission link to Kohistan 220/132 KV grid station .The 736 MW available from various HPP Projects at Mansehra region will be linked through a sub transmission system of 132 KV to the main Mansehra 220/132 KV GS. The 220/132 KV GS at Mansehra can be linked to National Transmission and Despatch Company Limited (NTDC) 220/132 KV GS in the vicinity .The Transmission and Grid Projects are planned to be executed under Stage-01, Phase-II with a time line falling under 5-10 years.

II. SPECIAL ECONOMIC ZONES

1. That it has been proposed that inter-connection and transmission facilities shall be provided to the proposed special economic zones.
2. The present networks of NTDC and Peshawar Electric Supply Company Limited (PESCO) needs sizable investment and time to upgrade the system in order to meet the new load patterns including existing and forthcoming KP Province economic zone (EZ) and Special Economic Zones (SEZ) being in pipe lines by provisional and central governments.

III. REQUIREMENTS

1. The KP Province is gifted by nature with water and other resources. There is lot of generation potential in the area. However, there is non-availability and insufficient transmission capacity of the national grid in many parts of the Province that is severely hampering transmission of electric power besides development and exploitation of the natural resources available within the Province who intends to harness power potentials for its industries and the people;

2. The national grid company in submitting the Indicative Generation Capacity Expansion Plan (IGCEP) has considered only 171 MW from the KP Province until 2030. The Pre-Feasibility Report reflects a much larger capacity in the Province; out of which few are under construction while others are expected shortly. There is dearth of transmission capacity for evacuation of power.
3. On the other hand, the KP Province is engaged in various projects related to power sector while there are various power producers as well as consumers in its geographical territory those require supply and provision of electric power. To add, the GoKP has already extended its commitments for growth of the industry, and resultant benefit to its people, through the Industrial Policy 2016. To serve these consumers for which 132, 220, 500 kV lines and a High Voltage Direct Current (HVDC) Transmission Line is proposed.
4. GoKP through PEDO is already engaged in the generation of electric power at various districts of the Province.
5. The Transmission constraints has seriously affected GoKP plans and time lines to evacuate power its cheap and abundant HPP Projects potential and transmit it to the nearby and remote load centers in a flexible manner. Further, non-availability of a proper and adequate transmission network has hit planned schedules of existing and future HPP Projects which are under execution/to be executed by PEDO under various contractual modes such as Private Sector, G2G, PPP and through competitive biddings. Further, non-availability of a comprehensive transmission network to evacuate its HPP Projects power has affected KP Province HPP Projects in a multilateral directions as follows:
 - (i) How to evacuate power from current and future HPP Projects and in the absence of a readily available network to link HPP Projects source to the load centers as and when required. It has resulted heavy financial loss to the national and provincial exchequer;
 - (ii) The Commercial Operation Date (COD) timeline of completed HPP Projects consequently and consistently delayed;
 - (iii) Contractual & financial damages to ancillary projects;
 - (iv) Difficult to plan, showcase and market future HPP Projects and to seek and attract potential investors within the country and from abroad; and
 - (v) Projects of strategic and urgent natures which are needed to be run and completed on **Fast Track** are greatly affected due to power evacuation problems. The COD of various HPPS

cannot be figured out in the absence of a timely available HV & Extra High Voltage (EHV) transmission network.

- 6. The KPTGCL, in capacity of the Provincial Grid Company, shall serve as the cornerstone of the GoKP's existing and upcoming Energy Policies those aim to utilize at optimum level, the massive potential of water and other renewable resources to produce clean & cheap electricity.

IV. LIMITATIONS AND CONSTRAINTS OF NTDC NETWORK IN KP PROVINCE

- 1. The NTDC has five (5) Major network feeding points in KP province:
 - 1.1 **Sheik Muhammadi 500/220/132 KV GS:** Looking at the NTDC 500KV and 220 KV network Single line diagram, it can be noted (and since early 1990s when the Sheikh Muhammadi 500/220/132 grid station was commissioned), till today, Sheikh Muhammadi GS is fed from Tarbela Power House by only one (1) 500 KV Single Circuit line with power capability **of around 1000 MW**. This MW transfer is also highly compromised with difference in seasonal generation capacities of Tarbela power house.
 - 1.2. In addition to the above, Sheikh Mohammedi 500K/220/132 KV GS has three Single Circuit (SC) 220 KV Transmission lines, two of which are fed from Chashama Nuclear power Plants via Daud Khel GS and one is fed from Ghazi Brotha Power House. The three of the 220 KV Lines has an accumulative MW transfer capacity of **nearly 2000-3000 MW** with due consideration to the an effective contingency plans to keep the system stable.
 - 1.3. **220/132 KV Nowsehra GS:** The Nowshera GS is fed from Ghazi Brotha through Single Circuit (SC) 220 KV Transmission lines with a 1000 MW transfer capacity.
 - 1.4. **220/132 KV Mardan GS:** The Mardan GS is fed from Tarbela Power through one 220 KV line double circuit (DC) Transmission line with 1200 MW transfer capacity. **Please note in June 2020, this line has contributed a transmission of 609 MW only and running around 50% of its utilization factor.**
 - 1.5. **220/132 KV Mansehra GS:** The Maneshra GS is fed through one single circuit from Allai Khwar Power House (108 MW) and another Single Circuit 220 KV T/line from 220KV/New Islamabad.

From the above data (items VIII: 1-5) it can be seen that though NTDC has 220 KV and 500 KV transmission network, which indicates a theoretical transmission capacity of around 5000-6000 MW in KP Province, Nevertheless , NTDC is unable to utilize it up to 100% capacity for a variety of serious limitations and constraints.

Further, it is to be noted that the above transmission network by NTDC was built and established in decades, with serious apprehension at the moment as how could NTDC will be able to put in place a transmission Network in North to evacuate 7,320 MW of power from KP in the next 10-15 years.

At present and according to the recent load management data collected from utility PESCO for the Y2019-20, under the present NTDC network configuration, NTDC contributed a maximum of **2182 MW** against **PESCO peak demand of 3137 MW**. A maximum **shortfall of 1019 MW** prevailed over the period.

2. The difference between supply and demand due to generation and transmission constraints between NTDC & PESCO inflicts uncontrolled service voltage fluctuation and out of the utility guaranteed ranges. This result in huge asset damages and financial loses to the domestic and industrial consumer beside operational damages to the network itself. The problem is resolved with forced outages which give further rise to consumer resentments.
3. As the energy sector at the national level is under financial crises for reasons known to all and is presently touching the lowest ebb, including but not limited to circular debt, unmet revenue requirements, high transmission losses, dilapidated infrastructure, chances are remote that the above constraints and limitations could be settled out by NTDC to revamp, upgrade and extend its transmission capacity of its existing system and particularly in northern part of KP Province
4. Under such scenario, there seems to be little or no chances that GoKP could be able to get adequate share of NTDC Transmission corridors in near future to evacuate its mammoth HPP Projects potential. This is also established by the IGCEP 2020-2047 report prepared by the NTDC which either delays or ignores the provincial power projects.
- 5.. The NTDC transmission limitations will deprive the GoKP and Federal Government and all other stakeholders to yield huge benefit from the cheap Hydro potential of the KP Province. This Hydro power is badly required to limit and control prevailing energy crisis. Besides, its strategic objectives are to enhance hydro generation to the desired level and to reduce and keep thermal generation's component at minimum.

1. Available HPP Projects at various Geographical Location

Sr.	Region	By Year 2030 (MW)
1.	Chitral	2946
2.	Dir	508
3.	Kohistan	2054
4.	Mansehra	736
5.	Swat	1076
6.	DI Khan (Solar)	249
TOTAL		7,539

2. Power Evacuation & Transmission Strategy

The Government of KP's power evacuation and transmission strategy is as follows:

- (i) **Stage 1:** To evacuate power from HPP Projects available in Short term over the next 1-7 years;
- (ii) **Stage 2;** To evacuate power from HPP Projects available in medium term over the next 7-15 years;
- (iii) **Stage 3:** To evacuate power from HPP Projects available in long term over the next 15-30 years and beyond.

3. Major Milestones of the KPTGCL's Network

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Phase-I

- (i) It will provide transmission of bulk power through 500 KV and 220 KV transmission lines network with the major transmitting and receiving stations located at Chitral (500/220/132 KV GS), Chakdara (500/220/132 KV GS), Swat 220/132 KV GS, Kohistan 220/132 KV GS and Mansehra 220/132 KV GS.
- (ii) These Major Stations will be inter-connected in such a way as to establish 500 KV and 220 KV network rings. In parallel, 132 KV network ring will be added looping various HPPs.
- (iii) The 500 KV and 220 KV network will be extended to NTDC and PESCO networks at appropriate nodes for the export/import of Power.

Phase-II

- (i) Network stage Phase -II is intended to link one 500 KV Double Circuit Transmission Lines from Chakdara 500/220/132 HV GS to Sheikh Mahammad 500/220/132 KV GSK. It will play a major role to reinforce the central and southern power network of KP Province.
- (ii) A regional control center will be part of the KPTGCL transmission and grid network to control, monitor and dispatch power according to the best international transmission practices and through fully equipped SCADA system.
- (iii) The KPTGCL medium term plans to connect and strengthen KP Province southern network with a step further to provide surplus power to Baluchistan province from a gate way provided at DI Khan.

Phase-III

- (i) The KPTGCL long term plans is to export surplus MW to cross border to Afghanistan and Central Asian Republics.

4. Preliminary Proposed HV and EHV Network

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The preliminary proposed HV and EHV network comprising of 500 KV, 220 KV and 132 KV supply rings. It is aimed to cater transmission link between various regions and load centers. The proposed network will comprise the following Grids and Transmission lines.

S.NO	KV LEVEL	OVERHEAD TRANSMISSION LINE (OHTL)	GRID SYSTEM (GS)
1.	500 KV	Chitral - Lower Dir	Chitral 500/220/132 KV
2.	500 KV	Chakdara – Peshawar	Chakdara 500/220/132 KV
3.	220 KV	Chakdara - Swat	Swat 220/132 KV
4.	220 KV	Swat- Kohistan	Kohistan 220/132 KV
5.	220 KV	Kohistan – Mansehra	Mansehra 220/132 KV
6.	220 KV	Manshra –Peshawar	Peshawar 220/132 KV

5. Technical details of Complete Network including Transmission and Grid Station.

The technical details of complete HV and EHV network including transmission lines and grid stations are subject to approval and finalization of the complete integrated network diagram.

The network finalizations further demands a host of technical studies with technical evaluations such as system planning, system structure, configuration of HV & EHV rings, load flow studies and establish tie lines for coordination with other adjoining systems such as NTDC & PESCO

which will be done once the License is issued and the KPTGCL is authorized to carry out such activities.

6. **Evacuation Plans until Complete KPTGCL Network Is Configured and fully established.**

Till the complete network is Configured and established to provide flexible HV & EHV rings of adequate and flexible KV levels to link HPP Projects to various load centers, the power of the completed HPP Projects shall be dispatched through short radial Transmission lines and through wheeling Arrangements to PESCO & NTDC.

7. **Financial Requirements to Execute and Complete HV and EHV Network over Various Stages**

The GoKP has identified a three phase plan for the purposes of investment in the KP Province.

The investments are indicated to be made in formation and maintenance of transmission line and for construction and maintenance of Grid Stations. During the first phase a total of USD 144,000,000/- shall be invested in the transmission network and USD 280,000,000/- in the grid network. While during phase 2 a sum of USD 152,000,000/- shall be invested and transmission network and USD 120,000,000/- shall be invested in grid network. Lastly, in phase 3 a total of USD 19,800,000/- shall be invested and transmission and USD 78,000,000/- shall be invested in grid network.

8. **First Phase of Evacuation**

As part of the first phase of the first stage, evacuation will be carried through a network link established between Chitral, Dir, Swat, Kohistan and Mansehra regions. The prospective network diagram and tentative cost for the first 10 years have been attached.

To combat and counter transmission deficiencies, the GoKP decided to establish a company namely Pakhtunkhwa Transmission and Grid Company to cater its needs and requirements for the evacuation of power of hundreds of thousands of MW from its HPP Projects generation points located at various geographic locations which will be available to be connected to the system over a planned period of time.

S.No	Name of the Hydro Power Project	Location (District)	Capacity (MW)	Mode	COD	COD as per IGCEP	Remarks
Public Sector Hydropower Projects							
1		Chitral	495	Public sector	2027	2047	Candidate
2	Balakot HPP	Mansehra	300	Public sector	2026	2047	Candidate
3	Gabral Kalam HPP	Swat	88	Public sector	2025	2045	Candidate
4	Gorkin Matiltan HPP	Swat	84	Public sector	2022	2023	Comitted
5	Malakand III HPP	Malakand	81	Public sector	2008	2008	-
6	Lawi HPP	Chitral	69	Public sector	2022	2021	Comitted
7	Kalkot Bankot Patrak HPP	Dir (Upper)	47	Public sector	2024	2047	Candidate
8	Koto HPP	Dir (Lower)	40.8	Public sector	2020	2020	Comitted
9	Daral Khwar HPP	Swat	36.6	Public sector	2019	2020	-
10	Patrak Sheringal HPP	Dir (Upper)	22	Public sector	2024	2047	Candidate
11	Pehure HPP	Swabi	18	Public sector	2010	2010	-
12	Ranolia HPP	Kohistan	17	Public sector	2019	2020	-
13	Karora HPP	Shangla	11.8	Public sector	2020	2020	Comitted
14	Chapri Charkhel HPP	Kurram	10.56	Public sector	2023	2045	Candidate
15	Jabori HPP	Battagram	10.2	Public sector	2020	2020	Comitted
16	Machai HPP	Mardan	2.6	Public sector	2017	2017	-
	Total		1,333.56				
Private Sector Hydropower Projects having COD as per IGCEP 2020							
1		Chitral	610	IPP (G2G)	2029	2046	Candidate
2		Kohistan	496	PPP	2029	2047	Candidate
3		Chitral	232	IPP (G2G)	2028	2047	Candidate
4		Swat	215	IPP (G2G)	2025	2045	Candidate
5	Kalam Asrit HPP	Swat	212	IPP (G2G)	2026	2044	Candidate
6	Naran HPP	Mansehra	188	PPP	2026	2045	Candidate
7	Sharmai HPP	Upper Dir	150	IPP	2024	2046	Candidate
8		Chitral	144	IPP (G2G)	2027	2047	Candidate
9		Chitral	137	IPP (G2G)	2027	2046	Candidate
10	Shigo Kas HPP	Lower Dir	102	IPP	2025	2046	Candidate

11		Chitral	99	IPP	2025	2047	Candidate
12	Batakundi HPP	Mansehra	96	PPP	2026	2041	Candidate
13	Gabral-Utror HPP	Swat	89.2	IPP	2024	2045	Candidate
14	Artistic-I HPP	Upper Dir	63	IPP	2026	2047	Candidate
15	Chowkel-Khwar HPP	Swat	60	IPP	2025	Not included	Candidate
16	Shalfalam HPP	Lower Dir	60	IPP	2025	2046	Candidate
17	Artistic-II HPP	Swat	55	IPP	2026	2047	Candidate
18		Chitral	48.6	IPP	2026	2047	Candidate
19		Chitral	39	IPP	2025	2046	Candidate
20	Bankhwar HPP	Swat	35.6	IPP	2025	2045	Candidate
21	Nila-Da-Katha HPP	Mansehra	34	IPP	2025	2047	Candidate
22	Trappi HPP	Mansehra	32	IPP	2025	2045	Candidate
23	Tangar HPP	Mansehra	25.91	IPP	2024	2047	Candidate
24		Shangla	20.6	YTD	2026	2047	Candidate
25		Upper Dir	20.4	IPP	2024	2045	Candidate
26	Dhadda HPP	Mansehra	18	IPP	2023	2047	Candidate
27		Battagram	12.3	YTD	2025	2047	Candidate
28		Battagram	10.97	IPP	2024	2045	Candidate
29		Mansehra	10.04	IPP	2024	2047	Candidate
30		Swat	9.5	IPP	2023	2047	Candidate
31		Swat	8.5	IPP	2024	2045	Candidate
32		Swat	8	IPP	2024	2044	Candidate
33		Mansehra	7.86	IPP	2024	2045	Candidate
34		Shangla	7.75	IPP	2024	2047	Candidate
35		Upper Dir	6.8	IPP	2024	2045	Candidate
36		Mansehra	3.6	IPP	2024	2047	Candidate
37	Blue Star Energy HPP	Mardan	3.1	IPP	2021	2024	Candidate
38	Machai-III HPP, Sar Energy	Mardan	1.72	IPP	2022	2047	Candidate
	Total		3,372				

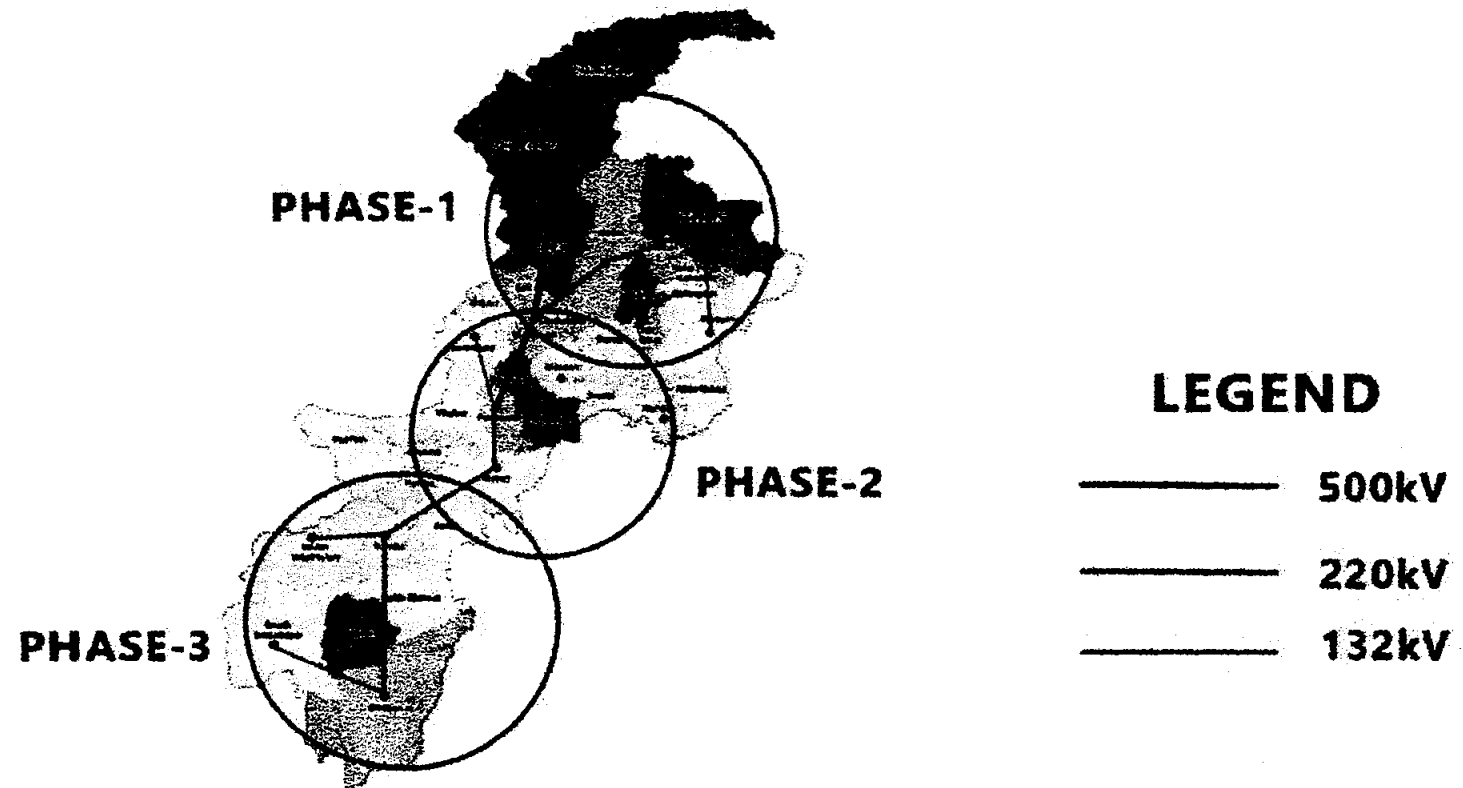
Projects in pipeline

1	Lower Palas HPP	Kohistan	665	IPP		2041	Candidate
2	Middle Spat Gah HPP	Kohistan	501	IPP		not picked	-
3	Middle Palas HPP	Kohistan	398	IPP		2046	Candidate
4	Gahrit-Swir Lasht HPP	Chitral	377	IPP		2047	Candidate
5	Upper Spat Gah HPP	Kohistan	277	IPP		not picked	-
6	Karrang HPP	Kohistan	260	IPP		-	
7	Madian HPP	Swat	157	IPP		2044	Candidate
8	Upper Palas HPP	Kohistan	157	IPP		2047	Candidate
9	Balakot-2 (Javed II) HPP	Mansehra	100	IPP		2047	Candidate
10	Garhi Habibullah (Javed-III) HPP	Mansehra	100	IPP		2047	Candidate
11	Istaro-Booni HPP	Chitral	72	IPP		2047	Candidate
12	Meragram-Brep HPP	Chitral	70	IPP		-	
13	Torkhow HPP	Chitral	70	IPP		2042	Candidate
14	Mastuj-I HPP	Chitral	65	IPP		-	
15	Khal (Javed-V) HPP	Lower Dir	65	IPP		2047	Candidate
16	Dander HPP	Upper Kohistan	65	IPP		2029	Candidate
17	Mujigram-Shagore HPP	Chitral	64	IPP		2047	Candidate
18	Dubair Kalay HPP	Lower Kohistan	60	IPP		2029	Candidate
19	Pashot HPP	Upper Kohistan	60	IPP		2045	Candidate
20	Chota Jabba HPP	Swat	51	IPP		2047	Candidate
21	Charun-Shachar HPP	Chitral	50	IPP		-	
22	Mahodand (Javed-IV) HPP	Swat	45	IPP		2047	Candidate
23	Wari HPP	Upper Dir	43.3	IPP		2046	Candidate
24	Kaigah-II HPP	Kohistan	39.6	IPP		-	
25	Athor HPP	Kohistan	35	IPP		-	
26	Nerai-Dubair HPP	Lower Kohistan	35	IPP		2029	Candidate
27	Qandeel-Landay HPP	Swat	30	IPP		-	
28	Jhangdai-Dubair HPP	Lower Kohistan	30	IPP		-	
29	Sammargah HPP	Kohistan	28	IPP		-	
30	Birti HPP	Kohistan	26	IPP		-	
31	Kabul River Weir HPP	Peshawar	19.9	IPP		-	
32	Kedam Khwarh HPP	Swat	17.14	IPP		-	
33	Artistic 3 HPP	Swat	16.5	IPP		-	

34	Una HPP	Mansehra	16	IPP		-	
35	Ayun Gol HPP	Chitral	15.17	IPP		-	
36	Qalangi HPP	Malakand	15	IPP		-	
37	Ushu River HPP	Swat	12	IPP		-	
38	Domishi HPP	Abbottabad	12	IPP		-	
39	Golan III, Astore HPP	Chitral	11	IPP		-	
40	Osman Swati HPP	Swat	10.88	IPP		-	
41	Kaigah-III HPP	Kohistan	10	IPP		-	
42	Sarral-Dhartian	Haripur	9.2	IPP		2047	Candidate
43	Rathi Gali HPP	Mansehra	9	IPP		-	
44	Shishikoh HPP	Chitral	9	IPP		-	
45	Saiful Maluk Katha HPP	Mansehra	7.43	IPP		-	
46	Osheri-III	Upper Dir	6.5	IPP		-	
47	Garen & Giralal HPP	Mansehra	5	IPP		-	
48	Jarin Khwarh HPP	Lower Kohistan	5	IPP		-	
49	Kaner Kas HPP	Abbottabad	4.25	IPP		-	
50	Takarwah HPP	DI Khan	4	IPP		-	
51	Savy Links HPP	Mardan	3.5	IPP		-	
52	Kalam HPP	Swat	3.25	IPP		-	
53	Ghanool HPP	Mansehra	2.4	IPP		2047	Candidate
54	Asherit HPP	Swat	2	IPP		-	
55	Dynatech HPP	Peshawar	2	IPP		-	
56	Sarhan-Boi HPP	Abbottabad	1.52	IPP		-	
57	Baatal (Usheri Dara) HPP	Upper Dir	1	IPP		-	
	Total		4227				

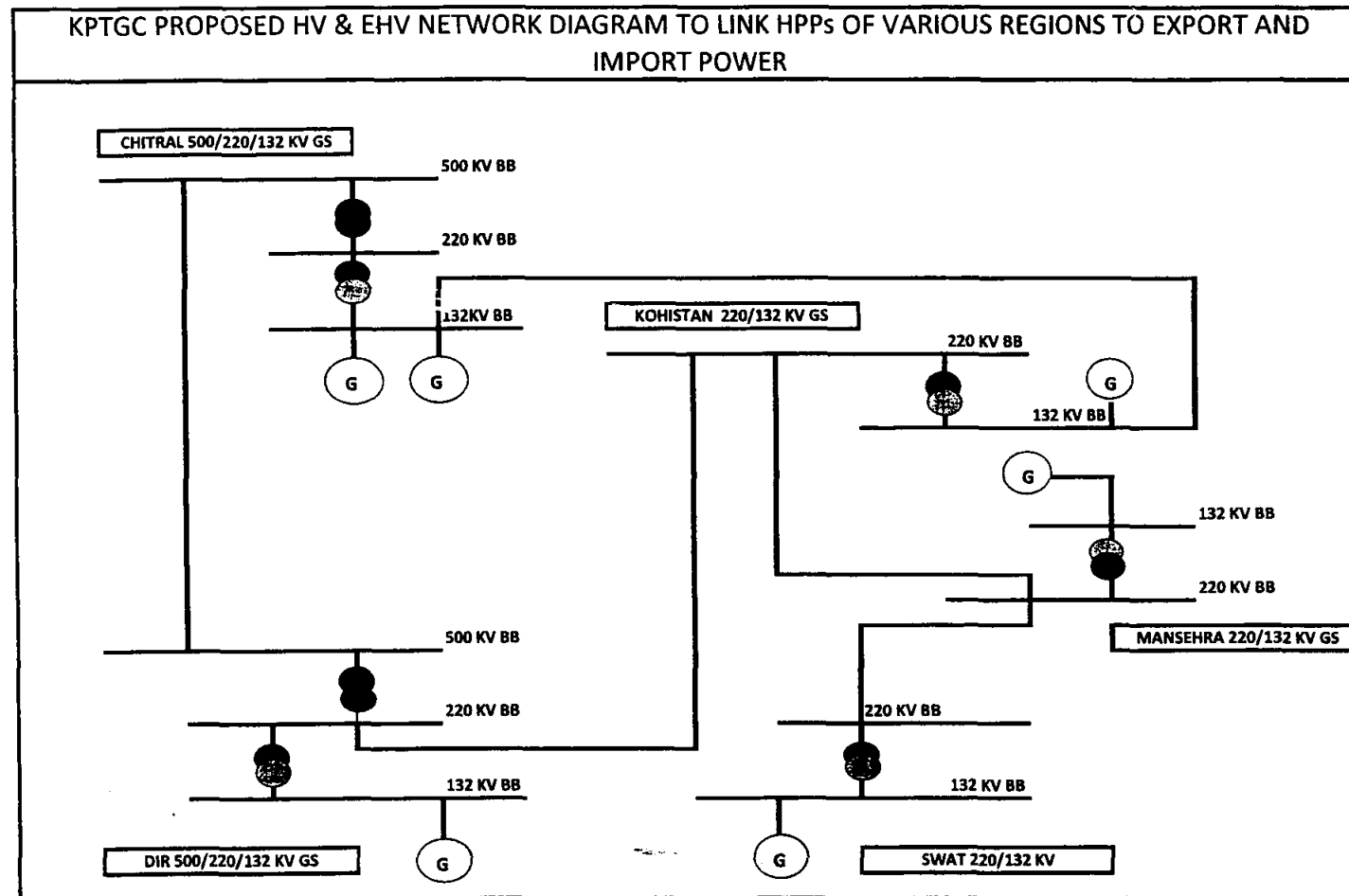
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PROPOSED KPTGC 500/220/132 KV NETWORK



"Annex-5"
-241-

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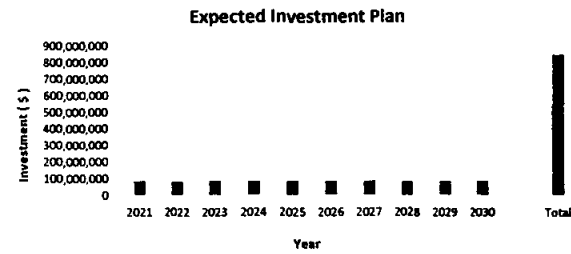


PROPOSED KPTGC OHTL NETWORK : INITIAL CAPACITY AND COST

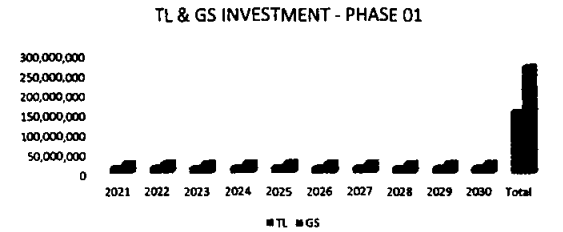
DISTINATION STATIONS			LINE	*APPROX	**MW TRANSFER CAPACITY(1 CKT)	ESTIM: COST (US \$) / KM	TOTAL COST (US \$)	REMARKS
S.No	FROM	TO	VOLTAGE LEVEL (KV)	LENGTH (KM)				
PHASE -01								
1	CHITRAL	CHAKDARA	500	125	1000	700,000	87,500,000	*The Line lengths are taken from google map with point to point connection. The actual line lengths will be subject to variation per actual line route selection.
3	CHAKDARA	SWAT	220	64	650	300,000	19,200,000	
4	SWAT	KOHISTAN	220	95	650	300,000	28,500,000	
5	KOHISTAN	MANASEHRA	220	71	650	300,000	21,300,000	
PHASE -02								
1	CHAKDARA	PESHAWAR	500	125	1000	700,000	87,500,000	**The 500 KV and 220 KV Lines Transmission Capacity are greatly compromised with SIL loading factor, Voltage Profile, Line Length and Contingency Plans.
2	PESHAWAR	KOKAT	220	55	650	300,000	16,500,000	
3	KOHAT	N.WAZIRISTAN	132	85	150-200	150,000	12,750,000	
PHASE -03								
1	KOHAT	BANNU	220	65	650	300,000	19,500,000	
2	BANNU	DIKHAN	220	54	150-200	300,000	16,200,000	
3	DI KHAN	S.WAZIRISTAN	132	48	150-200	150,000	7,200,000	

INDICATIVE INVESTMENT PLAN FOR RESPECTIVE PHASES OF KPTGC TRANSMISSION AND GRID NETWORK AND TO BE FINALIZED LATER PER PROJECTS PRIORITY LIST

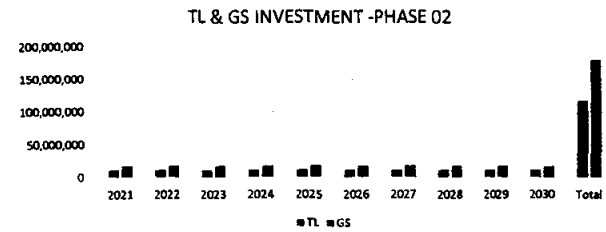
Indicative Investment Plan	Year	Investment
	2021	84,690,000
	2022	84,690,000
	2023	84,690,000
	2024	84,690,000
	2025	84,690,000
	2026	84,690,000
	2027	84,690,000
	2028	84,690,000
	2029	84,690,000
	2030	84,690,000
	Total	846,900,000



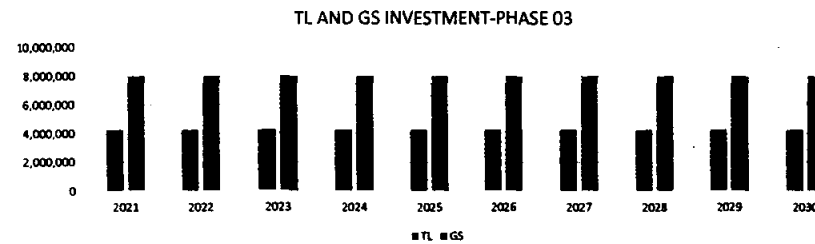
PHASE-01	Year	TL	GS
	2021	15,650,000	27,000,000
	2022	15,650,000	27,000,000
	2023	15,650,000	27,000,000
	2024	15,650,000	27,000,000
	2025	15,650,000	27,000,000
	2026	15,650,000	27,000,000
	2027	15,650,000	27,000,000
	2028	15,650,000	27,000,000
	2029	15,650,000	27,000,000
	2030	15,650,000	27,000,000
	Total	156,500,000	270,000,000



PHASE-02	Year	TL	GS
	2021	11,675,000	18,000,000
	2022	11,675,000	18,000,000
	2023	11,675,000	18,000,000
	2024	11,675,000	18,000,000
	2025	11,675,000	18,000,000
	2026	11,675,000	18,000,000
	2027	11,675,000	18,000,000
	2028	11,675,000	18,000,000
	2029	11,675,000	18,000,000
	2030	11,675,000	18,000,000
	Total	116,750,000	180,000,000

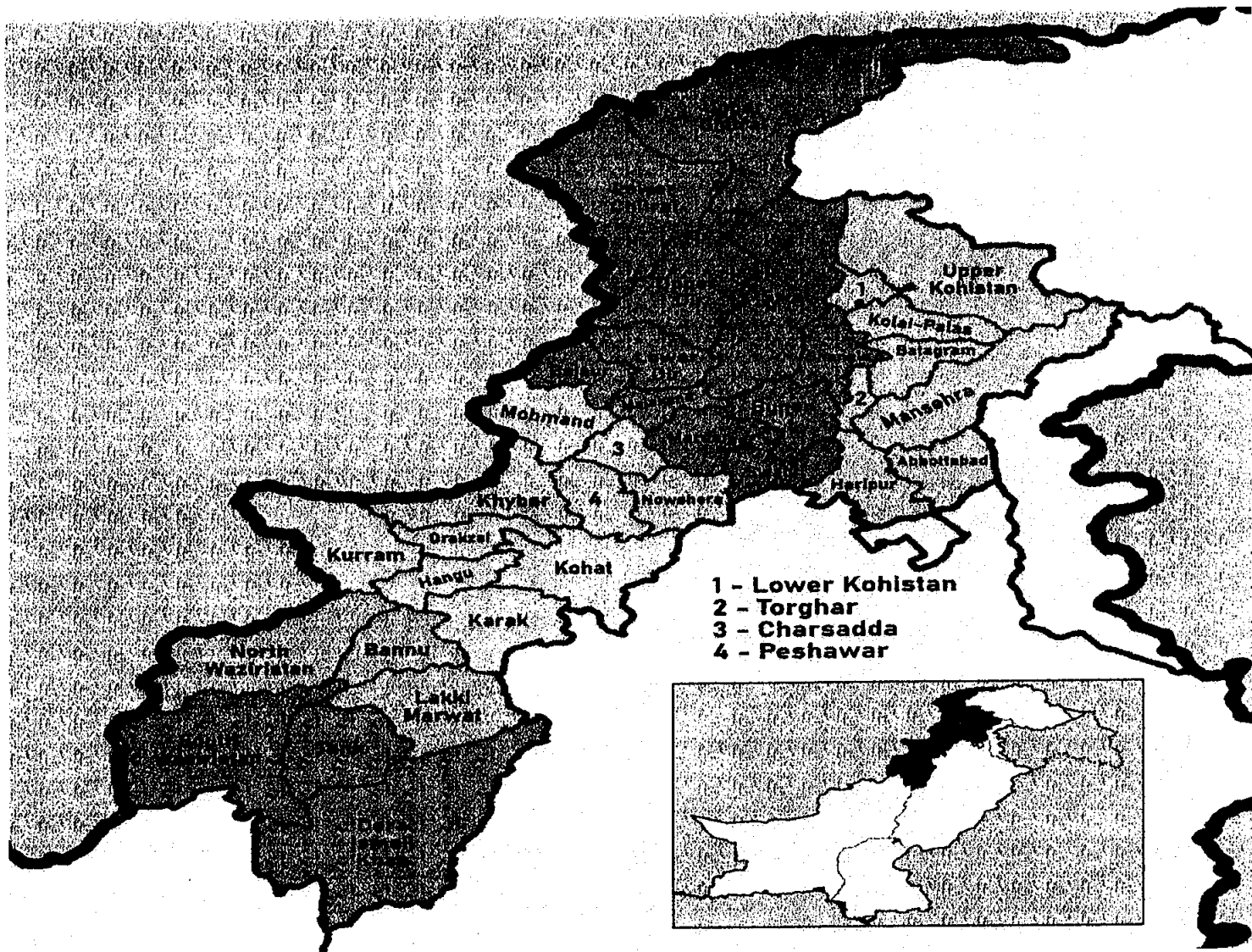


PHASE-03	Year	TL	GS
	2021	4,290,000	8,000,000
	2022	4,290,000	8,000,000
	2023	4,290,000	8,000,000
	2024	4,290,000	8,000,000
	2025	4,290,000	8,000,000
	2026	4,290,000	8,000,000
	2027	4,290,000	8,000,000
	2028	4,290,000	8,000,000
	2029	4,290,000	8,000,000
	2030	4,290,000	8,000,000
	Total	42,900,000	80,000,000

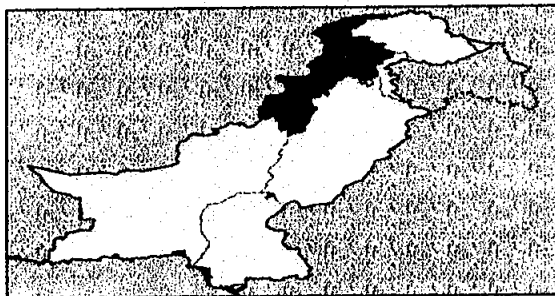


PROPOSED KPTGC GRID STATIONS NETWORK:INITIAL CAPCITY AND COST

NO	GRID STATIONS	VOLTAGE LEVEL (KV)	ESTIM.COST (US \$)	TOTAL COST (US \$)	REMARKS
1	CHITRAL	500/220/132	75,000,000	75,000,000	* One no Grid Stations of the assigned KV level is proposed at each station. The MVA Capacity of Transformors will be worked out during network study.
2	CHAKDARA	500/220/132	75,000,000	75,000,000	
3	SWAT	220/132	40,000,000	40,000,000	
4	KOHISTAN	220/132	40,000,000	40,000,000	
5	MANSEHRA	220/132	40,000,000	40,000,000	
	S. TOTAL			270,000,000	
1	PESHAWAR	500/220/132	75,000,000	75,000,000	
2	KOHAT	220/132	40,000,000	40,000,000	
3	S.TOTAL			115,000,000	
1	BANNU	220/132	40,000,000	40,000,000	
2	N.WAZIRISTAN	132	20,000,000	20,000,000	
3	S. WAZIRISTAN	132	20,000,000	20,000,000	
	S. TOTAL			80,000,000	
1	REGIONAL CONTROL CENTER PESHAWAR	500/220/132	65,000,000	65,000,000	
	G.TOTAL			530,000,000	



- 1 - Lower Kohistan
- 2 - Torghar
- 3 - Charsadda
- 4 - Peshawar





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KHYBER PAKHTUNKHWA TRANSMISSION & GRID SYSTEM COMPANY (PRIVATE) LIMITED

1st Floor, Block-A, Abdul Wali Khan Multiplex
Civil Secretariat Peshawar
Phone: 091-9223625; Fax: 091-9223624

BOARD RESOLUTION

RESOLUTION THROUGH CIRCULATION PASSED BY THE BOARD OF DIRECTORS OF M/S KHYBER PAKHTUNKHWA TRANSMISSION & GRID SYSTEM COMPANY (PRIVATE) LIMITED (THE "COMPANY") ON 6th October 2020.

"Resolve, that the Board of Directors of the Company, be and are hereby authorized to file Petition for file application for Transmission License for Provincial Grid Company (the "Petition") including all supporting documents;

FURTHER RESOLVED, that Mr. Maqsood Anwar Khan, the CEO KPT&GSC, CNIC No. 1730116115511 be and are hereby ("Duly Authorized Representative") for and on behalf of the Company to sign all necessary documents, pay necessary fee, appear and file Petitions, Responses, applications and pleadings before the Authority as needed and to do all such acts necessary for processing and completion of this Petition and make such other representations which are required."

CERTIFIED TRUE COPY:

I hereby certify that the above resolutions were duly passed through circulation by the Board of Directors of the Company on 06th October 2020.

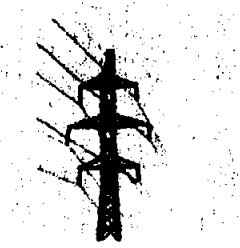

(Mr. Muhammad Zubair)
CHAIRMAN/DIRECTOR


(Mr. Atif Rehman)
DIRECTOR


(Mr. Humayun Khan)
DIRECTOR


(Mr. Naeem Khan)
DIRECTOR


(Mr. Maqsood Anwar Khan)
DIRECTOR



**KHYBER PAKHTUNKHWA TRANSMISSION
& GRID SYSTEM COMPANY (PRIVATE)
LIMITED**

1st Floor, Block-A, Abdul Wali Khan Multiplex
Civil Secretariat Peshawar
Phone: 091-9223625; Fax: 091-9223624

VAKALATNAMA

**[M/S KHYBER PAKHTUNKHWA TRANSMISSION & GRID SYSTEM COMPANY
(PRIVATE) LIMITED (the "Petitioner"),**

hereby appoint, authorize **Barrister Asghar Khan, Faisal Atta, and Dawood Iqbal Advocate(s)** to file, sign, appear, plead and act for us as our advocates in connection with the representation before NEPRA in the matter of **filing application for Transmission License for Provincial Grid Company** (the "Petition").

The Petitioner specifically authorizes the said Barrister / Advocate to do all acts and things necessary for the processing, completion and finalization of the Petition with NEPRA.

Mr. Maqsood Anwar Khan
(CEO / Authorized Representative)

**KP TRANSMISSION &
GRID SYSTEM COMPANY**



**KHYBER PAKHTUNKHWA TRANSMISSION
& GRID SYSTEM COMPANY (PRIVATE)
LIMITED**

1st Floor, Block-A, Abdul Wali Khan Multiplex
Civil Secretariat Peshawar
Phone: 091-9223625; Fax: 091-9223624

VAKALATNAMA

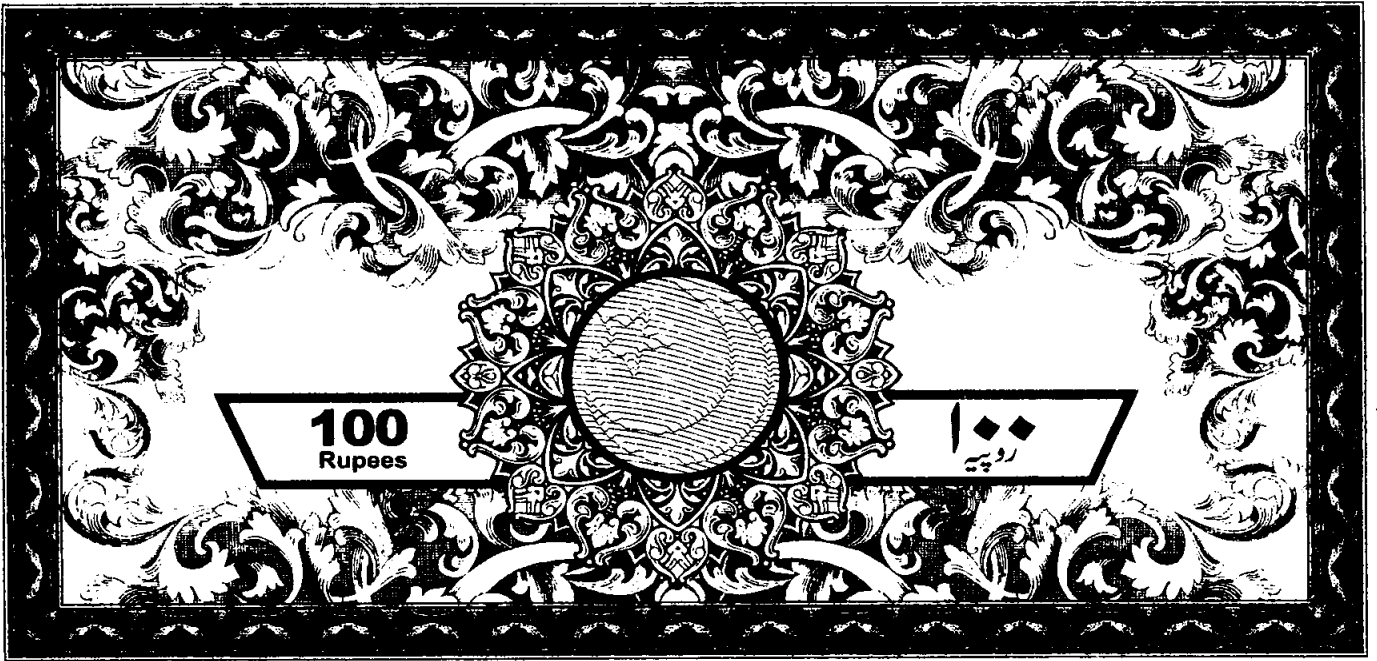
[M/S KHYBER PAKHTUNKHWA TRANSMISSION & GRID SYSTEM COMPANY (PRIVATE) LIMITED (the "Petitioner"),

hereby appoint, authorize Syed Ibrahim Ahmed, Sheikh Muhammad Ali and Shazeb Nawaz Khan Advocate(s) to file, sign, appear, plead and act for us as our advocates in connection with the representation before NEPRA in the matter of filing application for Transmission License for Provincial Grid Company (the "Petition").

The Petitioner specifically authorizes the said Barrister / Advocate to do all acts and things necessary for the processing, completion and finalization of the Petition with NEPRA.

Mr. Maqsood Anwar Khan
(CEO / Authorized Representative)

**KP TRANSMISSION &
GRID SYSTEM COMPANY**



AFFIDAVIT

BEFORE THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
(NEPRA)

I, Maqsood Anwar Khan, duly authorized representative of M/S KHYBER PAKHTUNKHWA TRANSMISSION & GRID SYSTEM COMPANY. (PRIVATE) LIMITED, do hereby solemnly affirm and declare that the contents of the accompanying file application for Transmission License for Provincial Grid Company including all supporting documents under, inter alia, NEPRA Act, 1997 (as amended from time to time) are true and correct to the best of my/our 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 with the Petition shall be true to the best of my knowledge and belief.

DEPONENT

Signature 
KF TRANSMISSION &
GRID SYSTEM COMPANY

Dated: 07th October 2020



14 OCT 2020

1 Preamble

Energy is a prerequisite for sustainable development in today's world. Pakistan is a developing country in the South East Asia with a population of more than 210 million. Pakistan is highly dependent on imported oil and gas since long time. The share of installed renewable energy and hydro up-till now is 6% and 27% respectively.

Khyber Pakhtunkhwa has boundary touching with Gilgit Baltistan and Azad Jammu and Kashmir in its northern side, Afghanistan on its west side, and Punjab and Balochistan on its southern side. The main river that flows in KPK are Kunhar, Swat, Indus, Kabul, Kohat, Kurram, Panjkooora, Ushu, Gabral, Tochi and Chitral.

Khyber Pakhtunkhwa (KPK) is one of the four provinces of Pakistan and is blessed with a significant amount of hydro and renewable energy potential which includes small hydro, solar, wind and biomass. Hydropower alone has a total potential of around 30,000 MW¹. Average daily solar radiation for KPK is found to be 4.99kWh/m²/day. The amount of solar energy that can be harnessed in Khyber Pakhtunkhwa is 214 MWh/m² where only around 2 MW of electricity is being generated by solar currently. It was found that daily solar radiation remains high in the summer season from April-July and then falls in the winter season. In KPK, Mardan receives the highest daily solar radiation in June and Chitral receives the lowest daily solar radiation in December. The province is also blessed with biomass. In biomass there is a total potential of 3 million biogas plants in the province but only 2000 biogas have been installed so far. KPK has total livestock population of 43 million including cows, buffaloes, sheep and goats. Waste from animals can be converted into biogas which can be used for cooking and heating purposes. Some parts of the province like Malakand, Buner, Haripur have also some wind potential which is enough to provide electricity to the nearby villages and communities.²

In KPK, there are two major entities working on power sector on large scale. Both are government entities. The first one is Water and Power Development Authority (WAPDA) and the other one is Pakhtunkhwa Energy Development Organization (PEDO). WAPDA is Federal Government entity whereas PEDO is governed by KPK Provincial Government. Private Power and Infrastructure Board is Federal Government organization working under Ministry of Energy, also involved in the development of hydropower projects in KPK through Independent Power Producers (IPPs). There is another department under the ministry of Science & Technology known as Pakistan Council for Renewable Energy Technology (PCRET). Other than above Government entities, there are some Non-

¹ KPK Hydropower Policy 2016

² Renewable Energy Potential in KPK – International Journal of Engineering Works – UET, Peshawar

Government Organizations like Sarhad Rural Support Program (SRSP), Agha Khan Rural Support Program (AKRSP) working in the power sector.

PCRET has installed 553 Mini-Micro Hydropower Projects (MMHPP's) across KPK with a total generation capacity of 8 MW. SRSP has also installed MMHPP's with generation capacity of 28 MW. AKRSP has installed 147 MMHPP's with a total generation capacity of 13.5 MW.

2 Objectives of Study

Government of Khyber Pakhtunkhwa (GoKPK) has established a company for the transmission of electricity from the power projects to the various Load Centers in KPK, National Grid and/or Bulk Power Consumers. For the purposes the pre-feasibility study (Desk Study) has been carried out. The objectives of this study are:

- Highlight the Generation projects being developed by public sector
- Highlight the Generation projects being developed by private sector
- Issues in the Transmission system in KPK
- Develop the proposed transmission corridor

3 Hydropower Projects in KPK

The KPK Province of Pakistan has power potential of more than 30,000 MW in addition to River Indus and its tributaries of Tarbela. This potential is spread over in Chitral, Dir, Swat, Kaghan and other northern valleys of KPK. To harness this immense potential and to generate cheap and environmentally clean electricity to meet the growing demand, the best option is development of huge hydropower power potential available in the northern areas of Pakistan.

WAPDA being the federal entity has developed mega projects in the KPK province.

Table 1: Detail of Projects that are in operation by WAPDA in KPK³

S. No.	Project Name	Location	Capacity (MW)
1.	Tarbela	Tarbela	3478
2.	Tarbela 4 th Extension	Swabi	1410
3.	Warsak	Peshawar	240
4.	Dubair Khwar	Kohistan	130
5.	Allai Khwar	Besham	121
6.	Golen Gol HPP	Chitral	108
7.	Khan Khwar	Shangla	72
8.	Jaban (Malakand-I)	Swat Canal	20
9.	Dargai (Malakand-II)	Swat Canal	20

³ WAPDA website www.wapda.gov.pk

10.	Kurram Garhi	Kurram Garhi (Canal)	4
11.	Chitral HPP	Chitral	1
Total			5604

Table 2: Detail of Projects that are under construction by WAPDA in KPK

S. No.	Project Name	Location	Capacity (MW)
1.	Keyal Khwar	Kohistan	128
2.	Dasu	Kohistan	4320
3.	Warsak Rehabilitation	Peshawar	280
Total			4728

PPIB being the one-window facilitator on behalf of Government of Pakistan to promote private investments in power sector has issued LOI's of hydropower projects in KPK.

Table 3: Projects being developed by PPIB under IPP mode⁴

S. No.	Project Name	Location	Capacity (MW)
1.	Turtonas-Uzghor HPP	Chitral	82
2.	Suki Kinari	Mansehra	870
Total			952

PEDO being the only provincial entity involved in the development of power projects and is developing projects directly as well as through the involvement of IPPs.

The list of hydropower projects which are being developed/operated by PEDO are presented below:

Table-4: Detail of Projects that are in operation by PEDO in KPK

S. No.	Project Name	Location	Capacity (MW)
1.	Malakand-III HPP	Dargai	81
2.	Daral Khwar HPP	Bahrain	36.6
3.	Pehur HPP	Swabi	18
4.	Reshun	Chitral	4.2
5.	Ranolia HPP	Kohistan	17
6.	Machai HPP	Mardan	2.6
7.	Shishi HPP	Chitral	1.875
Total			161.275

Table 5: PEDO-Projects Under-Construction Stage

S.	Project Name	Location	Capacity (MW)	Commercial
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⁴ PPIB website www.ppib.gov.pk

No.				Operation Date
1.	Jabori HPP	Mansehra	10.2	2020
2.	Karora HPP	Shangla	11.8	2020
3.	Koto HPP	Dir	40.8	2020
4.	Gorkin-Matiltan HPP	Swat	84	2022
5.	Lawi HPP	Chitral	69	2022
Total			215.8	

Region wise hydropower projects under PEDO in KPK has been listed down:

Table 6: List of Potential Hydropower Projects in Chitral Region, KPK Under PEDO⁵

S. No.	Project Name	Capacity (MW)	Category (Public/Private)	Current Status
1	Kari-Mushkur HPP	446 495	Public Sector - PEDO	Feasibility study is in progress
2	Torcamp-Guddabar HPP	409	Public Sector - PEDO	Feasibility study is in progress
3	Ghrait- Swir Lasht HPP	370	Available for investment	Feasibility Completed. Under different financing options
4	Turen Mori Kari HPP	350	Private Sector - Sinohdro Corporation	Feasibility completed. Technical & Financial Proposals under evaluation
5	Jamshill Turen More HPP	260	Private Sector - Sinohdro Corporation	Feasibility completed. Technical & Financial Proposals under evaluation
6	Laspur-Murigram HPP	230	Private Sector - FWO	Feasibility completed. Feasibility review and update under progress.
7	Shushgai Zhendoli HPP	144	Private Sector - FWO	Feasibility completed. Feasibility review and update under progress.
8	Shogo Sin HPP	132	Private Sector - FWO	Feasibility completed. Feasibility review and update under progress.
10	Arkari Gol HPP	99	Private Sector - Master Textiles	Feasibility completed. NEPRA approved levelized tariff
12	Istaru Booni HPP	72	Available for investment	Feasibility Completed. Under different financing options
13	Murigram HPP	70	Private Sector	Under LOI Stage to IPP
14	Turkoh River HPP	70	Private Sector	Under LOI Stage to IPP
16	Mujigram-Shoghor HPP	64	Available for investment	Feasibility Completed. Under different financing options

⁵ PEDO

18	Charun-Shachar HPP	50	Private Sector - SKBRO	Under LOI Stage to IPP
19	Mastuj River HPP	48	Private Sector - Chinar Power	Feasibility completed; tariff negotiation is in progress at NEPRA
20	Barum Gol HPP	24.93	Private Sector - Markhor Energy	LOI issued, feasibility is in progress
21	Ayun Gol HPP	15.17	Available for investment	Pre-feasibility site will be offered to private sector investment
22	Oshghor HPP Raw site	11	Private Sector	Under LOI Stage to IPP
23	Shishiko HPP	9	Private Sector - Markhor Energy	LOI issued, feasibility is in progress
24	Rosh Gol HPP	7	Available for investment	Pre-feasibility site will be offered to private sector investment
28	Mastuj-1 HPP	65	Private Sector	LOI Issued, feasibility study is in progress
Total		2946.1		

Table 7: List of Potential Hydropower Projects in Dir Region, KPK Under PEDO

S. No.	Project Name	Capacity (MW)	Category (Public/Private)	Current Status
1	Sharmai HPP	150	Private Sector - Sapphire Textiles	LOI issued, feasibility is in progress
2	Shigo Kas HPP	102	Private Sector - Saifco Group	Feasibility completed. Tariff Determined
3	Shalfalam HPP	60	Private Sector - Siddiqsons	LOI issued, feasibility is initiated
4	Sahibabad HPP	49.63	Private Sector - Artistic Milliners	LOI will be issued shortly
5	Barikot Patrak HPP	47	Public Sector - World Bank Financing	PEDO is at advance stages of negotiation for funding from the World Bank
7	Wari HPP	37	Private Sector - Markhor Energy	LOI will be issued shortly
8	Patrak Shringel HPP	22	Public Sector - World Bank Financing	PEDO is at advance stages of negotiation for funding from the World Bank

9	Gwaldai Sin HPP	21	Private Sector - AASAL Hydrotech	Feasibility is in progress
10	Serai Sin HPP	7	Private Sector - AASAL Hydrotech	Feasibility is in progress
11	Samkot Osheri HPP	5	Private Sector - Amin Shah	LOI issued
12	Gwaldai Sin-2 HPP	5	Private Sector - Al-Haj Tex	LOI will be issued shortly
13	Gandigar HPP	3.21	Private Sector - FB Constructors	LOI issued, feasibility is in progress
Total		508.21		

Table 8: List of Potential Hydropower Projects in Kohistan Region, KPK Under PEDO

S. No.	Project Name	Capacity (MW)	Category (Public/Private)	Current Status
1	Lower Palas HPP	665	PPP mode	Not Yet Awarded,
2	Lower Sapat Gah HPP	496	PPP Mode	Notice to Proceed
3	Karrang HPP	260	Private Sector - Associated Technologies	Pre-feasibility site. Technical & Financial Proposal under evaluation
4	Sammar Gah HPP	28	Private Sector	Feasibility Study completed, Detail design in progress
5	Kaigah-II HPP	24	Private Sector	LOI issued, feasibility is in progress
7	Kaigah-III HPP	10	Private Sector	LOI issued, feasibility is in progress
8	Kaigah HPP	545	Private Sector	Feasibility study completed
9	Birti HPP	26	Public Sector	Feasibility study completed
Total		2054		

Table 9: List of Potential Hydropower Projects in Mansehra Region, KPK Under PEDO

S. No.	Project Name	Capacity (MW)	Category (Public/Private)	Current Status
1	Balakot HPP	300	Public Sector – PEDO	Feasibility Completed. PEDO is at final stages of negotiation for funding from Asian Development Bank (ADB).
2	Naran HPP	188	Available for investment	Feasibility completed will be offered to private sector investment
3	Batakundi HPP	96	Available for investment	Feasibility completed will be offered to private sector investment
4	Tarappi HPP	32	Private Sector - Compcept Ltd.	LOI issued, feasibility is in progress
5	Tangar HPP	25	Private Sector - SAR Energy	Feasibility completed. Tariff negotiation at NEPRA
6	Kund	25	Raw-Site, Private Sector	Pre-Feasibility Study
7	Dhadar HPP	18	Private Sector - Dhadar Pvt	Feasibility completed. Tariff negotiation at NEPRA
8	Ndiyar Khwar	12	Available for investment	Feasibility completed will be offered to private sector investment
10	Bhimbal Katha HPP	7.86	Private Sector - Multiline Enterprises	LOI issued, feasibility is in progress
11	Saiful Maluk Katha HPP	7.5	Available for investment	Pre-feasibility site
12	Nila Da Katha HPP	2.47	Private Sector – SinoPak	LOI issued, feasibility is in progress
13	Jabri Bedar HPP	3.6	Private Sector – Karimi Energy	Feasibility study completed
14	Sarral-Dhartian	9.5	Private Sector – Karimi Energy	Feasibility study in progress
15	Mahandri	10	Private Sector	Feasibility study completed
Total		736.93		

Table 10: List of Potential Hydropower Projects in Swat Region, KPK Under PEDO

S. No.	Project Name	Capacity (MW)	Category (Public/Private)	Current Status
1	Bilkani HPP	7.15	Private Sector - Shangla Power	Feasibility completed, tariff at NEPRA
3	Ghorband Khwar HPP	21	Available for investment	Feasibility completed
4	Kalam Asrit HPP	238	Private Sector - KOEN	LOI issued, feasibility is in progress
5	Asrit Kedam	215	Private Sector - KOEN	Notice to Proceed issued.
6	Madian	157	Raw Site	To be advertised
7	Kedam Khwar HPP	17.14	Available for investment	Pre-feasibility completed
10	Chowkel Khwar HPP	12	Private Sector - MMP	LOI issued, feasibility is in progress
12	Ghabral-Kalam HPP	110.88	Public Sector - PEDO	Feasibility is in progress
13	Ushu River	48	Private Sector - AASAL Hydro	Feasibility study is in progress
14	Ushu River HPP	55	Private Sector - Artistic Milliners	Feasibility study is in progress
15	Ushu River HPP	20	Private Sector - GRC	Feasibility study is in progress
16	Gabral Utror HPP	45-73	Private Sector - Markhor Energy	Under LOI stage
17	Gabral village HPP	10	Private Sector - Osman Ali Swati	Under LOI stage
18	Ban khwar HPP	12.84	Private Sector - Markhor Energy	Under LOI stage
19	Daral Khwar-2 HPP	10	Private Sector - Siddiqsons	Feasibility Study in progress
20	Olai Khwar-1 HPP	7	Private Sector - Siddiqsons	NTP issued
21	Olai Khwar-2 HPP	6	Private Sector - Siddiqsons	NTP issued
22	Utror HPP	8	Available for investment	Pre-feasibility stage
Total		1076.15		

4 Solar Projects in KPK

The province of KPK has large potential for the solar projects. Certain LOIs have been issued by PEDQ in the private sector for the development of Solar power projects.

Table 11: List of Solar Projects in KPK under PEDQ

Project Name	Capacity (MW)	Category (Public/Private)	Current Status
Nowshehra	50	Private Sector - Siddiqsons	Feasibility completed
Kohat	50	Private Sector - Siddiqsons	Feasibility completed
Kulachi, DI Khan	50	Private Sector - Target Energy	Feasibility completed
Kulachi, DI Khan	50	Private Sector - FAS Energy	Feasibility completed
Paharpur, DI Khan	49.5	Private Sector - AASAL Solar Power	Feasibility completed

5 Transmission System⁶

The transmission line network of NTDC includes 6,417 km long transmission lines operating at 500 kV level and 10,103 km long 220 kV lines. As of 30 June 2019, NTDC is maintaining 16 (sixteen) 500 kV grid stations with a transformation capacity of 24,791 MVA. There are 42 (forty-two) 500/220 kV transformers and 34 (thirty-four) 220/132 kV transformers installed at these grid stations. At 220 kV level there are 45 grid stations with a transformation capacity of 29,935 MVA. There are 124 (one hundred and twenty four) 220/132 kV transformers installed at 220 kV grid stations.

Out of 42 transformers at 500/220 kV level, 24 transformers (57%) are loaded above 80% of their rated capacity. Similarly out of 158 transformers at 220/132 kV level, 69 are overloaded representing around 44% overloading in the system.

Khyber Pakhtunkhwa

- 500 kV Grid Station:

NTDC has established and managing the only 500 kV grid station in KPK located at Sheikh Muhammadi. As per the state of industry report 2019, the grid station is overloaded to above 80%

- 220 kV Grid Station:

⁶ State of Industry Report 2019

No. of 220 kV grid stations have been developed by NTDC in KPK. This list is presented below:

- i. Bannu
- ii. Daud Khail
- iii. Mardan
- iv. Shahi Bagh
- v. D.I. Khan
- vi. Mansehra
- vii. Chakdara
- viii. Nowshera

Grid stations located at Daud Khail and Mardan are overload to above 90%.

6 Indicative Generation Capacity Expansion Plan

The Indicative Generation Capacity Expansion Plan (IGCEP), submitted by NTDC, forecasts additional capacity of 127,760 MW (candidate projects) by 2047 out of which KPK share of hydropower is only 5,652 MWs. Whereas, PEDO had proposed share of **8,562 MWs** constituting 6.71% of the planned generation capacity. Total system addition proposed by IGCEP during 2020 – 2030, the period which is most relevant to us, is 30,685 MW, out of which ONLY 171 MW (0.56%) has been selected by IGCEP as share of KPK.⁷

	2020-30	2031-47	Total
Total System Addition (candidate projects) Proposed in IGCEP	30,685	97,075	127,760
Planned Hydro Capacity Proposed by GoKPK	5,652	2,910	8,562
Percentage of Hydro Proposed by GoKPK	18.42%	3%	6.70%
GoKPK Hydro Selected by IGCEP	171	5,481	5,652
Percentage of GoKPK Hydro Selected in IGCEP	0.56%	5.65%	4.42%

The total capacity of Projects by KPK with projected CODs are presented in below table:

Year	Capacity ^{MW}
2028	1193
2029	1062.81
2030	1798
2031	1194.87
2032	1203

⁷ Comments submitted by PEDO to NEPRA on IGCEP

2033	423.36
Total	6875.04

7 Proposed Transmission Corridors

The geographic boundaries of KPK is presented in Figure-1 "Map of Khyber Pakhtunkhwa". In order to tap the maximum power potential, the-power plants, as mentioned in above tables, were marked on google map in Geographic Information System. In comparison of potential in KPK with the IGCEP, it is evident that majority of the projects have not been tapped for any evacuation. The projects are in the development stage and many of them are stalled for the simple reason of not having commitment of having evacuation. To facilitate the project's and to evacuate the power potential, broader transmission and evacuation plan is proposed based on the line capacity as per the grid code. The exercise has been conducted separately for major valleys.

7.1 Assumptions

For selection of voltage level of various transmission line segments following assumptions have been taken into account:

The Typical values of current /MVA ratings for various voltage levels used by NTDCL-Planning department are as under:

Power Transfer Capability of HV Transmission Lines

Voltage	Name of conductor	No. of conductor per phase	Transmission Capacity (MVA)
132 kV	Lynx	1	112
132 kV	Greely	1	184
132 kV	Rail	1	202
220 kV	Rail	1	337
220 kV	Rail	2	674
220 kV (double circuit)	Rail	2	1348

Note:

- i. Without considering the voltage drop.
- ii. For 132 kV and 220kV lines, the thermal rating of conductor for 40 deg C temperature rise at 0.6meters/second wind can safely be used.

Power Transfer Capability of EHV Transmission Lines

Voltage	Name of conductor	No. of conductor per phase	Distance (km)	Transmission Capacity (MVA)
500 kV	Drake/Greely	4	=100 km	1500
500 kV	Drake/Greely	4	>100 <200	1400
500 kV	Drake/Greely	4	>200 <300	1200

Note:

- i. For 500kV lines the capacity is restricted by reactance of the transmission line, the capacity decreases as the distance increases.

Preferred Connection Arrangement as per NTDC Grid Code

Connection Voltage	Approximate Generation Size
11kV and Below	1-4 MW
66kV	4-40 MW
132kV	40-150 MW
220kV	150-400 MW
500kV	400 MW and above

Control of Power System Voltage

The System Operating Voltage shall be maintained within these specified limits for both normal operating conditions and contingency conditions excluding transient and abnormal system conditions.

According to Grid Code-2005, the operating conditions shall be based on (N-0) and (N-1) contingency conditions. In (N-0) state, all transmission system components are expected to be in service. Single contingency case (N-1) shall be defined as the unplanned forced outage of any single transmission and grid system facility.

These limits shall be maintained at 500 kV, 220 kV and selected 132 kV busses of the System.

Voltage level	Operating Voltage Limits (Normal/Contingency Condition)			
	Normal Condition		(N-1) Condition	
	Max	Min	Max	Min
500 kV	540	475	550	450
220 kV	238	209	245	198
132 kV	143	125	145	119

7.2 Region-Wise Transmission Corridor

Transmission Corridor of Chitral, Dir and Swat is presented below for initial stage:

A. Chitral Region

The proposed network has to disperse the total capacity of aprox. 3100 MW which will be collected at a proposed 500 KV grid station near Chitral. The proposed grid station will have inputs from 132 KV transmission line, 220 KV transmission lines and 500 KV transmission lines. HVDC transmission line system is proposed to evacuate the power from 500 KV Chitral grid station to proposed Chakdara grid station. A brief of network is mentioned hereunder:

- Double circuit 132 KV transmission line (single - Rail conductor) with a length of aprox. 22 km starting from Arkari Gol HPP near Garam Chashma Village, transferring 163 MW of capacity and terminating at a 500 KV Chitral grid station
- Double Circuit 132 KV transmission line (single - Rail conductor) with a length of aprox. 35 km starting from Jamshill Turen More HPP near more payan village, transferring 260 MW of capacity, and terminating at a 500 KV Chirtal grid station
- Double circuit 220 KV transmission line (twin- bundle Rail conductor) with a length of aprox. 100 km starting from Mastuj-I HPP near Parwak village, transferring 413 MW of capacity, and terminating at a 500 KV Chitral grid station
- Double circuit 220 KV transmission line (single - Rail conductor) with a length of aprox. 90 km starting from Turkoh river HPP near mastuj village, transferring 361 MW of capacity, and terminating at a 500 KV Chitral grid station
- Double circuit 132 KV transmission line (single - Rail conductor) with a length of aprox. 3 km starting from Shogo sin HPP, transferring 132 MW of capacity, and terminating at a 500 KV Chitral grid station
- Double circuit 220 KV transmission line (single - Rail conductor) with a length of aprox. 15 km starting from Turen Mori Kari upstream of singoor village, transferring 350 MW of capacity, and terminating at a 500 KV Chitral grid station
- Double circuit 220 KV transmission line (twin-bundle Rail conductor) with a length of 38 km starting from Torcamp-Guddabar HPP for transferring 409 MW power to Ghrait-Swir Lasht HPP powerhouse switchyard
- One Single Circuit and One Double Circuit 220 kV transmission line (twin-bundle Rail conductor) in parallel from Ghrait-Swir Lasht HPP powerhouse switchyard to 500 KV Chitral grid station to transfer 1294 MW with a length of 54 km
- Aggregate capacity of 3100 MW will be available at 500 kV Chitral grid station which has to be transferred to Chakdara grid station. There are two options to transfer this power (i) 500 kV system (ii) HVDC
- Since distance between 500 kV chitral grid station and proposed chakdara grid station is of more than 200 km, as such we need four 500 KV (quad Drake conductor) transmission lines to meet (N-1) contingency condition
- Visualizing the corridor constraint between Chitral and Chakdara, an HVDC transmission line is proposed however, final selection of transmission line can only be ascertained after the detailed techno-economic study of network in the region.

The map of Chitral region corridor is presented at Figure-2.

B. Dir Region

The proposed network is to cover the total capacity of aprox. 510 MW which will be collected at a proposed grid station near chakdara. A brief of network is mentioned hereunder:

- Double circuit 132 KV transmission line (single - Lynx conductor) starting from Barikot Patrak HPP (47 MW) making one circuit in & out at Patrak HPP (22 MW), making the other circuit in & out at sharmai HPP (150 MW) (Rail conductor), making in & out arrangement at wari HPP (37 MW) and terminating at Shalphalam powerhouse switchyard transferring 256 MW power of capacity with a length of 30 km
- Double circuit 220 KV transmission line (twin - Rail conductor) starting from Shalphalam powerhouse switchyard (60 MW) making one circuit in & out at Sahiabad HPP (49 MW), making the other circuit in & out at Koto HPP (40.8 MW), making in & out arrangement at Shigo Kas HPP (102 MW) and terminating at Chakdara grid station transferring the total aprox. 508 MW power with a length of 62 km

The map of Dir corridor is presented at Figure-3.

C. Swat Region

The proposed network is to cover the total capacity of aprox. 1000 MW which will be collected at a proposed grid station near Chakdara. A brief of network is mentioned hereunder:

- Double circuit 132 KV transmission line (single - Rail conductor) starting from Ushu 3 HPP (20 MW), making in & out arrangement at Ushu 2 Hpp (48 MW), another in & out arrangement at Ushu HPP (55 MW) and terminating at Matiltan powerhouse transferring 123 MW power with a length of aprox. 21 km
- Double circuit 132 KV transmission line (single - lynx conductor) starting from Gabral HPP (10 MW), making in & out arrangement at Utror Hpp (8 MW), Gabral utror (45 MW), and another at Bankhwar HPP (10 MW) and terminating at Matiltan powerhouse transferring 73 MW power with a length of aprox. 23 km
- Double Circuit 132 KV transmission line (single - Rail conductor) with a length of 5 km starting from Ghabral Kalam HPP powerhouse transferring 110 MW and terminating at Matiltan Powerhouse
- Double Circuit 220 KV transmission line (twin bundle - Rail conductor) starting from Matiltan powerhouse switchyard (84 MW) and terminating at Madyan powerhouse with a length of 47 km and transferring 390 MW power
- Double Circuit 220 KV transmission line (twin bundle - Rail conductor) starting from Kalam Asrit powerhouse switchyard (238 MW), with in / out arrangement at

Asrit Kadam Hpp (215 MW) and terminating at Madyan powerhouse with a length of 31 km and transferring 453 MW power

- Aggregate capacity of 1000 MW will be available at Madyan powerhouse switchyard which has to be transferred to Chakdara grid station. There are two options to transfer this power either on 220 kV system or 500 kV system. If the evacuation is carried out through 220 kV transmission lines then two double circuit 220 kV with twin bundle rail conductor is proposed and if the evacuation is carried out through 500 kV transmission lines Double circuit 500 kV transmission line quad bundle drake conductor is proposed with the length of 135 km. The selection of voltage level can only be ascertained after carrying out the techno-economic study in the region

The map of Swat corridor is presented at Figure-4.

Table 12: Region-Wise list of Transmission Lines

Sr. No.	Region	Voltage Level	Name of Conductor	No. of Conductor Per Phase	No. of Circuits	Length (km)
1.	Chitral	132 KV	Rail	Single	Double	60
2.		220 KV	Rail	Twin	Double	192
3.		220 KV	Rail	Single	Double	105
4.		220 KV	Rail	Single	Single	54
5.		HVDC	According	to detailed	Engineering	216
6.	Dir	132 KV	Lynx	Single	Double	50
7.		132 KV	Rail	Single	Double	30
8.		220 KV	Rail	Twin	Double	62
9.	Swat	132 KV	Lynx	Single	Double	23
10.		132 KV	Rail	Single	Double	26
11.		220 KV	Rail	Twin	Double	78
12.		500 KV	Drake	Quad bundle	Double	135

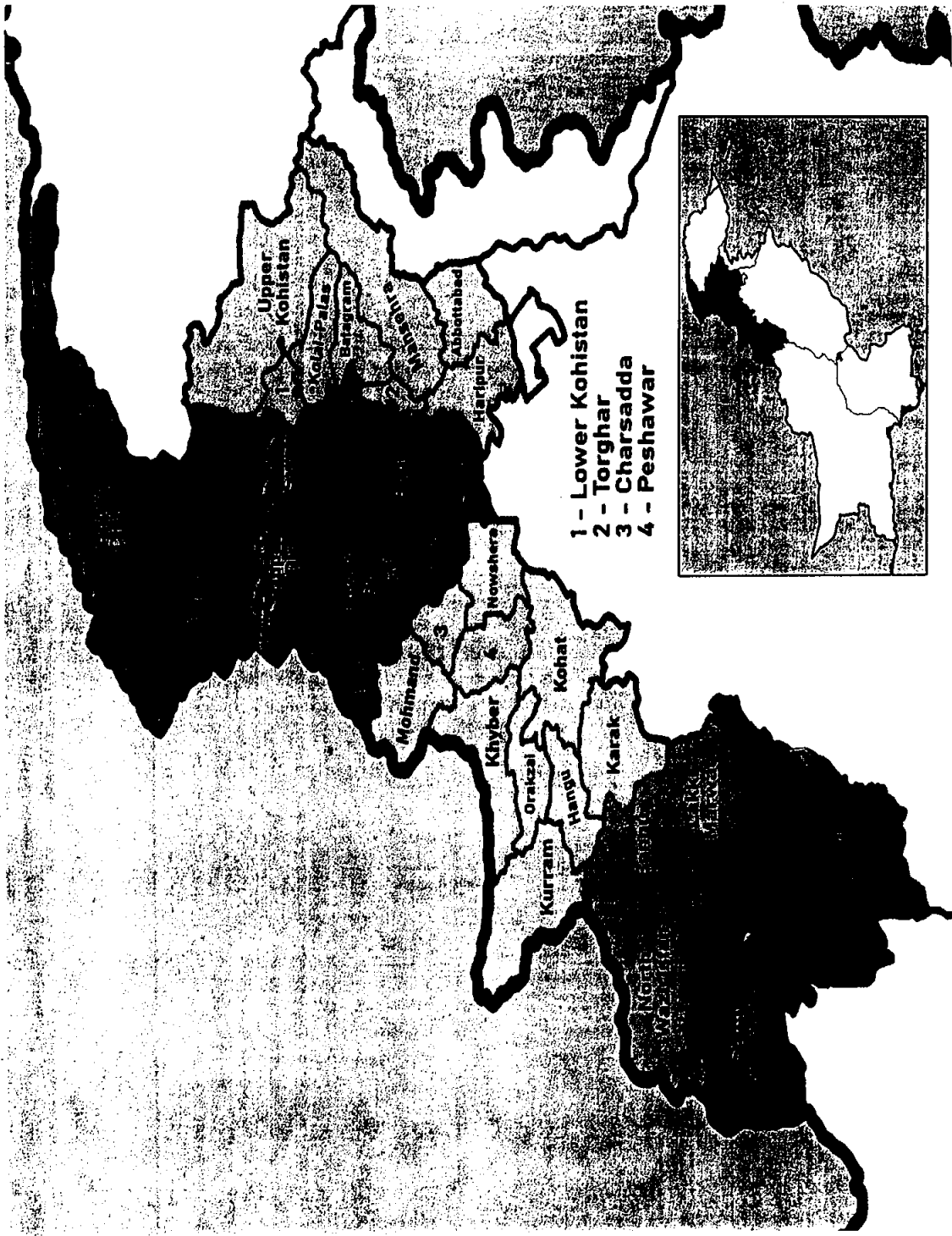


Figure-7-1: Map of Khyber Pakhtunkhwa

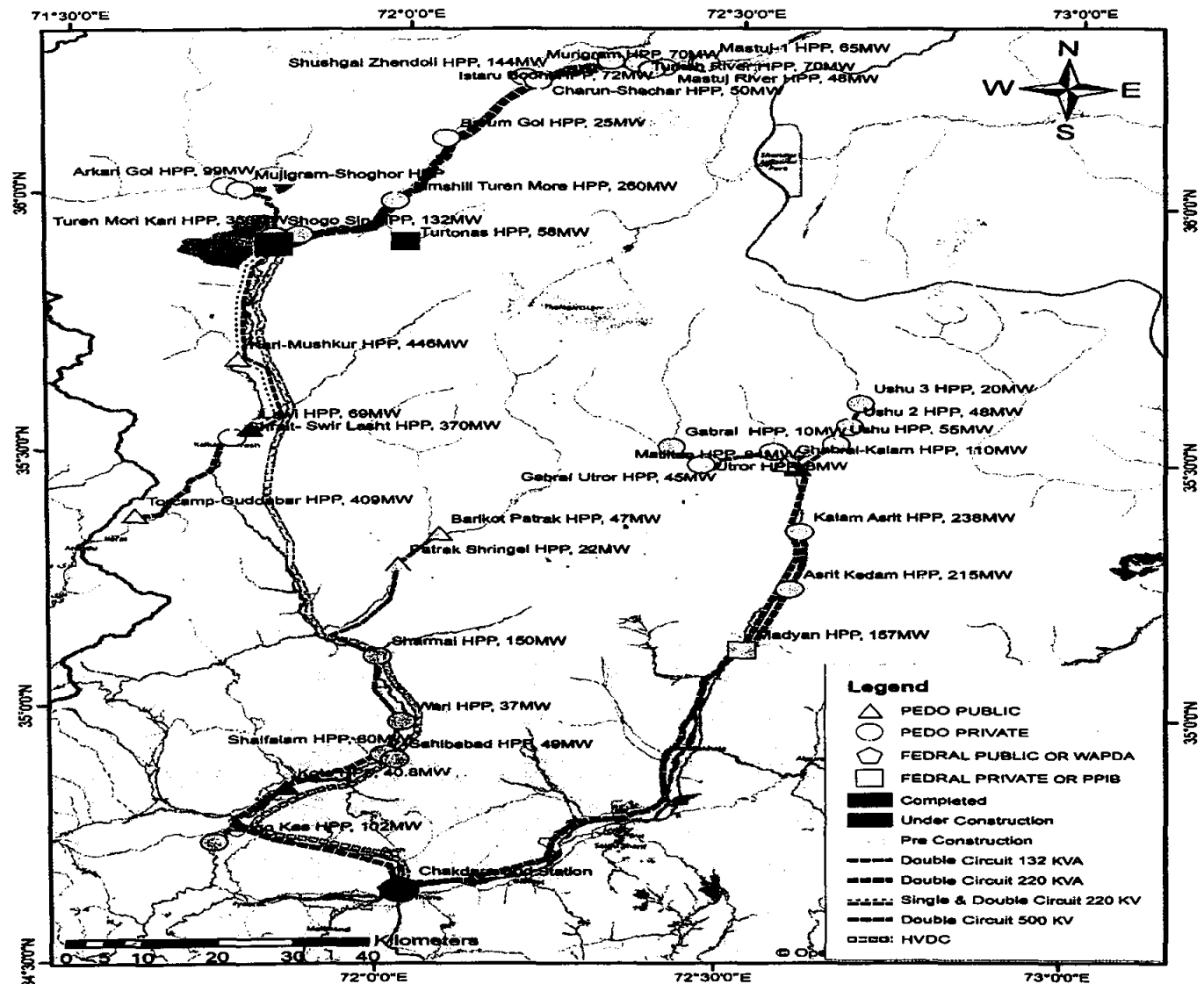


Figure 7-2: Transmission Corridor of Chitral, Dir & Swat Region

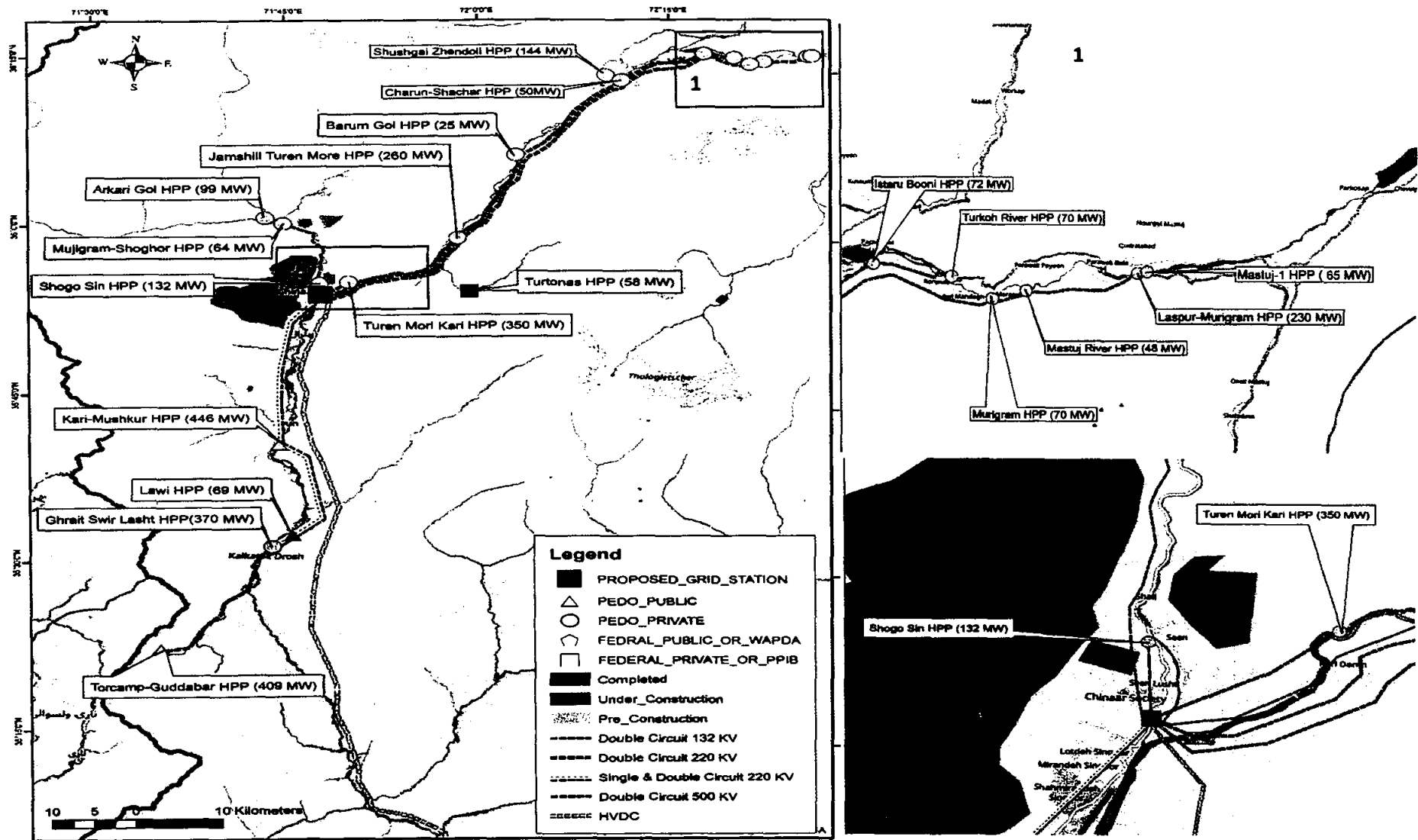


Figure 7-3: Transmission Corridor Map of Chitral Region

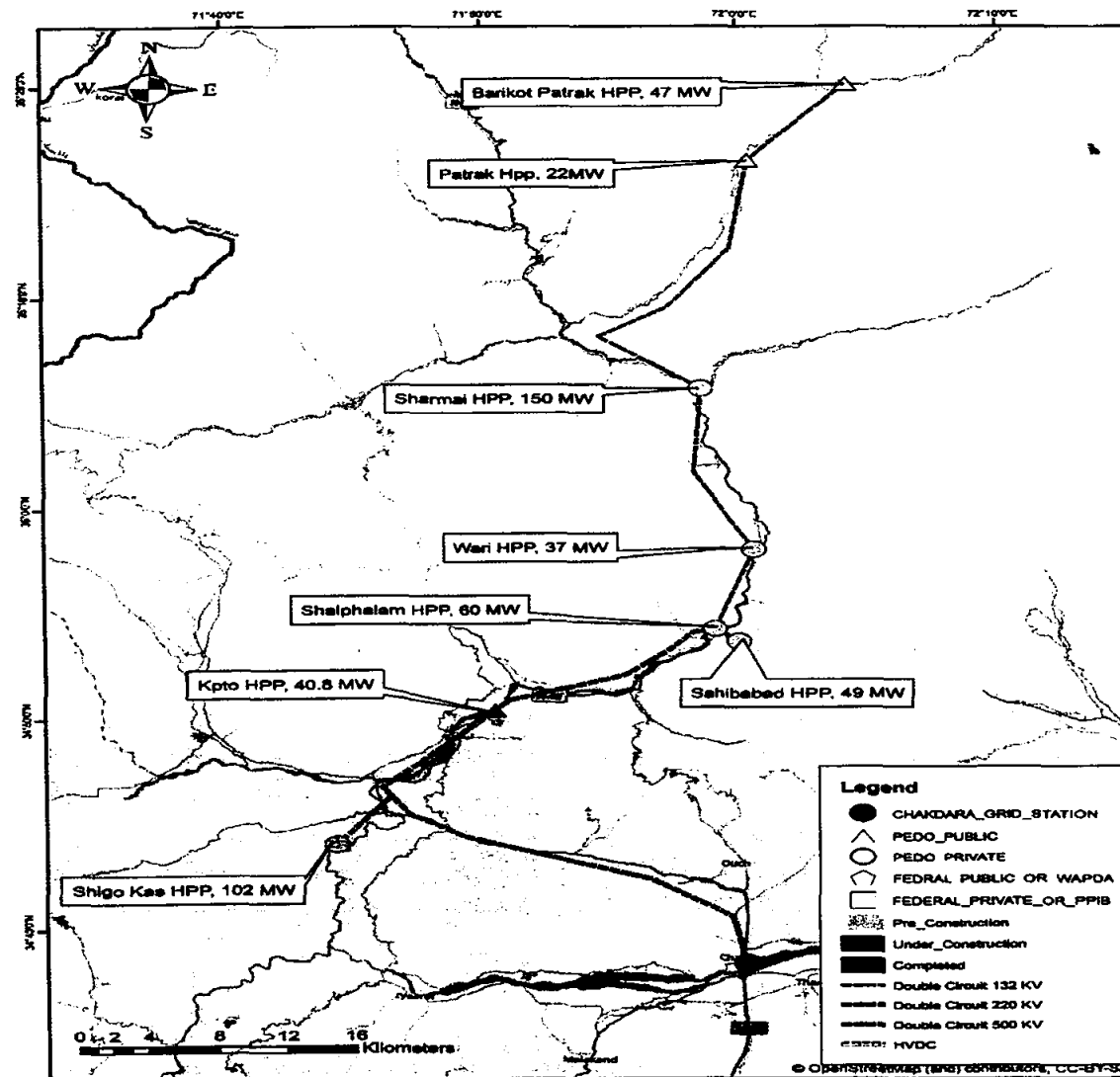


Figure 7-4: Transmission Corridor Map of Dir Region