

F/A



PAKISTAN
WATER AND POWER DEVELOPMENT AUTHORITY

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General Manager Finance (Power)
713-Wapda House, Lahore

No. GMFP/CPCC/4525/446

For info & record

16/5/22

Dated: 14-05-2022

The Registrar, NEPA
NEPA Tower,
Ataturk Avenue (East)
G-5/1, Islamabad.

- Adil D. - I
copy to:
- ADGCT
- SAC (R&E)
- ens. CTech
- m.f.

cc: Chairman
- v.c/m (R&E/CA)
- m. C. (T)

Subject: BULK SUPPLY TARIFF PETITION – WAPDA HYDROELECTRIC FOR FY 2022-23

Please find attached three sets of Bulk Supply Tariff (BST) petition in respect of WAPDA Hydroelectric for FY 2022-23 for sale of Power to CPPA(G) under section 3(1) of the NEPA Tariff Standards and Procedures Rules 1998, along-with the affidavit and a cheque # 43251598 Dated 13-05-2022 amounting Rs. 2,300,000/- (after deduction of Tax Rs.200,000/-) as NEPA fee.

(Syed Irfan H. Rizvi)
GM Finance (Power)

Cc to:

1- Section Officer (HP) MoWR, Ataturk Avenue G-5/1, Islamabad.

with Cheque of Rs. 2,300,000/-

Only
NBP

EQUIVALENT BANK OF PAKISTAN
WAPDA HOUSE BRANCH SHAHRAE QUADE AZAR ROAD LAHORE

Cheque No

Date

13052022

REGISTRAR
Dy. No. 4586
Dated: 16.5.2022

Two Million Three Hundred Thousand Only (NEPA)
Signature

4515 98 07004 16004 1600300054858 7000



Annex-A

NAME OF LICENSEE: PAKISATN

**WATER AND POWER DEVELOPMENT
AUTHORITY**

LICENSE No. GL (HYDEL) /05 / 2004

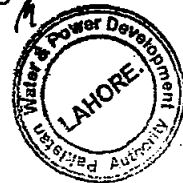
PETITION:

**PETITION FOR REVISION OF TARIFF
FOR FY 2022-23 FOR BULK
SUPPLY OF POWER FROM WAPDA
HYDEL POWER STATIONS.**



TABLE OF CONTENTS

<u>CONTENTS</u>	<u>PG.#</u>
1. ABOUT THE PETITIONER	03
2. THE PETITION	06
3. STATEMENT OF COMPLIANCE	07
4. GROUNDS OF PETITION	10
5. GENERATION FACILITY AND PLAN	11
6. COMPONENTS OF REVENUE REQUIREMENT	12
7. REGULATORY ASSETS BASE OF HYDEL POWER STATIONS	16
8. DEVELOPMENT PROJECTS	17
9. REGULATORY ASSETS BASE OF HYDEL POWER PROJECTS	21
10. INCOME FROM ASSETS OTHER THAN FINANCIAL ASSETS	23
11. REGULATORY REVENUE GAP	23
12. HYDEL RELATED CHARGES	25
13. REVENUE REQUIREMENTS HYDEL LEVIES FOR FY 2022-23	27
14. RELIEF SOUGHT	28



ABOUT THE PETITIONER**1 - WAPDA**

WAPDA was established under the WAPDA Act in 1958 as an autonomous body for the development and use of the water and power resources of Pakistan on a unified and multipurpose basis. As a result of structural reforms introduced by Federal Government in Power Sector, WAPDA Power Wing Hydroelectric emerged and is responsible for operation, maintenance, up-gradation and expansion of its in-operation Hydel power stations and construction of new projects for generation of power using Hydel sources on Built, Own and Operate (**BOO**) basis as per the provisions of Section-8 of WAPDA Act.

2 - Hydroelectric Business

WAPDA Power Wing Hydroelectric is operating under Generation License granted in 2004 by the Power Regulator 'NEPRA', for operation, maintenance and development of Hydel power resources in Pakistan. Being the largest and bona fide generator of Hydel power, WAPDA Power Wing Hydroelectric holds significant and strategic importance for the country. At present, after modification-V in Generation License, vide NEPRA letter No. NEPRA/R/LAG-23/10113-18 dated 07-04-2020, WAPDA holds Generation License for its Twenty Four (24) Hydel power projects having aggregate generating capacity of 17,368 MW out of which, three (03) Hydel power projects of aggregate capacity of 8,948 MW are under construction, whereas, twenty one (21) Hydel power stations with generation capacity of 8,420 MW are in operation.

3 - Power Sale Tariff

Section-25 of WAPDA Act provides that, the Authority shall ordinarily sell power in bulk. Further it is also stated that the rate at which the authority shall sell power shall be so fixed as to provide for meeting the operation cost, interest charges and depreciation of assets, the redemption at due time of loans other than those covered by the depreciation, the payment of any taxes and a reasonable return on investment.

Being licensee of WAPDA Power Wing Hydroelectric gets its modified power sale tariff for an agreement year determined at the bus bar of hydel power stations from NEPRA under the Section 31 of NEPRA Act-1997.

4 - Tariff Methodology

WAPDA Power Wing Hydroelectric files a petition for the revision in tariff on year to year basis upon the annual revenue requirement of WAPDA Hydroelectric stations comprising of operating costs, depreciation and return on investment which is determined by NEPRA periodically for prudently cost incurrence. The tariff methodology adopted by NEPRA for WAPDA hydroelectric, involves the assessment and recovery of prudent cost-of-service in line with Section-17(3) of NEPRA Tariff Standards and Procedure Rules-1998.

The periodic tariff of WAPDA is determined by NEPRA based upon the projected revenue requirement for a particular financial year/ period including O&M, depreciation and ROI. Tariff of WAPDA Hydroelectric does not include any indexation/ escalation. The projected revenue requirement is trued up in each succeeding petition based upon the established prudence of cost-of-service through audited accounts for that particular financial year.



Tariff of WAPDA Hydroelectric power stations is determined in two components i.e. Fixed Charge and Variable Charge for recovery of annual revenue requirements. Whereas, Hydel related charges i.e. Net Hydel Profit under Article 161(2) of the Constitution to the provinces, Water usage charges to AJK and IRSA levy are allowed separately as a pass-through charge at the rates determined by the relevant forum. The tariff determination methodology adopted by NEPRA for WAPDA Hydel Power Stations is as under: -

Annual Revenue Requirement = *Return on Regulatory Asset Base + Depreciation Expenses + O&M + Ijara Rental – Other Income [+/-] prior period adjustments for regulatory revenue gaps.

*The Regulatory Assets Base for tariff purpose includes:

- i. Average Net value of Operating Assets at historical cost
- ii. Average Capital WIP

NEPRA has adopted the mechanism of allowing Return on Regulatory Assets for WAPDA Hydroelectric stations, by including return on the actual incurred capital cost of development projects Net-off Interest During Construction (IDC) going forward towards completion at the actual weighted average cost of capital (**WACC**) with 10% return on equity. The return varies based on WACC and average level of Regulatory Assets Base (**RAB**). IDC is allowed as period cost and not as part of project cost.

This special mechanism not only offer sustainable increase in tariff but it also facilitates WAPDA to attract adequate funding for Capital Cost intensive projects from local as well foreign capital market by ensuring the payment of interest on loans during construction period as well as, ensuring injection of equity at the stipulated ratio by ploughing back ROE earned during construction period of the project.

NEPRA allows WAPDA Power Wing Hydroelectric return on incurred capital cost on those projects only which are included in its Generation License and ensure check on the progress regular basis. Therefore, instead of executing the project through a separate project company, the same are preferred to be executed through modification of Generation License of WAPDA Power Wing Hydroelectric.

Existing methodology/ mechanism of year to year determination of tariff for WAPDA Hydroelectric is well thought out and justified. It allows WAPDA to discharge its duties under WAPDA Act remaining within the provisions of NEPRA Act and NEPRA Tariff Standards and Procedure Rules-1998.

5 - Commercial Operation

NEPRA determines Bulk supply tariff for WAPDA Hydroelectric to meet with revenue required for the defined period and recommends GoP to notify the same through a Gazette Notification. WAPDA Power Wing Hydroelectric can only charge the tariff officially notified by GoP through a gazette notification. Tariff once notified remains applicable till the notification of modified tariff.

WAPDA Power Wing Hydroelectric key source of revenue is proceeds from sale of electricity at a notified tariff to CPPA (G). For sale of power, after restructuring of Power Wing WAPDA has entered into Power Purchase Agreement (PPA) with NTDC on



WAPDA HYDROELECTRIC – TARIFF REVISION PETITION FY 2022-23

01.03.1999 which was subsequently novated to CPPA(G) vide amendment dated 01-10-2015 (**Annex-1**).

6 - Operation & Maintenance

WAPDA carries out operation & maintenance of hydel power stations as per the recommendations of the manufacturers to ensure availability of its power stations while observing the outages allowance permitted in PPA. Further, in order to secure and boost the life of present installed capacity of Tarbela, Mangla, Warsak and other small Wapda Hydel power stations replacement, refurbishment, up-gradation and expansion activities have been initiated as per the recommendations of the respective feasibility studies with the assistance of different foreign donors which will continue in different phases in the coming years.

7 – Human Resource

WAPDA appoints personnel and fixed their terms of employment by exercising administrative powers conferred under Section 17 & 18 of WAPDA Act. The manpower strength is reviewed each year keeping in view the functional requirements of Hydel power stations and supervisory offices. Being fully GoP owned autonomous body, WAPDA has adopted National Pay Scales, therefore salary package of the employees is adjusted year to year in line with adjustments made by the federal government for its employees in each financial year budget.

Additionally, WAPDA Hydroelectric also employ/ hire services of WAPDA Water and Coordination Wings as well as from outside agencies on need basis.

8 - Maintenance of Accounts

As provided at Section 26 of WAPDA Act 1958, it is mandatory for WAPDA to maintain separate accounts for all power development schemes and power generating units. WAPDA maintain complete and accurate books of accounts in accordance with IAS adopted in Pakistan and NEPA determinations.

WAPDA Power Wing Hydroelectric has implemented ERP modules for General Ledger, Store Inventory and Payroll which are working successfully.

9 - Audit

Auditor General of Pakistan performs the audit of the WAPDA under Section 28 of WAPDA Act 1958. In addition to that, since FY 2009-10, Audit of accounts of WAPDA Power Wing Hydroelectric business regulated by NEPA is also carried out by a reputable audit firm of Chartered Accountants. In this regard Annual accounts of WAPDA Power Wing Hydroelectric for FY 2019-20 were audited by EY Ford Rhodes Chartered Accountants whereas, Annual Accounts for FY 2020-21 were audited by Crowe Hussain Chaudhury & co.



THE PETITION

Authorization

This petition is being filed for the determination of Bulk Supply Tariff for FY 2022- 23 through General Manager Finance (Power) WAPDA who has been duly authorized to sign and file this petition by the WAPDA Authority vide resolution dated 30th April, 2022 (**Annex-2**). In the said resolution following officers have also been authorized by the WAPDA Authority to submit and sign, individually or jointly, the documents necessary in support of this petition and to appear before NEPRA and represent WAPDA-Hydroelectric in and during proceedings of this petition:

1. General Manager Finance (Power)
2. General Manager (Hydel Operation)
3. General Manager (Hydel Development)
4. General Manager (Hydro Planning)
5. General Manager (C&M) Water
6. Director Legal



STATEMENT OF COMPLIANCE

1. Order of NEPRA

WAPDA filed its Tariff Modification Petition for FY 2020-21 in NEPRA on 29.06.2020, Whereas, NEPRA gave its determination on 05.04.2021. WAPDA filed motion for recalculation on April 08, 2021 under rule 16(5) of NEPRA (Tariff Standards and Procedures) Rules, 1998 because of certain discrepancies in the NEPRA determined tariff. Pursuant to WAPDA's Motion for Recalculation, NEPRA revised its original decision dated 05.04.2021 and issued an amended decision on 07.06.2021.

As per para-6 of revised Order of National Electric Power Regulatory Authority dated June 07, 2021 (**Annex-3**) in the Motion for Recalculation filed by WAPDA Hydroelectric against the Tariff Determination for FY 2020-21 issued on 05.04.2021, is as under:

1. *WAPDA Hydroelectric is allowed to charge the Central Power Purchasing Agency Guarantee Limited (CPPA(G)) the Tariff of each plant at the bus bar of its hydroelectric power stations connected directly or indirectly to the transmission system of NTDC.*

The above NEPRA determined tariff was notified by the GoP in the Official Gazette on 18-10-2021 (**Annex-4**) and tariff become applicable from 18.05.2021.

2. No More CDL be Parked in Cost of DBD

NEPRA at para-80 of its Tariff Determination of WAPDA (Hydroelectric) for FY 2020-21 dated 05.04.2021 directed that the Petitioner shall ensure no more CDL is parked at DBD which is contributing to Power sector cost and accordingly resolve this issue with the Federal Government and that in the future if the grant amount from the current estimated Rs 331 billion increases, the corresponding adjustment shall be carried out in WAPDA Hydro electric's tariff.

It is apprised that since FY 2016-17 no further CDL has been released by the Government for DBD.

3. Provision of Details of Subhead "Others" in Projects

NEPRA at para-94 of its Tariff Determination of WAPDA (Hydroelectric) while allowing ROI on development project for FY 2020-21 dated 05.04.2021 directed WAPDA to share proper details and justification of each item in subhead "Others" to be considered for assessment of ROI.

Number of WAPDA Hydroelectric projects are at inception stage / feasibility stage and expenditures on these projects are clubbed under subhead "Others". The provision of details of these projects in Financial Statements will make them bulky, therefore duly audited figures of these projects have been clubbed on the face of Financial Statements under the subhead "Others".



TABLE - 1

Other Projects - Capital Work In Progress				
		Rs. In '000'		
Inception Stage Projects	Name of Project	2019	2020	2021
	Tarbela 5th Extension Hydro Power Project - (TXF)	63,019	773,507	10,642,430
	Bunji H/Power Project-BPP	2,132,747	2,132,747	2,132,747
	Thakot HPP (THP)	769,216	988,800	991,777
	Pattan HPP (PPD)	575,851	575,851	575,851
	Phandar Hydro Project-PHP	125,927	125,927	125,927
	Shyok Dam Multipurpose Project- (SDM)	126,571	130,841	130,774
	Other Projects	771,911	2,100,872	2,776,787
	Total	4,565,242	6,828,545	17,376,293

As apparent from above table, major portion of cost of CWIP-Other projects in FY 2020-21 pertains to Tarbela 5th Extension. Licensee Proposed Modification (LPM) for inclusion of T5 in existing Generation License of WAPDA has been filed with NEPRA. The cost of CWIP-Others will significantly reduce in FY 2022-23 upon inclusion of T5 in Generation License of WAPDA.

4. Detailed analysis of Higher Outages of Plants

NEPRA at para-117 of its Tariff Determination of WAPDA (Hydroelectric) for FY 2020-21 dated 05.04.2021 directed WAPDA to submit the analysis of higher outages of hydel power stations than allowed as per their PPA.

In compliance of the directions, hydel power station wise analysis of outage hours along with reasons has been submitted vide WAPDA's letter No. CEHO/9653-54 dated 07.06.2021 (**Annex-5**).

5. Finalization of Power Purchase Agreement (PPA) with CPPA(G)

NEPRA at para-118 of its Tariff Determination of WAPDA (Hydroelectric) for FY 2020-21 dated 05.04.2021 directed WAPDA & CPPA(G) to finalize the PPAs for remaining hydel power stations of WAPDA.

For inclusion of remaining Hydel Power Stations in PPA WAPDA and CPPA(G) have finalized 4th amendment in PPA which has been duly approved by WAPDA Authority vide Notification dated 21.03.2022 (**Annex-6**) for signing between WAPDA & CPPA(G).

6. Capacity Testing of Power Plants

NEPRA at Para-122 of its Tariff Determination of WAPDA Hydroelectric for FY 2020-21 dated 05.04.2021 directed WAPDA and CPPA(G) to finalize the procedure/protocols for testing of WAPDA HPPs at the earliest.

WAPDA and CPPA(G) has finalized the protocols for capacity testing of WAPDA Hydel Power Stations. Accordingly, CPPA(G) has completed the capacity testing of various Power Stations as per attached details (**Annex-7**).



WAPDA HYDROELECTRIC – TARIFF REVISION PETITION FY 2022-23

7. Creation of Post-Retirement Benefits Funds Account

NEPRA at para-27 of its Tariff Determination of WAPDA Hydroelectric for FY 2020-21, while allowing provision for the postretirement benefit to WAPDA directed to ensure to deposit the differential of the amount of provision allowed to the Petitioner vs. the actual payment made by the Petitioner. In case of failure, the Authority may deduct the differential amount of provision vs. the actual payment and may also charge a certain financial cost as a penalty for the amount retained by the Petitioner.

NEPRA has been allowing WAPDA Employees Post Retirement Benefits in line with IAS-19 as per actuarial revaluation report. In this regard a comparison of Employees Retirement Benefits charged as Cost of Revenue in Statement of Profit and Loss on the basis of actuarial revaluation reports and payment of benefits actually paid as per Audited Accounts is depicted in the Table below.

TABLE - 2

Post Employment Benefits (PEB)					
					(Mln Rs.)
	2017-18	2018-19	2019-20	2020-21	Total
Charge for Employee Benefits in Statement of Profit & Loss - (A)	4,493	6,357	8,886	7,891	27,627
Employee benefits paid during the year - (B)	2,141	2,737	3,103	3,858	11,839
Difference - (C=A-B)	2,352	3,620	5,783	4,033	15,788
TDR Placed for Fund purpose - (D)					5,000
Balance Amount - (E=D-C)					10,788

WAPDA Hydroelectric main source of revenue stems from sale of power to CPPA(G), which make partial and unreliable payments against WAPDA Power Sale Invoices, due to which Power Sale Receivables from CPPA(G) has accumulated to Rs.234,144 mln. Despite less and erratic payments from CPPA(G), WAPDA Hydroelectric has managed to invest Rs.5,000 million as TDRs against the required Rs.15,788 million. Upon recovery of dues and start of full regular receipts against power Sale invoices from CPPA(G) balance Rs.10,788 million shall also be recouped besides establishment of Pension Fund.



Grounds of Petition

Change in components of Revenue Requirements of WAPDA Hydroelectric for FY 2022-23, as against the NEPRA determined Revenue Requirement for FY 2020-21 have formed the basis for this Tariff Modification Petition which has been projected with the help of audited Financial Statements of WAPDA Hydroelectric for FY 2019-20 and FY 2020-21, Six (6) months (Jul-Dec) actual numbers for FY 2021-22, provisional numbers for last Six (6) months (Jan-Jun) of FY 2021-22 and budgeted numbers for full FY 2022-23.

A comparison of the Revenue Requirements determined by NEPRA for FY 2020-21 and Revenue Requirements proposed for FY 2022-23 is as under:

TABLE – 3

WAPDA's Revenue Requirement

Revenue Components	Existing NEPRA Determined for FY 2020-21	Requested in Tariff Petition for FY 2022-23
	(Mn Rs)	(Mn Rs)
O&M Expenses	17,622	23,616
Depreciation (Repayment of Loan & Equity	6,869	8,025
Ijara Rentals (Sukuk Bond repayments)	1,690	-
Return on Investment-H/P stations	28,330	30,385
Return on Investment-H/P Projects	21,030	34,265
Deduction for Misc. Income	(698)	(767)
Sub.total	74,183	95,524
Regulatory Revenue Gap	15,515	26,285
Mark-up on NHP Loans	11,024	-
Revenue Requirement WAPDA	100,722	121,809

In the above comparison:

1. Projected Increase in Regulatory Assets Base (RAB) for Power Stations and development projects due to capital expenditures on rehabilitation/ replacement of aged generation plants and acquisition of new fixed assets as well as due to more capital investment in the under-development hydropower projects.
2. Projected increase in O&M cost for FY 2022-23 against O&M determined by NEPRA for FY 2020-21.
3. Variation in Depreciation charges for FY 2022-23 from that determined by NEPRA for FY 2020-21.
4. Variation in Debt-Equity Ratio and WACC from that allowed by NEPRA for FY 2020-21.
5. Change in estimated other Income from NEPRA regulated business activities for FY 2022-23 with NEPRA determined for FY 2020-21.
6. Regulatory Revenue Gap for FY 2019-20, FY 2020-21 and FY 2021-22 has arisen due to difference between actual and allowed revenue requirement as well as delayed determination and notification of tariff.



Generation Facility and Plan

WAPDA Hydroelectric is operating under Generation License GL (Hydel)/05/2004 granted by NEPRA in 2004 for 30 years for operation, maintenance and development of Hydel power resources in Pakistan, which was also subsequently modified by NEPRA several times. The last modification of Generation License was made by NEPRA on April 07, 2020 and present Generation License of WAPDA Hydroelectric comprise Twenty-Four (24) Hydel Power stations having aggregated installed capacity of 17,368 MW. Out of which, twenty-one (21) hydel power stations having installed capacity of 8,420 MW are currently in operation.

Projected generation for FY 2021-22 is based on eight months actual and four months projected generation, whereas, generation for FY 2022-23 has been forecasted considering the hydrology situation. Power Station Wise Generation plan is tabled below:

TABLE - 4

WAPDA HYDROELECTRIC Generation Plan

Sr.No.	Hydel Power Station	Installed Capacity	Net Generation (Gwh)				
		MW	2018-19 (Actual)	2019-20 (Actual)	2020-21 (Actual)	2021-22 (Actual/Prov.)	2022-23 (Projected)
1	Tarbela	3,478	10,589	11,858	12,566	11,660	11,957
2	Warsak	243	1,000	1,095	1,065	984	898
3	Duber Khawar	130	592	609	641	595	595
4	Allai Khawar	121	461	469	439	465	463
5	Khan Khawar	72	233	274	231	253	306
6	Jabban	22	135	138	134	135	136
7	Dargai	20	109	98	109	104	105
8	Kuram Garhi	4	14	15	20	19	20
9	Chitral	1	4	3	3	3	3
10	Tarbela 4th Ext.	1,410	2,489	5,486	3,419	3,840	3,840
11	Golen Gol	108	116	86	82	100	120
12	Gomal Zam	17	32	54	62	58	60
	Total KP	5,626	15,774	20,186	18,770	18,215	18,503
13	Ghazi Barotha	1,450	6,476	6,482	6,811	6,600	6,600
14	Chashma	184	762	747	772	780	840
15	Jinnah HPP	96	219	177	235	252	290
16	Rasul	22	69	34	77	76	77
17	Nandipur	14	35	34	32	33	35
18	Shadiwal	14	28	14	32	32	32
19	Chichoki	13	28	30	27	28	28
20	Renala Khurd	1	2	2	2	2	2
	Total Punjab	1,794	7,620	7,519	7,989	7,803	7,903
21	Mangla	1,000	3,803	4,589	5,314	4,841	4,945
	Total AJK	1,000	3,803	4,589	5,314	4,841	4,945
	Total	8,420	27,196	32,295	32,073	30,859	31,352

Revenue Requirement of WAPDA FY 2022-23

Revenue Requirements of WAPDA Power Wing Hydroelectric comprises O&M expenses, Depreciation charges, Ijara Rentals, Return on Regulatory Asset Base (RAB) and Regulatory Revenue Gap.

Revenue Requirements for FY 2019-20 and FY 2020-21 are requested as per audited Financials being prudently incurred costs, while Revenue Requirement for FY 2021-22 has been forecasted with actual expenses for the first six (6) months and provisional expenses during the remaining six (6) months. Whereas, Revenue Requirement for full FY 2022-23 is budgeted.

Consolidated Revenue Requirement of WAPDA Hydroelectric from FY 2019-20 to FY 2022-23 is shown in the table below, whereas station wise Revenue Requirement is appended at (Annex-8).

TABLE - 5

Consolidated - Revenue Requirement

Unit	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
	Audited	Audited	Budgeted	Projected
	(Mln Rs)	(Mln Rs)	(Mln Rs)	(Mln Rs)

Block wise Bulk Supply Tariff

Installed Capacity	(MW)	8,420	8,420	8,420	8,420
Est. Generation (Net Electrical Output)	(Gwh)	32,295	32,073	30,859	31,352
Plant Factor	(%)	44%	43%	42%	43%

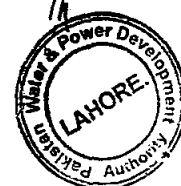
Revenue Requirement (Mln Rs)

O&M	(Mln Rs)	18,678	18,117	21,358	23,616
Depreciation (At Carrying Cost)	(Mln Rs)	7,696	8,060	8,058	8,025
Ijara Rental	(Mln Rs)	1,780	1,574	746	-
Return on Investment	(Mln Rs)	37,464	32,085	31,234	30,385
Provision for Future Development	(Mln Rs)	12,781	14,179	20,328	34,265
Misc. Income	(Mln Rs)	(556)	(767)	(767)	(767)
Total Revenue Requirement	(Mln Rs)	77,842	73,248	80,958	95,524

Regulatory Revenue Gap

FY - 2019-20 - Audited	7,893
FY - 2020-21 - Audited	8,901
FY - 2021-22 - Provisional	9,491
Total Revenue Gap	26,285
Total Revenue Requirement with Rev. Gap	121,808

Rationale in respect of each component and sub component of WAPDA Hydroelectric Revenue Requirement has been briefly explained in the following paras.



WAPDA HYDROELECTRIC – TARIFF REVISION PETITION FY 2022-23

1. O&M EXPENSES

O&M expenses comprises of Employees Cost, Repair & Maintenance and Administration Cost. A comparison of component wise audited O&M costs with the total adjusted O&M cost allowed by NEPRA at Para-47 of tariff determination dated 05.04.2021 is shown in the succeeding table whereas station wise O&M costs is appended at **(Annex-9)**.

TABLE - 6

(Min Rs.)

Components of O&M Cost	2019-20		2020-21		2021-22	2022-23
	Audited	Allowed	Audited	Allowed	Actual/Prov.	Projected
Employee's Salaries & Benefits	5,787		5,296		7,500	8,737
Post Retirement Benefits	8,886		7,891		8,200	8,700
Repair & maintenance	976		1,460		1,537	1,749
Administrative Expenses	3,029		3,470		4,121	4,430
Total	18,678	16,311	18,117	17,622	21,358	23,616

- a) **Employees Cost** is sub classified into Employee salary & wages, Employees Benefits and Retiring Benefits. Requested Employees Costs are mentioned in the table below followed by brief explanation of their basis.

TABLE - 7

(Min Rs.)

	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
	Audited	Audited	Actual/Prov.	Projected
Salaries and Wages	4,210	4,359	5,746	6,895
Employees Benefits	1,577	937	1,754	1,842
Post Retirement Benefits	8,886	7,891	8,200	8,700
Total	14,673	13,186	15,700	17,437

- Sanctioned manpower is expected to remains the same.
- The increase in forecasted Employee salary & wages during FY 2021-22 over FY 2020-21 is due to grant of Disparity Reduction and Adhoc Relief allowances by GoP as well as effect of annual increments. Further, budgeted Employee salary & wages for FY 2022-23 are proposed with 20% increase over FY 2021-22 to adjust already granted 15% Disparity Reduction allowance, and annual increments.
- Employees benefits comprise different allowances payable as per the Federal Pay structure adopted by WAPDA. During FY 2021-22 GoP increased some allowances resulting in increase of employee benefits over FY 2020-21. For FY 2022-23 a normal 5% increase over forecasted expenses of FY 2021-22 is assumed.
- Employees Retirement benefits consist of Pension, Medical, Electricity and compensated absences benefits in line with IAS-19 (Employee Benefits) based upon Actuarial Valuation Report as per Projected Unit Credit Cost method. Employees Retirement benefits from FY2019-20 to FY 2020-21 are as per Actuarial Valuation Report and audited financial statements. Retirement benefits for FY 2021-22 have been projected with 5% increase over the actuarial estimates for FY 2020-21, whereas, for FY 2022-23 these benefits are budgeted with a further 6% increase over forecasted expenses for FY 2021-22 due to non-availability of actuarial valuation



WAPDA HYDROELECTRIC – TARIFF REVISION PETITION FY 2022-23

reports. The forecasted and budgeted figures will be trued-up in the succeeding tariff petition. Actuarial Valuation Report of WAPDA Hydroelectric NEPRA regulated business, for FY 2019-20 & FY 2020-21 has been attached at **(Annex-10)**.

- b) **Repair and Maintenance expenses** are projected to carryout scheduled daily, weekly and annual preventive/ unforeseen R&M activities/ schemes of Power Generation and General Plant & Assets as well as Civil structures & other Physical Properties necessary for proper up-keeping and smooth running of the aging Assets of WAPDA Power Stations. Routine Repair and Maintenance "R&M" of all Hydel Power Stations during FY 2022-23 has been planned as per the manufacturers recommendations within the maintenance hours allowed in the PPA. Station-wise maintenance schedule and technical data are appended as **(Annex-11)** of the Petition.

TABLE - 8

(Mln Rs.)

	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
	Audited	Audited	Actual/Prov.	Projected
Fuel Charges	22	19	29	31
Repair and Maintenance	904	1,241	1,300	1,500
Insurance	49	199	140	147
Consultancy	0	1	69	72
Total	976	1,460	1,537	1,749

- c) **Administration costs** mainly include Management charges, NEPRA Fees, security contracts, vehicles running costs, Dams and hydrology monitoring costs. Moreover, due to recurring nature NEPRA has been allowing Survey and Investigation costs for new power projects as part of O&M under Administration costs.

TABLE - 9

(Mln Rs.)

	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
	Audited	Audited	Actual/Prov.	Projected
Dams and Hydrology Monitoring Cost	702	944	944	944
Survey and Experiment	292	350	350	368
Power, Gas and Water	432	413	425	450
Management/Authority Overheads	993	1,138	1,200	1,300
Vehicle Running Expenses	222	206	225	245
NEPRA Fees	141	157	400	436
Other Operating Expenses	247	261	577	688
Total	3,029	3,470	4,121	4,430

In the current petition, Administration costs for FY 2019-20 and FY 2020-21 are actual/ audited. For FY 2021-22 cost is forecasted on the basis of actual expenses during the first half and forecasted expenses during the second half of FY 2021-22. Administration cost during FY 2022-23 has been budgeted with a conservative overall 6% increase over forecasted expenses during FY 2021-22 despite of much higher inflation index. Further, WAPDA has to make payment of Rs.60 million annually on account of local area security arrangement "NIKAT" to 89 Badargas of Mahsud tribe deployed at Gomal Zam Dam Project which is also included as Admin costs in Gomal Zam Dam Project.



2. DEPRECIATION CHARGE & IJARA RENTALS

Depreciation Charges have been worked out on straight line method based on the carrying cost of the Fixed Assets at the approved rates.

As per policy proportionate depreciation is charged on new assets additions during the year in accordance with International Accounting Standard (IAS-16). Depreciation is charged at the following rates:

TABLE – 10

Sr. No:	Description of Assets	Depreciation Rates
1	Land	0%
2	Building & Civil Works	2%
3	Power Generation Plant	2%-5%
4	Transmission Equipment	4%
5	Dam & Reservoirs	1%-1.25%
6	General Plant Assets	10%
7	Office Equipment	10%-25%
8	Furniture and Fixtures	10%
9	Transportation Equipment	20%

In Para-101 of Tariff Determination for FY 2020-21 dated 05.04.2021, NEPRA did not allow depreciation on certain fixed assets / parts such as "Transmission equipment" and "other assets" for want of plant wise breakup.

Accordingly, station wise details of depreciation charges of each group of Fixed Assets in Operation including "Transmission Equipment" have been provided with the instant Tariff Modification Petition which is attached as (**Annex-12**).

SUKUK-III has been redeemed during FY 2021-22. In FY 2020-21 & FY 2021-22 Ijara Rental has been taken as per terms of Ijara Rental Agreements of SUKUK III. Ijara Rentals pertain only to Tarbela Dam Project.

Consolidated schedule of proposed charge of depreciation and Ijara Rentals for FY 2021-22 is given in the table below:

TABLE – 11**Depreciation & Ijara Rentals**

(Mln Rs)

	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
	Audited	Audited	Actual/Prov.	Projected
Depreciation	7,696	8,060	8,058	8,025
Ijara Rentals	1,780	1,574	746	-
Total	9,476	9,634	8,804	8,025



3. REGULATORY ASSETS BASE (RAB)

Regulatory Assets Base (RAB) of WAPDA Hydroelectric is classified into two categories i.e. RAB for **Power Stations** and RAB for **Development Projects**. RAB for Power Stations comprises Average Net Fixed Assets in operation at historical cost whereas, RAB for Development Projects consists of Average direct cost in Capital Works in Progress (**CWIP**) balance net off Interest During Construction (**IDC**).

NEPRA allows Return on Investment (**ROI**) on Average RAB of Power Stations, whereas Provision for Future Development is allowed on Average RAB of Development Projects.

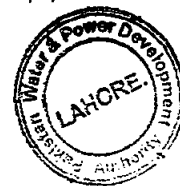
4. REGULATORY ASSETS BASE OF HYDEL POWER STATIONS

Average RAB has been worked out on the average historical cost of Net Fixed Assets in operation after taking into effect additions/ transfer to Fixed Assets, depreciation charges and disposal of Fixed Assets. NEPRA has been allowing return for hydel power stations at benchmark debt equity ratio of 70%:30%, therefore, in line with NEPRA's approach, debt equity ratio for power stations (except T-4 and Golen Gol) has been claimed as 70%:30%. Since T-4 and Golen Gol HPPs have been completed and transferred to operation from Capital Work in Progress at D/E ratio of 80%:20% i.e., benchmark set by NEPRA for development projects, therefore return for these two projects has been proposed at D/E ratio of 80%:20%.

NEPRA in its Tariff determination of WAPDA Hydroelectric for FY 2021-21 dated 05.04.2021 at para no.50 had not allowed "Transmission Equipment" and "Other Assets" as part of fixed assets in operation due to lack of plant wise details. Plant wise fixed assets details of "Transmission Equipment" and "Other Assets" have been prepared and attached as (**Annex-13**) and are also included in Regulatory Asset Base.

The Regulatory Assets Base of Hydel Power Stations, Debt/ Equity Ratio, WACC and Return on Investment from FY 2019-20 to FY 2020-21 has been calculated based on audited accounts, while incorporating budgeted CAPEX of Hydel Power Stations during FY 2021-22 & FY 2022-23.

Projected Consolidated Net Regulatory Assets Base of Hydel Power Station (for return purpose i.e., excluding financing through grant) for FY 2022-23 is estimated as Rs.241,009 Mln comprising debt financing of Rs. 176,724 million (73%) and equity, of Rs. 64,285 million (27%) whereas WACC works out as 12.61% against 12.9% determined by NEPRA in tariff determination for FY 2020-21. In addition to consolidated statement given below, Power station wise detail is also place at (**Annex-14**).



WAPDA HYDROELECTRIC – TARIFF REVISION PETITION FY 2022-23

TABLE – 12

	(Mln Rs)			
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
	Audited	Audited	Budgeted	Projected
Fixed Assets in Operation (At Historical Cost)				
Net Fixed Assets in Operation (Opening)	266,137	264,145	257,232	250,453
Additions				
Other Addition/Purchased/(Deletion)	5,700	1,138	1,280	1,344
New Constructions(from CWIP)	-	-	-	-
Total Addition	5,700	1,138	1,280	1,344
(Deletions)				
Depreciation on Fixed Assets	(7,696)	(8,060)	(8,058)	(8,025)
Transfer/Adjustment	4	8	-	-
Total Deletion	(7,692)	(8,052)	(8,058)	(8,025)
Net Fixed Assets in Operation (Closing)	264,145	257,232	250,453	243,773
Average Net Fixed Assets in Operation	265,141	260,689	253,843	247,113

TABLE – 13

Regulatory Assets Base and Return on Assets - Power Stations

		FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
		Audited	Audited	Budgeted	Projected
Avg. Net Fixed Assets in Operation (at Carrying Cost)	(Mln Rs)	265,141	260,689	253,843	247,113
Less: Financing of Assets through Grant	(Mln Rs)	6,055	6,226	6,104	6,104
Avg Net Fixed Assets for Return Purpose	(Mln Rs)	259,086	254,462	247,738	241,009
Fixed Assets Financed By Debt/Equity					
Average Debt	(Mln Rs)	190,091	186,737	181,734	176,724
Average Equity	(Mln Rs)	68,995	67,725	66,004	64,285
Debt Equity Financing Ratio					
Debt	(%)	73%	73%	73%	73%
Equity	(%)	27%	27%	27%	27%
WACC					
Cost of Debt	(%)	14%	14%	14%	14%
Return on Equity	(%)	17%	10%	10%	10%
WACC	(%)	14.46%	12.61%	12.61%	12.61%
Return on Assets	(Mln Rs)	37,464	32,085	31,234	30,385

5. DEVELOPMENT PROJECTS

WAPDA was established in February 1958 (WAPDA Act 1958) for integrated and rapid development and maintenance of water and power resources of the country on unified and multipurpose basis. Since its inception, WAPDA has been developing the new power projects with multiple sources of financing.

As mandated, WAPDA is actively pursuing its development program. WAPDA's prospective projects include Dasu, Keyal Khwar, Tarbela 5th ext. Hydropower projects as well as Multipurpose Diamer Bhasha and Mohmand Dam. These Projects are also



WAPDA HYDROELECTRIC - TARIFF REVISION PETITION FY 2022-23

included in the Indicative Generation Capacity Expansion Plan (IGCEP) 2021-30 issued by NEPRA.

Dasu, Diamer Bhasha Dam, and Keyal Khawar HPP are already included in the Generation License of WAPDA whereas upon the direction of NEPRA Licensee Proposed Modification (LPM) seeking inclusion of Tarbela 5th Ext. and Mohmand Dam in the existing Generation License of WAPDA Hydroelectric has been filed on 28.02.2022 (**Annex-15**).

Diamer Bhasha Dam Project

Diamer Bhasha Dam Project is a multipurpose project having installed capacity of 4500 MW situated on Indus River near Chillas (Khyber Pakhtunkhwa & Gilgit-Baltistan). PC-I of DBD (Land Acquisition & Resettlement) was approved in 2015 and to date almost 90% land has been acquired for the project.

Certain preliminary works for upgradation of surrounding area and welfare of local community as per PC-I approved are also underway with Construction of Model Village at Harpan Das-50% complete, Construction of Cadet College at Darang Das-95% complete, Construction of Valley Roads-70% complete, and Confidence Building Measures Package-1&2 are 100% completed. Moreover, Project colony at Thor Valley is 90% complete.

PC-I of DBD Dam Part was approved in 2018 whereas, Main Works Contract was awarded to M/S Power China-FWO JV in May 13, 2020. The Contractor has been mobilized and work is in progress at dam site. Till now 4.80% physical progress has been achieved. PC-I of Power Generation Facilities of DBD has also been submitted to MoWR on 17.09.2021 which is under approval.

DBD a multipurpose dam project is the single largest infrastructure project in the history of Pakistan to date, having significant importance and impact on National Economy. Apart from substantial financial challenges associated with DBD, magnitude of development works and hard area location also entails massive logistics and engineering challenges. WAPDA is striving hard to explore conventional as well as out of box strategies and avenues for arrangement of funds commensurate with planned project development activities but there is still a long journey ahead, moreover, variation in estimated works and quantities also arise as an essential part of infrastructure projects. It may be acknowledged that implicit financing & technical hurdles of Mega DBD project are beyond the control of WAPDA which requires national level commitment and strenuous efforts for timely completion of DBD.

Dasu Hydropower Project

Dasu HPP Stage-1 having installed capacity of 2,160 MW is one of WAPDA's prominent project situated on River Indus. PC-I of Dasu HPP Stage-1 was approved in 2014. However, pace of work on project remained slow due to land acquisition issues which are beyond the control of WAPDA, since it is the sole responsibility of Provincial Govt. of KP/ District Administration of Kohistan Upper to acquire land and hand it over to WAPDA for implementation of the project as per Land Acquisition Act 1894. Resolution of land acquisition issues in 2019 took considerable time and efforts which has resulted in delay of project for almost three (03) years. To date almost 85% of the land required for the project has been acquired including the priority areas required for Main Civil Works. Remaining land falls in the reservoir area that does not affect the pace of the project,



WAPDA HYDROELECTRIC – TARIFF REVISION PETITION FY 2022-23

which is also expected to be acquired with in next few months. Overall Preparatory Works are almost 50% complete which include Project Colony, access Infrastructure and a dedicated 132 KV Dubair-Dasu transmission line.

The Main Civil Works Contract was awarded to M/s China Gezhouba Group Company (CGGC) and work on Dasu HPP Stage-I commenced on June 23, 2017 which was expected to be completed by June 2023. E&M Contract was awarded to M/s Power China-General Electronics JV in Feb 2021 with expected completion in March 2026. Pace of work on main civil works remained slow initially however, after resolution of land acquisition issues in 2019, work on the project was going on smoothly and gaining momentum amid COVID-19 Pandemic outbreak until July 14, 2021 when an unfortunate terrorist attack took place on a bus of Chinese Contractor staff resulting in several casualties and injuries which caused complete suspension of work for the next almost four months. After concrete efforts of WAPDA and GoP, M/s CGGC (Main Work Contractor) resumed the halted work on October 25, 2021, albeit in a phased manner and is expected to get fully mobilized during 1st half of 2022. This delay has badly impacted the construction schedule as the major milestone of River Diversion which was earlier scheduled in Nov-Dec 2021 has been slipped to Dec-2022 causing one-year delay. Overall Physical progress achieved is 12%.

Due to Land acquisition issues, COVID Pandemic, and terrorist incident which are all beyond the control of Wapda, the expected COD of Dasu Stage-1 HPP has been pushed till FY 2026-27. Accordingly, NEPRA is requested to also allow the extension in COD.

Keyal Khawar HPP

Keyal Khawar HPP has an installed capacity of 128 MW is located on Keyal Khwar Nallah of Indus River in Lower Kohistan District of Khyber Pakhtunkhwa.

The contract for civil works was awarded to M/S Sinohydro-Hajvairy JV which was terminated due to non-performance. NEPRA in its Tariff determination dated 05.04.2021 for FY 2020-21 has also disallowed ROI due to the fact that bidding process has been annulled and alternate financing arrangements after withdrawal of lender are not available.

Now, Re-Tendring of Civil and E&M contracts is under process and 3rd Revised PC-I amounting Rs.49,648.67 Million is cleared by MoWR and forwarded to Planning Commission for approval. The Donor Agencies have also been approached through EAD, who have expressed their interest to finance the project and enter into agreement(s) once 3rd Revised PC-I is approved. Till now, the project has achieved 10% physical progress.

Tarbela 5th Extension

Tarbela 5th Extension Hydropower Project has generation capacity of 1530 MW with three generating units of 510 MW each and is being constructed on Tunnel No. 5 of Tarbela Dam with approved PC-I of US\$ 807 million with following Financing Arrangements:

• World Bank + AIIB	US\$ 690 Million
• WAPDA	US\$ 109 Million
• NTDC	US\$ 8 Million

The project upon completion will provide 1.347 billion units of low-cost hydel electricity to the National Grid on the average every year. With completion of Tarbela 5th Extension



WAPDA HYDROELECTRIC – TARIFF REVISION PETITION FY 2022-23

Hydropower Project, installed capacity at Tarbela Dam will rise from 4888 MW to 6418 MW. The contract for E&M works has been awarded to JV of M/s Harbin Electric Intl and M/s Harbin Electric Machinery, while Transmission Line contact is undertaken by NTDC.

Mohmand Dam Hydropower Project

Mohmand Dam HPP with generation capacity of 800 MW is located on Swat River about 5 km upstream of Munda Head Works in Mohmand Tribal District, KP. The project was commenced on September 20, 2019 and the main works, contract was awarded to joint venture of M/S China Gezhouba Group Company (CGGC) and M/S Descon. Mohmand Dam is a multipurpose project and offer numerous benefits to the economy besides 700 MW of hydropower generation including flood mitigation 16737 acres of additional agriculture land, socio-economic uplift of people of the area. Land for the project is fully acquired and work on permanent access roads, Project Colony, Diversion & access Tunnels Spillway etc. are in Progress. The physical progress of the project is 15.18%.

Mangla & Warsak Rehabilitation

In order to secure and boost the life of present capacity of Mangla & Warsak Hydel Power Stations replacement, refurbishment and Up-gradation activities have been initiated as per the recommendations of the feasibility studies expenditures incurred on these activities have also been included in CWIP. Mangla Refurbishment project has been mainly financed through USAID Grant and AFD loan, while WARSAK Rehabilitation is being financed through AFD loan, Kfw loan, and Eu Grant. Despite COVID PANDEMIC restrictions during last two years. WAPDA managed to kept on moving with Mangla Refurbishment and Warsak Rehabilitation projects and achieve physical progress of 53% & 14% respectively.

Tarbela 4th Extension & Golen Gol HPPs

NEPRA Authority in its Tariff Determination dated 05.04.2021 for WAPDA Hydroelectric for FY 2020-21 disregard investment made post COD in T-4 and Golen Gol HPP for the purpose of computing WACC based return while observing that WAPDA has not submitted evidence that substantiates/justify such transactions.

In this regard it may be mentioned that, Tarbela 4th Extension Project has been designed to operate the powerhouse through raised intake structures of existing tunnel-4. Project was substantially completed on 30-06-2018 and Powerhouse was available for operation through existing lower intake of Tunnel-4 despite non-completion of raised intakes due to reservoir level constraints. Energy was generated through Lower intake during high flow season of 2018-19. Work on Raised intakes of Tunnel-4 was continued in parallel from June 2018 to 2022.

It is pertinent to mention that raising of existing intake of Tunnel-3 was also part of this project due to anticipated delta pile up in future. So raised intake will provide maximum energy in long run. Work is only possible during the low flow season when water recedes. During high flow season energy is generated. During the Year 2019-20 permanent plugging of lower intakes was completed. During 2020-21 trash racks were installed during low flow season. Presently work is being carried on removal of rock barriers around raised intakes. Remaining minor punch list items will be finished by the end of financial year 2022-23.

Golen Gol HPP having installed capacity of 108 MW was completed and transferred to Fixed Assets in Operation in FY 2018-19. Post COD expenses on Golen Gol HPP include payments in respect of leftover cases of affectees through concerned DC office, cases in



WAPDA HYDROELECTRIC – TARIFF REVISION PETITION FY 2022-23

Arbitration, and Retention Money are logical/ legitimate. Moreover, successive GLOF incidents post COD in the project area which are beyond the control of WAPDA also necessitates several rehabilitation and preventive works for restoration of full generation capacity of the project which are underway.

TABLE – 14

Investment in CWIP of Ongoing Development Projects	Yearly CWIP Investment (Mln Rs.)			
	2019-20	2020-21	2021-22	2022-23
DBD	57,760	15,237	15,500	41,537
Dasu	19,137	31,523	56,514	55,924
Keyal	172	213	1,084	2,950
Mohmand Dam	5,609	19,593	9,024	25,000
T-5	710	10,642	18,801	62,930
Mangla Rehabilitation	4,290	4,437	3,028	6,515
Warsak Rehabilitation	139	54	1,862	6,142
T-4	2,164	3,659	1,900	3,512
Golen Gol	550	282	2,700	3,400
Others	1,620	104	651	2,326

Expenses on various Inception / Feasibility study stage projects are clubbed under head "others".

6. REGULATORY ASSETS BASE OF HYDEL POWER PROJECTS

Regulatory Assets Base (RAB) for Development Projects has been calculated on Average Capital Works in Progress (CWIP) balances excluding Interest During Construction (IDC). Average RAB for CWIP has been calculated as per NEPRA decisions with following variables:

- Opening CWIP balances.
- Adding annual additional capital investment in under-development licensed power projects estimated on the basis of approved/ revised PSDP.
- Excluding annual IDC being period cost.
- Average of the resultant closing balance of CWIP and opening CWIP.

Moreover, as per NEPRA determined percentage for power sector, ROI of DBD @ 49% cost has been included in the instant tariff petition. Expenditures incurred for different projects through Grant were not included in RAB for Return purposes. Post COD expenses on T4 & Golen Gol HPP are legitimate and necessary therefore expenditure incurred during FY 2019-20 to FY 2022-23 are included in RAB.

While allowing "Provision for Future Development", NEPRA considers debt equity ratio of 80%:20% for power projects as benchmark instead of actual debt equity ratio. In compliance with NEPRA's above decision, in the current tariff petition, debt equity ratio for power projects has been claimed as per bench mark 80%:20% set by NEPRA.



WAPDA HYDROELECTRIC – TARIFF REVISION PETITION FY 2022-23

Return on RAB in respect of each Project is calculated exclusively at its respective Weighted Average Cost of Capital (WACC) which transpires from bench mark Debt-to-Equity Ratio of 80:20 contracted cost of debts and return on equity as per GoP decision. Cost of Mohmand Dam project incurred during FY 2022-23 from other than Grant has been included in the RAB.

Consolidated Average Regulatory Assets Base, WACC and ROI of Hydel Power Projects for FY 2019-20 & FY 2020-21 (Audited) and Budgeted for FY 2021-22 & FY 2022-23 using the NEPRA bench mark debt/equity ratio of 80:20, has been given in the table below. In addition to consolidated statement given below, Power project wise detail is also placed at **(Annex-16)**.

TABLE – 15

RAB for Hydel Power Projects

	(Min Rs)			
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
	Audited	Audited	Budgeted	Projected
Capital Work In Progress (Excl. IDC) Opening	110,006	162,634	220,602	353,947
Add: Investment During the Year	56,913	58,167	82,409	167,301
Less: CWIP Transferred to Fixed Assets	(4,285)	(198)	-	-
Capital Work In Progress (Excl. IDC) Closing	162,634	220,602	303,011	521,248
Average Capital Work in Progress	136,320	191,618	261,807	437,597

TABLE – 16

Regulatory Assets Base and Return on Assets - Power Projects

		FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
		Audited	Audited	Budgeted	Projected
Avg. Capital Work in Progress (Excluding IDC)		136,320	191,618	261,807	437,597
Less: Financing of RAB through Grant		23,368	47,803	56,171	104,169
Avg. Capital Work in Progress (For Return Purpose)	(Min Rs)	112,951	143,815	205,636	333,429
Fixed Assets Financed By:					
Average Debt	(Min Rs)	90,361	115,052	164,509	266,743
Average Equity	(Min Rs)	22,590	28,763	41,127	66,686
Debt Equity Financing Ratio					
Debt	(%)	80%	80%	80%	80%
Equity	(%)	20%	20%	20%	20%
WACC					
Cost of Debt	(%)	9.9%	9.8%	9.9%	10.3%
Return on Equity	(%)	17%	10%	10%	10%
WACC	(%)				



7. INCOME FROM ASSETS OTHER THAN FINANCIAL ASSETS

Actual other income derived from "assets other than financial assets" for the period from FY 2021-22 to FY 2022-23 against NEPRA determined for FY 2020-21. Other income during FY 2019-20 and FY 2020-21 has been taken as per the audited accounts whereas for FY 2021-22 & FY 2022-23 other income is assumed at the same level of FY 2020-21.

TABLE - 17

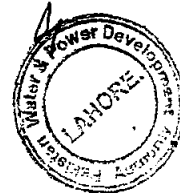
Mln Rs.

Income from Non-Financial Assets	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
	Audited	Audited	Projected	Projected
Amortization of Grant	246.283	244.678	244.678	244.678
Income from Guest Houses and Others	99.786	155.623	155.623	155.623
Sale of Scrap	0.286	117.653	117.653	117.653
Gain on disposal of Operating fixed assets	9.324	6.213	6.213	6.213
Income from non-utility operations	9.507	2.298	2.298	2.298
Sale of Stores	101.706	52.799	52.799	52.799
Miscellaneous Income	89.031	218.194	218.194	218.194
Total	555.923	797.458	797.458	797.458

8. REGULATORY REVENUE GAP

Regulatory Revenue Gap has been calculated based on the audited accounts from FY 2019-20 & FY 2020-21 and for FY 2021-22 is based on six months actual and six month projected. Figure. Regulatory Revenue Gap has mainly arisen due the following reasons:

- ❖ The prudently incurred actual O&M expenses were higher than estimates allowed by NEPRA while determining revenue requirement.
- ❖ Return & Depreciation on some classes/parts of Fixed Assets in operation were not allowed by NEPRA for want of supplementary details which are now provided.
- ❖ Actual additions to the Capital Work in Progress (CWIP) remained higher than the estimates.
- ❖ Late determination of tariff for FY 2020-21 coupled with its late notification by the GoP in Official Gazette render WAPDA Hydroelectric unable to apply the tariff whole agreement year.



WAPDA HYDROELECTRIC - TARIFF REVISION PETITION FY 2022-23

TABLE-18

CONSOLIDATED Revenue Gap	(Mln Rs)			TOTAL
	2019-20	2020-21	2021-22	
NEPRA Determined				
O&M	15,937	17,622	17,622	
Depreciation (At Carrying Cost)	6,826	6,869	6,869	
Ijara Rental	1,857	1,690	1,690	
Return on Investment	32,033	28,330	28,330	
Provision for Future Development	14,354	21,030	21,030	
Misc. Income	(698)	(698)	(698)	
Total	70,308	74,843	74,843	

Accrued as per Audited/Provisional

O&M	18,678	18,117	21,358
Depreciation (At Carrying Cost)	7,696	8,060	8,058
Ijara Rental	1,780	1,574	746
Return on Investment	37,464	32,085	31,234
Provision for Future Development	12,781	14,179	20,328
Misc. Income	(556)	(767)	(767)
Revenue Gap	-	-	-
	77,842	73,248	80,958

Revenue Gap

O&M	2,741	495	3,737
Depreciation (At Carrying Cost)	870	1,191	1,189
Ijara Rental	(77)	(116)	(944)
Return on Investment	5,431	3,755	2,904
Provision for Future Development	(1,572)	(6,851)	(702)
Misc. Income	142	(69)	(69)
Revenue Gap	-	-	-
	7,534	(1,595)	6,114

Total Revenue Gap

NEPRA det. Revenue (To be Billed)	70,308	74,843	74,843
Sales Revenue (Actually Billed)	62,764	64,348	71,466
Gap due to late notification	7,545	10,495	3,377
(+) Gap (Audited-NEPRA det)	7,534	(1,595)	6,114
Total Revenue Gap Accrued	15,079	8,901	9,491
(-) Rev. Gap provisionally determined	7,186	-	-
R. Gap Claim for this Petition	7,893	8,901	9,491
			26,285



HYDEL RELATED CHARGES

1 NET HYDEL PROFIT (NHP)

Article 161(2) of the Constitution of Pakistan 1973 provides for the payment of Net Hydel Profit to the Provinces. CCI is the competent forum for determining Sale Rate at Bus Bar of Hydel Power Stations. In its decisions dated 29.02.2016 and 16.12.2016, the CCI approved payment of NHP to the provinces @ Rs.1.10/Kwh and specifically instructed in its decision dated 24.11.2017 that the same rate may be continued as an interim rate for subsequent years till the finalization of revised rates.

NEPRA in its determination dated 13.11.2015, approved payment of NHP @ Rs.1.10 Kwh. *Whereas, 5% indexation provisionally allowed through tariff determination dated 22.11.2017 to increase of NHP rate from Rs.1.10/Kwh to Rs.1.155/Kwh, was subsequently withdrawn by the NEPRA Authority vide WAPDA tariff determination dated 05.04.2021, with the instruction that excess past payment made as a result of the application of 5% indexation be adjusted on yearly basis. The GoP notified the above NEPRA decision vide Notification dated 18.05.2021.*

GoKP filed a Motion for Leave for Review (MLR) dated 30.04.2021 against the above decision of NEPRA. After consideration of GoKP's contention, the above mentioned instructions contained in CCI's latest decision dated 16.12.2016 & 24.11.2017 (**Annex 17**) and detailed comments furnished by WAPDA vide letter dated 02.08.2021 (**Annex 18**), NEPRA Authority issued revised determination dated 23.08.2021 (**Annex 19**) and provisionally allowed two (02) separate rates for payment NHP to the provinces i.e. Rs.1.404/Kwh for power station situated in KPK and Rs.1.337/Kwh for power station situated in Punjab, with the following directions imparted at para-3 &4 of order:

Para-3: The GoKP (Petitioner) shall approach CCI to obtain clear guidelines on the issue of NHP and indexation (if any) within six months of notification of this decision, till such time.

- a) "NHP Regular" rates as stated shall be applicable. In case the Petitioner fails to obtain an explicit decision of CCI on NHP and its indexation (if any) then the "NHP Regular" shall be paid at Rs 1.10 per kWh to the provinces.
- b) "NHP Arrears" as stated shall be applicable. In case the Petitioner fails to obtain an explicit decision of CCI on NHP and its indexation (if any) then the "NHP Regular" shall be paid at Rs 1.10 per kWh to the provinces and no payment shall be charged on this account, however, for Gomal Zam HPP, "NHP Arrears" shall be paid @ Rs.454.646 per kW per month.

Para-4: Any excess payment made (due to application of 5% indexation) to the provinces as a result of failure of the Petitioner to obtain clear guidelines on NHP from CCI shall be adjusted in the next tariff determination of WAPDA Hydroelectric.

The GoP has not yet notified the said revised decision dated 23.08.2021 of NEPRA and 06 months' time limit stipulated in the above NEPRA decision has also expired. So far, GoKP has not produced/ obtained the explicit decision / new guidelines of CCI on the issue of NHP and indexation.

Therefore, payment of NHP at the uniform rate of Rs.1.10/kWh has been proposed on the generation of electricity of all HPSs of Khyber Pakhtunkhwa and Punjab, in accordance with the CCI's latest decision dated 24.11.2017, NEPRA determinations dated 05.04.2021 & 23.08.2021 and GoP notification dated 18.05.2021.



2 WATER USAGE CHARGES (WUC)

WAPDA Hydroelectric has been making payment of Water Usage Charges (**WUC**) to GoAJ&K @ Rs.0.15/kWh on the generation of Mangla Hydel Power Stations, in terms of clause 5.6 of the Mangla Dam Raising Agreement 2003, and Revised Order passed by NPERA at Sr.1 of the tariff determination dated 14.12.2017.

Subsequently, ECC in its decision held in case No.ECC 76/11/2019 dated 20-03-2019 notified vide MoWR, GoP Islamabad letter No.6(17)/2004-HP dated 28.03.2019 (**Annex-20**), decided that:

- i. Water Usage Charges (WUC) @ Rs.1.10/ Kwh should be allowed on Mangla HPP, NJHPP and any other future public sector power projects, to AJK at par with NHP paid to the provinces. Any future revision in the rate of NHP for provinces shall also apply to WUC for AJ&K.
- ii. WUC at the revised rate of Rs.1.10/ Kwh shall be paid prospectively only, once the recovery through tariff begins after tariff determination by NEPRA. This arrangement shall not have retrospective effect.

In order to implement the above ECC decision, WAPDA filed Tariff Modification Petition dated 28.11.2019 (**Annex-21**) for revision /enhancement of WUC rates payable to GoAJ&K at par with the rate of NHP payable to provinces. However, the said WAPDA request was not acceded to by NEPRA Authority, which observed in its decision /letter dated 23.07.2020 (**Annex - 22**) that payment of WUC to AJK is agreed in MoU signed at the time of Mangla Dam Raising Project @Rs.0.15/Kwh on generation of power from Mangla Power Station in line with the GoP Power Policy 2002, which has been accordingly incorporated for payment of WUC to AJ&K in the tariff of WAPDA hydroelectric. This warrants that if any change in rate is to be incorporated in WAPDA hydroelectric tariff, the underlying agreement i.e. Mangla Dam Raising Agreement has to be amended first and the same has also been stated in clause-ix of the above ECC decision dated 20-03-2019.

The revised WUC rate approved in ECC decision dated 20.03.2019, has been duly incorporated in 1st Amendment to the Mangla Dam Raising Agreement of 2003 and notified vide MoWR, GoP Islamabad's Memorandum No.6(17)/2004-HP dated 28.02.2022 (**Annex - 23**).

As the above NEPRA requirement has been fulfilled, therefore, payment of WUC on the generation of Mangla HPS, has been proposed @ Rs. 1.10/Kwh at par with the NHP payable to the provinces, as per clause 5.6 of the 1st Amendment to Mangla Dam Raising Agreement. As per ECC decision dated 20.03.2019, payment of WUC to GoAJ&K at revised /enhanced rate shall be applicable prospectively only, once the recovery through tariff begins after tariff determination by NEPRA and issuance of GoP notification.

NEPRA in its tariff determination for WAPDA Hydroelectric for FY 2020-21 allowed WUC rate of Rs.0.15 per kWh for generation from Mangla Power Station under hydel levies which was subsequently notified by GoP on 18.05.2021. WAPDA filed motion for recalculation on 08.04.2021 due to certain discrepancies in NEPRA determined tariff, consequently NEPRA revised its original decision dated 05.04.2021 and issued an amended decision on 07.06.2021. However, in NEPRA decision dated 07.06.2021 WUC rate was omitted in the hydel levies block which was accordingly notified by MoE (Power Division) on 18.10.2021 and presently applicable. WAPDA requested CPPA(G) to allow



WUC provisionally but CPPA(G) vide letter dated (**Annex- 24**) refused to allow in the absence of Govt. Notification. In order to bridge this gap, NEPRA is requested to allow WAPDA Hydroelectric to raise supplementary charges invoice for WUC at present rate of Rs.0.15/kWh on the electricity generated at Mangla Power Station from 18.10.2021 that is, the date of notification of Revised NEPRA tariff for FY 2020-21 till the date modified tariff for FY 2022-23 become applicable.

3 IRSA CHARGES

In the tariff determination dated 05.04.2021 of WAPDA hydroelectric, NEPRA determined IRSA Charges at the rate of Rs.0.005 per kWh for managing water for hydro power generation to be paid by WAPDA in terms of Ministry of Water & Power S.R.O. (1)/2011 dated 25th August 2011 (**Annex-25**) and S.R.O. (1)/2017 dated 10th Feb 2017 (**Annex-26**). Since there is no change in the rate of IRSA Charges made by the Federal Government, it is proposed that the present rate of IRSA charges may be continued for FY 2020-21.

4 REVENUE REQUIREMENTS HYDEL LEVIES FOR FY 2022-23

Revenue Requirements of Hydel Levies comprising Regular NHP, WUC and IRSA charges for FY 2020-23 has been projected as under:

Table-19

Hydel Levies

Regular

NHP- Govt. of KP	
NHP- Govt. of Punjab	
WUC Govt. of AJK	
Total	
IRSA	
Total Hydel Levies - Regular	

Existing NEPRA Determined for FY 2020-21	Requested in Tariff Petition for FY 2022-23
Mln.Rs	Mln.Rs
24,562	20,354
10,517	8,694
712	5,440
35,791	34,487
151	157
35,942	34,643



RELIEF SOUGHT

- 1- NEPRA is requested to approve the following revised Bulk Supply Tariff of WAPDA Hydroelectric power stations for FY 2022-23 and recommend to MoWR for notification in the Official Gazette.

Table-20**WAPDA Hydroelectric Tariff for FY 2022-23**

Sr.No.	Power Stations	Location/ Province	Capacity	NEO	Wapda Tariff			Hydel Levies Tariff		
					Variable Rate	Fixed Rate	Revenue Gap	NHP Regular	WUC	IRSA
			MW	GWh	Rs/kWh	Rs/kW/M	Rs/kW/M	Rs/kWh	Rs/kWh	Rs/kWh
1	Tarbela	KPK	3,478	11,957	0.037	554.87	27.25	1.100	-	0.005
2	Warsak	KPK	243	898	0.102	952.64	96.31	1.100	-	0.005
3	Duber Khawar	KPK	130	595	0.282	2,396.36	990.42	1.100	-	0.005
4	Allai Khawar	KPK	121	463	0.268	1,977.91	398.75	1.100	-	0.005
5	Khan Khawar	KPK	72	306	0.281	2,243.76	975.88	1.100	-	0.005
6	Jabban	KPK	22	136	0.252	2,819.40	(766.98)	1.100	-	0.005
7	Dargai	KPK	20	105	0.127	1,413.55	716.18	1.100	-	0.005
8	Kuram Garna	KPK	4	20	0.348	3,083.07	1,646.65	1.100	-	0.005
9	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
10	Tarbela 4th Ext.	KPK	1,410	3,840	0.148	993.03	604.03	1.100	-	0.005
11	Golen Gol	KPK	108	120	1.833	3,579.64	4,797.65	1.100	-	0.005
12	Gomal Zam	KPK	17	60	0.751	4,465.64	(222.54)	1.100	-	0.005
13	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
14	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
15	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
16	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
17	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
18	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
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21	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
22	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
23	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
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25	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
26	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
27	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
28	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
29	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
30	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
31	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
32	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
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38	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
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40	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
41	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
42	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
43	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
44	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
45	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
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47	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
48	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
49	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
50	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
51	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
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64	Chitral	KPK	1	3	1.330	7,095.68	9,090.45	1.100	-	0.005
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- 2- Allow WAPDA Hydroelectric to raise supplementary charges invoice for WUC at rate of Rs.0.15/kWh on the electricity generated at Mangla Power Station from 18.10.2021 till the date modified tariff for FY 2022-23 become applicable.


General Manager Finance (P)
WAPDA, Wapda House, Lhr.

Detail of Annexures - Tariff Modification Petition FY 2022-23

Annex. No:	Description
1	PPA with NTDC later Novated to CPPA(G) on 01.10.2015
2	Authority Resolution dated 30.04.2022
3	Revised Order of NEPRA dated 07.06.2021
4	GoP Official Gazette Notification of Tariff dated 18.10.2021
5	WAPDA's letter for Outage hours vide No.9653-54 dated 07.06.2021
6	WAPDA Authority Notification to finalize 4th amendment in PPA dated 21.03.2022
7	Letter regarding CPPA(G) completed capacity testing of Power Plants
8	Power Station wise Revenue Requirement
9	Power Station Wise O&M Costs
10	Actuarial Valuation Reports FY 2019-20 & 2020-21
11	Power Station wise Maintenance schedule and Technical data
12	Power Station wise detail of depreciation Charges of Transmission Equipment
13	Power Station wise detail of Depreciation Charges
14	Power Station wise RAB
15	WAPDA Request letter for LPM Dated 28.02.2022
16	Power Project wise RAB
17	CCI decision dated 16.12.2016 & 24.11.2017
18	WAPDA comments vide letter dated 02.08.2021
19	NEPRA revised determination dated 23.08.2021
20	ECC decision case no.ECC/76/11/2019 dated 20.03.2019 notified vide MoWR letter no.6(17)/2004-HP dated 28.03.2019
21	WAPDA Tariff Modification Petition dated 28.11.2019
22	NEPRA decision/letter dated 23.07.2020
23	Revised WUC rate notified vide MOWR Memorandum No.6(17)/2004-HP dated 28.02.2022
24	CPPA(G) letter dated 09.05.2022
25	MOWR S.R.O. (1)/2011 dated 25.08.2011
26	MOWR S.R.O. (1)/2011 dated 10.02.2017
27	Annual Accounts FY 2019-20, FY 2020-21, & Interim Accounts Dec. 31st, 2021.



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27	Annual Accounts FY 2019-20, FY 2020-21, & Interim Accounts Dec. 31st, 2021.

Annexure - 1

THE PAKISTAN WATER AND POWER DEVELOPMENT AUTHORITY

AND

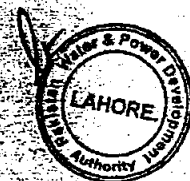
NATIONAL TRANSMISSION AND DESPATCH COMPANY LIMITED

AND

CENTRAL POWER PURCHASING AGENCY (GUARANTEE) LIMITED

AMENDMENT NO 3 TO THE
POWER PURCHASE AGREEMENT DATED 24TH JANUARY 2011

MADE AT ISLAMABAD,
ISLAMIC REPUBLIC OF PAKISTAN
ON 21 OCTOBER 2015



2/4

THE AMENDMENT NO 3 TO POWER PURCHASE AGREEMENT DATED 24th JANUARY 2011 (this "Agreement") is made as of the October 24, 2013 by and between

The Pakistan Water & Power Development Authority, a statutory corporation established pursuant to the Pakistan Water & Power Development Authority Act of 1958 and authorized licensee of generating hydroelectric power with its principal office located at WAPDA House, Lahore (herein referred to as the "WAPDA" which expression shall, where the context so permits, include its successors in interest and permitted assigns);

AND

National Transmission and Despatch Company Limited, a public limited company incorporated under the laws of Pakistan, with its principal office at WAPDA House, Shahrah-e- Quaid-e- Azam, Lahore, Pakistan (herein referred to as the "NTDC" which expression shall, where the context so permits, include its successors in interest and permitted assigns);

AND

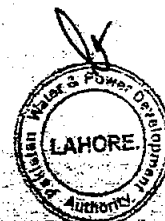
Central Power Purchasing Agency (Guarantee) Limited, a company incorporated under the laws of Pakistan, with its principal office at 6th Floor, Shaheed-e-Millat Secretariat, Jinnah Avenue, Blue Area, Islamabad (herein referred to as the "CPPA-G" which expression shall, where the context so permits, include its successors in interest and permitted assigns).

(The WAPDA, NTDC and the CPPA-G are hereinafter referred to individually as a "Party" and collectively as the "Parties").

RECITALS:

WHEREAS:-

1. NTDC and WAPDA entered into the Power Purchase Agreement dated 24th January 2011 (the "PPA") for the sale and purchase of Installed Capacity and Net Electrical Output of all WAPDA Power Stations, and any future power stations that may be developed and commissioned by WAPDA, pursuant to the terms and conditions set forth therein, including NTDC provision of transmission and system operation services.



1. NTDC is a government-owned company, incorporated under the Companies Ordinance, 1984 vide Certificate of Incorporation No. 00600 of 1998-99 and operating under transmission license no TL/01/2002 dated 31-12-2002, as amended from time to time (the "NTDC Transmission License"), issued by the National Electric Power Regulatory Authority ("NEPRA"), in terms of which the NTDC Transmission License allowed the following operations to NTDC:

a. Market Operations, i.e.:

(i) Central Power Purchasing Agency ('CPPA'); and

(ii) Contract Registrar and Power Exchange Administrator ('CRPEA'),
and

b. System Operations, i.e.:

(i) System Operator (SO); and

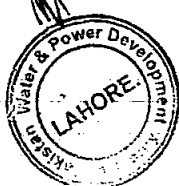
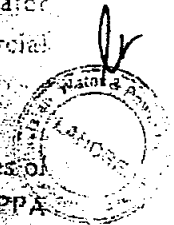
(ii) Transmission Network Operator (TNO).

3. CPPA-G is a government-owned guarantee limited company, incorporated under the Companies Ordinance, 1984 vide Certificate of Incorporation No. 0068608 of 2009.

4. In view of the Government of Pakistan Policy (GOP Policy), the Market Operations and System Operations of NTDC have been bifurcated and the Market Operations have been vested in CPPA-G, in consequence of which NTDC and CPPA-G have entered into an Administrative Agreement on 3rd June 2015 ("the Administration Agreement") in accordance with which the CPPA-G will perform and under take the Market Operations with respect to the Portfolio PPAs described in the Schedule II to the Administration Agreement, whereas the function of System Operations will remain with NTDC.

5. Pursuant to recent Power Sector Reforms regarding operationalization of CPPA-G as Market Operator, the Transmission Licence of NTDC stands modified. Since the CPPA-G has become functional and has entered into Power Purchase and Agency Agreement dated 3rd June 2015 ("PPAAs") contractual arrangement with the ex-WAPDA DISCOs for power procurement on their behalf and CPPA-G has been authorized as Market Operator by NEPRA hence is now solely responsible for implementing and administering the power market in accordance with Market Operator (Registration, Standards and Procedures) Rules, 2015 and the Commercial Code.

6. Pursuant to Section 16.2 of the PPA, WAPDA and NTDC as the parties of the PPA intend to amend the PPA and add CPPA-G as a party to the PPA.



IN WITNESS WHEREOF, the Parties have executed and delivered this Agreement in Islamabad, Pakistan, as of the date first above written, in supersession of Amendment Agreement signed in Islamabad on 20th May 2015, 2015.

Central Power Purchasing Agency
(Guarantee) Limited

National Transmission and Despatch
Company Limited

By: [Signature]
Title: Chief Executive Officer

By: [Signature]
Title: Managing Director

The Pakistan Water & Power Development Authority

By: id. h. Mustafiz
Title: MEMBER (POWER) LA-10

Witness: _____
Name: _____

Witness: _____
Name: _____



Annexure – 2

G.M.F. (Power)

Diary No: 7842

Dated 27/4/22



Member (Finance)
No. 3505
Date 28/4

Subject: - Authorization for Filing of Bulk Supply Tariff Petition for FY 2022-23 for Revision of Tariff for Generation from WAPDA Hydel Power Stations

1. WAPDA Hydroelectric is operating under Generation License GL (Hydel)/05/2004 granted by NEPRA in 2004 for 30 years for operation, maintenance and development of Hydel power resources in Pakistan, and sought approval of modification in its tariff from NEPRA.

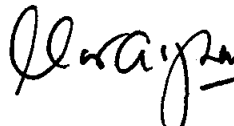
2. In this regard, last Tariff Modification Petition was filed by WAPDA on 29.06.2020, which was determined by NEPRA on 05.04.2021, subsequently NEPRA issued revised decision dated 07.06.2021 whereas the tariff is applicable from 18.05.2021. The Annual Revenue Requirement for FY 2022-23 has reasonably increased from that determined by NEPRA for FY 2020-21 (**Annex-I**) and in view of this a fresh Tariff modification Petition for FY 2022-23 has been prepared for submission to NEPRA for modification of tariff, as per NEPRA Tariff Standard & Procedure Rules, 1998. WAPDA has to nominate officers for finalizing the same with NEPRA.

3. WAPDA Authority is therefore requested to please allow GM Finance (Power) to file tariff modification petition in NEPRA for FY 2022-23. The Authority is also requested to authorize following officers of WAPDA to submit and sign individually or jointly, the documents necessary in support of this petition and appear before NEPRA and represent WAPDA Hydroelectric during proceedings of this petition: -

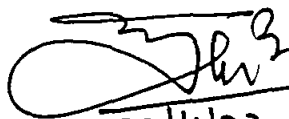
- i. General Manager Finance (Power) ✓
- ii. General Manager (Hydel Operation) ✓
- iii. General Manager (Hydel Development) ✓
- iv. General Manager (Hydro Planning) ✓
- v. General Manager (C&M) Water ✓
- vi. Director Legal ✓


GM Finance (Power) 27/4/2022


4. Member (Finance)


28/04/22

5. Member (Power)



28/4/22

6. Member (Water)


28/04/2022

7. Chairman (WAPDA)


29/4


28/4/22



Chairman WAPDA
Diary No. 1662
Date 29-4-22

Diary No. 1393
Dated 09.05.2022
WAPDA Secretariat

Annexure - 3

F/A-4

E-STAMP

737
پاکستان کے لیے
No: 7030



E-Stamp ID : PB-LHR-507DF608F8DE8A03
Stamp Type : Low Denomination
Amount : Rs 100/-

Description : AFFIDAVIT - 4
Applicant : SYED IRFAN HUSSAIN RIZVI[35202-2719285-9]
S/O : SYED SHABBIR HUSSAIN RIZVI
Address : LHR
Issue Date : 13-May-2022 9:37:42 AM
Delisted On/Validity : 20-May-2022
Amount in Words : One Hundred Rupees Only
Reason : FOR NEPRA
Vendor Information : Muhammad Yasir Yasin | PB-LHR-737 | Egeartan Road Lahore.

یہ تحریر شدہ دستاویز کے لیے قابل استعمال ہے۔

**BEFORE THE NATIONAL ELECTRIC POWER REGULATORY
AUTHORITY**

AFFIDAVIT

I, Syed Irfan Hussain Rizvi, General Manager Finance (Power) of WAPDA, 713 WAPDA House, Lahore being duly authorized representative/attorney of WAPDA Hydroelectric, hereby solemnly affirm and declare that contents of the accompanying petition/application # GMFP/ CPCC/ 4525/446 dated 14-05-2022 including all supporting documents are true and correct to the best of my knowledge and belief and that nothing has been concealed. I also affirm that all further documentation and information to be provided by me in connection with the accompanying petition shall be true to the best of my knowledge and belief.

DEPONENT

(Syed Irfan Hussain Rizvi)
General Manager Finance (Power)

Verification

Verified on oath this 14th day of May, 2022 that the contents hereof are true and correct to the best of my knowledge and belief and nothing has been concealed.

DEPONENT

(Syed Irfan Hussain Rizvi)
General Manager Finance (Power)

ATTESTED
OATH COMMISSIONER
DIST. COURT, LAHORE



Registrar

National Electric Power Regulatory Authority Islamic Republic of Pakistan

NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad
Ph: +92-51-9206500, Fax: +92-51-2600026
Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/R/ADG(Trf)/TRF-530/WAPDA-2020/28427-28430
June 7, 2021

Subject: Decision of the Authority in the matter of Motion for Recalculation filed by WAPDA Hydroelectric against the Tariff Determination of the Authority for FY 2020-21 issued on April 5, 2021 (Case No. NEPRA/TRF-530/WAPDA-2020)

Dear Sir,

Please find enclosed herewith the subject Decision of the Authority (03 Pages) in Case No. No. NEPRA/TRF-530/WAPDA-2020.

2. The Decision is being intimated to the Federal Government for the purpose of notification in the official Gazette pursuant to Section 31 (7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

3. The Order of the Authority's Decision is to be notified in the official Gazette.

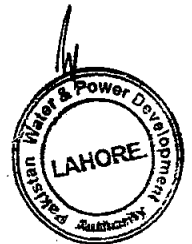
Enclosure: As above


07 06 21
(Syed Safeer Hussain)

Secretary,
Ministry of Energy (Power Division),
Government of Pakistan
'A' Block, Pak Secretariat,
Islamabad.

CC:

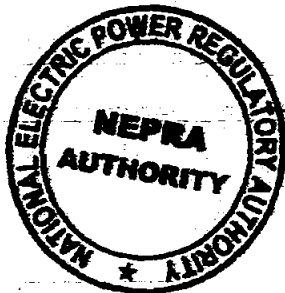
1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.
3. Secretary, Ministry of Water Resources, 'Attaturk Avenue (East), Sector G-5/1, Islamabad





**DECISION OF THE AUTHORITY IN THE MATTER OF MOTION FOR RECALCULATION FILED BY WAPDA
HYDROELECTRIC AGAINST THE TARIFF DETERMINATION OF AUTHORITY FOR THE FY 2020-21 ISSUED
ON APRIL 05, 2021**

1. WAPDA Hydroelectric ("the Petitioner") filed motion for recalculation on April 08, 2021 under rule 16(5) of NEPRA (Tariff Standards and Procedure) Rules, 1998 against the Tariff Determination of Authority issued on April 05, 2021 for the FY 2020-21.
2. WAPDA Hydroelectric vide subject motion for recalculation submitted that two hydropower projects namely Tarbela 4th extension and Golen Gol, included in the generation license of WAPDA Hydroelectric, were completed within the timeline as directed by NEPRA. However, the projects were transferred to operations in FY 2018-19. Accordingly, WAPDA requested half year ROI during FY 2018-19 in development phase upto COD, while remaining half year ROI has been claimed in operations as per normal practice. WAPDA Hydroelectric submitted that para 69 of the tariff determination shows that although NEPRA allowed transfer of T-4 and Golen Gol projects to operations in FY 2018-19, whereas inadvertently disallowed half year legitimate ROI on capital work in progress (CWIP) upto transfer of these projects. This according to the Petitioner, resulted into decrease in ROI of T-4 and Golen Gol amounting to Rs. 7,358 million in FY 2018-19. Keeping in view the above, WAPDA Hydroelectric requested that legitimate ROI on capital work in progress upto transfer of these projects into operations may be allowed.
3. The Authority considered the request of the Petitioner and noted that in the tariff determination for the FY 2017-18, the Authority directed it to ensure that the above mentioned projects are completed within the last quarter of FY 2018 i.e. in Apr-Jun 2018, beyond which the Petitioner was not be entitled to receive IDC and RoEDC on the cost of funds for these projects. The Petitioner in its tariff petition for the FY 2020-21 informed that the Hydel Power Stations of Tarbela 4th Extension and Golen Gol were timely completed during FY 2017-18 and after successful testing, it got transferred to operational assets during FY 2018-19. In-view of the foregoing, the Authority allowed ROI of these projects in development phase till FY 2017-18 beyond which the ROI on these projects was allowed in operations as per the normal practice. It is however noted that the ROI of these two projects in operation for the FY 2018-19 was claimed by the petitioner for half year accordingly the same was allowed by the Authority.
4. The Authority is of the view that the submission of the petitioner that the ROI on these projects should be allowed for a whole year is correct however allowing half of it in capital work in progress is not justifiable since as per previous decision of the Authority, these projects are considered to have been transferred in fixed assets by the end of FY 2018. Therefore, the Authority has decided to allow ROI on these two projects for the whole FY 2018-19 during operation phase.
5. The ROI for the complete FY 2018-19 of these two project in operations works out to be Rs. 12,562 million as against earlier allowed Rs. 6,052 million as tabulated below:





2/2

DECISION OF THE AUTHORITY IN THE MATTER OF
MOTION FOR RECALCULATION FILED BY WAPDA HYDROELECTRIC

Description	T-4	Golen Gol	Total
	2018-19		
Fixed Assets in Operations (Opening) (A) (Mln. Rs.)	62,051	20,144	
Total Additions/Deletions (B) (Mln. Rs.)	(1,660)	(341)	
Net Fixed Assets in Operations (Closing) (C) (Mln. Rs.)	60,391	19,803	
Average RAB (C= (A+C)/2) (Mln. Rs.)	61,221	19,974	
Less: Average Grant	-	(1,791)	
RAB for Return Purpose	61,221	18,183	
Debt: Equity	70:30	70:30	
Cost of Debt	14.92%	16.64%	
Cost of Equity	17.00%	17.00%	
WACC	15.54%	16.75%	
Revised ROI (Mln. Rs.)	9,517	3,045	12,562

ORDER

6. In accordance with Rule 16(5) of NEPRA (Tariff Standards & Procedure) Rules, 1998, the Authority hereby revise its order approved vide determination dated April 05, 2021 in the matter of Tariff Petition filed by WAPDA Hydroelectric for FY 2020-21 (Case No. NEPRA/TRF-530/WAPDA-2020) and allow WAPDA Hydroelectric (Petitioner) to charge the Central Power Purchasing Agency Guarantee Limited (CPPA-G) the following tariff of each plant at the bus bar of its hydroelectric power stations connected directly or indirectly to the transmission system of NTDC:





DECISION OF THE AUTHORITY IN THE MATTER OF
MOTION FOR RECALCULATION FILED BY WAPDA HYDROELECTRIC

Sr.No.	Power Stations	Variable Rate	Fixed Charges			Hydel Levies		
			Fixed Rate	Revenue Gap	Interest on Loans for NHP	NHP Regular	NHP Arrears	IRSA
		Rs/kVh	Rs/kV/M	Rs/kV/M	Rs/kV/M	Rs/kVh	Rs/kV/M	Rs/kVh
1	Tarbela	0.043	421.940	(425.917)	63.837	1.1000	-	0.005
2	Warsak	0.107	748.198	64.332	63.837	1.1000	-	0.005
3	Dubai Khawar	0.215	1,768.284	369.329	63.837	1.1000	-	0.005
4	Allai Khawar	0.215	1,508.871	523.789	63.837	1.1000	-	0.005
5	Khan Khawar	0.211	1,592.305	213.254	63.837	1.1000	-	0.005
6	Jabban	0.275	2,881.467	3,505.165	63.837	1.1000	-	0.005
7	Dargai	0.088	826.772	(587.876)	63.837	1.1000	-	0.005
8	Kuram Garhi	0.255	1,924.961	343.390	63.837	1.1000	-	0.005
9	Chitral	0.343	2,164.941	(4,020.787)	63.837	1.1000	-	0.005
10	Tarbela (HPP)	0.034	781.992	876.352	-	1.1000	-	0.005
11	Gomal Zam	0.314	2,446.539	2,225.457	-	1.1000	-	0.005
12	Gomal Zam	0.634	3,092.300	(470.671)	-	1.1000	454.646	0.005
13	Ghazi Brotha	0.079	777.899	434.090	366.499	1.1000	-	0.005
14	Chashma	0.191	1,524.435	1,403.294	366.499	1.1000	-	0.005
15	Jinnah HPP	0.267	1,521.280	1,113.603	366.499	1.1000	-	0.005
16	Rasul	0.157	895.550	(34.025)	366.499	1.1000	-	0.005
17	Nandipur	0.132	833.858	(1,222.819)	366.499	1.1000	-	0.005
18	Shadral	0.178	833.830	(790.848)	366.499	1.1000	-	0.005
19	Chicholdi	0.176	866.551	(870.882)	366.499	1.1000	-	0.005
20	Panala Khurd	0.342	1,831.918	(3,455.565)	366.499	1.1000	-	0.005
21	Mangla	0.067	715.090	41.611	-	-	-	0.005

7. The "Revenue Gap", "Interest on Loans for NHP" and "NHP Arrears" components of tariff as indicated above shall be applicable for a period of one year from the date of its notification by GoP, after which the tariff without these three tariff components shall be applicable.
8. The order is to be intimated to the Federal Government for notification in the official gazette under section 31 (7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

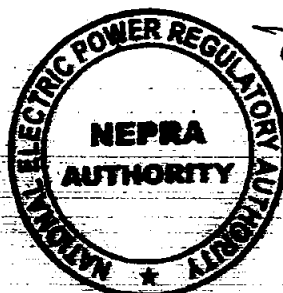
AUTHORITY

Rehmatullah Baloch
Member

Engr. Maqsood Anwar Khan
Member

Engr. Rafique Ahmed Shaikh
Member

Tauseef H. Farooqi
Chairman



07.06.21

HISTORY OF TARIFF - WAPDA HYDRO ELECTRIC

Serial No.	Category	Filing Date	Determination Date
1	Tariff Petition for Bulk Supply Tariff - 2003-04	02-05-2003	19-05-2004
2	Review Motion filed by WAPDA Hydro	04-06-2004	Rejected
3	Tariff Petition for Bulk Supply Tariff - 2005-06	11-05-2005	06-01-2006
4	Review Motion filed by WAPDA Hydro	18-01-2006	31-05-2006
5	Tariff Petition for Bulk Supply Tariff - 2007-08	16-03-2007	27-06-2007
6	Tariff Petition for Bulk Supply Tariff - 2009-10	06-10-2009	17-09-2010
7	Tariff Petition for Bulk Supply Tariff - 2011-12	27-05-2011	10-11-2011
8	Tariff Petition for Bulk Supply Tariff - 2013-14	01-04-2013	18-12-2013
9	Review Motion filed by WAPDA Hydro	26-12-2013	27-06-2014
10	Tariff Petition for Bulk Supply Tariff - 2015-16	28-04-2015	13-11-2015
11	Review Motion filed by WAPDA Hydro	23-11-2015	08-01-2016
12	Petition Net Hydel Profit 2015-16	11-04-2016	25-05-2016
13	Review Motion filed by WAPDA Hydro	03-06-2016	19-10-2016
14	Petition Bulk Supply 2017-18	22-03-2017	22-11-2017
15	Review Motion filed by WAPDA Hydro	30-11-2017	14-12-2017
16	Tariff Modification Petition for Net Hydel Profit / Water Use Charges to AJK From Mangla Power Station	28-11-2019	23-07-2020
17	Tariff Petition for Bulk Supply FY 2020-21	30-06-2020	05-04-2021
18	Motion for Recalculation	03-05-2021	07-06-2021
19	Review Motion filed by WAPDA Hydro	03-05-2021	23-08-2021