ORIGINAL

NAME OF LICENSEE: PAKISATN WATER AND POWER DEVELOPMENT AUTHORITY

LICENSE NO. GL (HYDEL) /05 / 2004

PETITION: PETITION FOR REVISION OF TARIFF FOR FY 2020-21 FOR BULK SUPPLY OF POWER FROM WAPDA HYDEL POWER STATIONS.

PAKISTAN WATER AND POWER DEVELOPMENT AUTHORITY

Telephone # : 99202522
99202211/ 2713
Fax :99202005

General Manager Finance (P)
WAPDA, 713 – Wapda House
Lahore

No.GMF/CPCC/4525/703

Dated: 29 / 06 / 2020

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

Subject: **BULK SUPPY TARIFF PETITION – WAPDA HYDROELECTRIC FOR FY 2020-21**

Please find attached three sets of Bulk supply Tariff (BST) petition in respect of WAPDA Hydroelectric for FY 2020-21 for sale of power to NTDC/CPPA under section 3(1) of the NEPRA Tariff Standards and Procedures Rules 1998, along-with the affidavit and a cheque # 1772423675.....Dated 29 - 06 -2020 amounting to Rs. 1713408..(after deduction of tax Rs 148992..) as NEPRA fee.

(Naveed Asghar Ch.)
General Manager Finance (P)

Cheque No 1772423675

0208-WAPDA HOUSE BRANCH
LAHORE-SHAHRAH-E-QUAID-E-AZAM

Date 29062020

Pay National Electric Power Regulatory Authority

Rupees One Million Seven Hundred Thirteen Thousand Four Hundred Eight only/- PKR 1,713,408/-

PK44 MUCB 0020 8030 1000 0028
G.M.FINANCE POOL ACCOUNT WAPDA

Please do not write below this line.

Signature

⑈7242367 5⑈0620208⑆00208030⑆100000028⑈000⑈

NAME OF LICENSEE: PAKISATN WATER AND POWER DEVELOPMENT AUTHORITY

LICENSE NO. GL (HYDEL) /05 / 2004

PETITION: PETITION FOR REVISION OF TARIFF FOR FY 2020–21 FOR BULK SUPPLY OF POWER FROM WAPDA HYDEL POWER STATIONS.

Pakistan Water & Power Development Authority LAHORE.

TABLE OF CONTENTS

Pakistan Water & Power Development Authority LAHORE

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 bulk power sale tariff determined at the bus bar of the hydel power stations from NEPRA from time to time 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.

Pakistan Water & Power Development Authority LAHORE

The periodic tariff of WAPDA is determined by NEPRA based upon the projected revenue requirement for a particular financial year/ period including 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.

Bulk supply 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 Power Wing Hydroelectric 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 the project going forward towards completion at the actual weighted average cost of capital (**WACC**) with 17% return on equity. The return varies based on WACC and average level of Regulatory Assets Base (**RAB**). Under this mechanism, electricity consumer pays Return on Assets (**ROA**), covering Interest during Construction (**IDC**) and Return on Equity during Construction (**ROEDC**) during construction phase.

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.

Pakistan Water and Power Development Authority LAHORE.

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.

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 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 as per the allowance permitted in PPA. Further, in order to secure and boost the life of present installed capacity of Tarbela, Mangla & Warsak Hydel power stations replacement, refurbishment, up-gradation and expansion activities have been initiated as per the recommendations of the feasibility studies 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 NEPRA determinations.

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

Pakistan Water & Power Development Authority LAHORE

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 NEPRA is also carried out by a reputable audit firm of Chartered Accountants. In this regard Annual accounts of WAPDA Power Wing Hydroelectric for FY 2017-18 & FY 2018-19 were audited by KPMG.

Pakistan Water & Power Development Authority LAHORE.

THE PETITION

Authorization

This petition is being filed for the determination of Bulk Supply Tariff for FY 2020- 21 through General Manager Finance (Power) WAPDA who has been duly authorized to sign and file this petition by the WAPDA Authority vide resolution dated 25th June, 2020 **(Annex-2)**. In the said resolution following officers have 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 (C&M) Water
4. Director Law.

Pakistan Water & Power Development Authority LAHORE

STATEMENT OF COMPLIANCE

1. Order of NEPRA

As per para-6 of revised Order 1~3 of National Electric Power Regulatory Authority in the Motion for Leave for Review for FY 2017-18 dated December 14, 2017 is as under:

1. *Subject to adjustment on account of determination of Net Hydel Profits, WAPDA Hydroelectric (Petitioner) is allowed to charge the Central Power Purchase Agency Guarantee Limited (CPPA-G), the following tariff* **(Annex-3)** *of each plant at the bus bar of its hydroelectric power stations connected directly or indirectly to the transmission system of NTDC.*
2. *The tariff with Revenue Gap/prior year adjustment as indicated above, shall be applicable for a period of one year from date of its notification by GoP, after which the tariff without Revenue Gap/prior year adjustment shall be applicable.*
3. *Any over/under recovery of cost/revenue requirement due to factors beyond control of the petitioner will be adjusted after due consideration by the Authority, at the time of next tariff determination.*

The above NEPRA determined tariff was notified by the GoP in the Official Gazette on 23-02-2018 (**Annex-4**) and tariff become applicable.

2. Modification of Relending Rates

NEPRA at para-77 of its Tariff Determination of WAPDA (Hydroelectric) for FY 2017-18 dated: 22.11.2017 desired WAPDA to submit summary to the GoP for modification of the relending rates at actual terms and conditions available to GoP to benefit the electricity consumers.

After implementation of NEPRA order w.e.f. 23rd February 2018, WAPDA requested its line ministry i.e. Ministry of Water Resources (MOWR) to approach Economic Affairs Division, GoP for soliciting approval of ECC for revision/ modification of relending policy for WAPDA and on lending of Foreign Loans/ Credits at actual terms and conditions available to GoP in line with the policy for Provincial Governments vide letter No.35/DFHD/2018/Relending Policy/Vol-IV/20 dated: 18.07.2018 **(Annex-5)** followed by reminders. In due course, MOWR vide letter 1(1)/2015-HP dated: 07.01.2020 **(Annex-6)** has also requested EAD for revision of the interest rates for WAPDA.

WAPDA is actively pursuing the revision/ modification of relending policy in close collaboration with the MOWR and is hope full of positive outcome in this regard.

3. Disallowance of DBD Cost in CWIP for want of Cost Allocation between Water and Power Sector

NEPRA at para-58 of its Tariff Determination of WAPDA (Hydroelectric) for FY 2017-18 dated: 22.11.2017 has disallowed the Return on Investment made in DBD due to non-availability of approved allocation of cost between Water and Power Wing.

It may be mentioned that Diamir Basha Dam (DBD) Project is included in the Generation License of WAPDA Hydroelectric since 2015. In the last Tariff Petition of WAPDA Hydroelectric, NEPRA authority was informed, that considering the significance and quantum of the DBD project, Federal Government has strategically decided to develop DBD in stages and that Ministry of Water & Power vide its letter dated 1st December 2016 **(Annex-7)** on the Financing Strategy for Diamir Basha Dam, has directed WAPDA to submit separate updated PC-Is for dam part and power generation. However, at that time updated PC-Is were under preparation.

Later on, as per the guidelines of Federal Government, WAPDA after the approval of PC-I covering Acquisition of Land and Resettlement, prepared updated PC-I for Dam Civil Works which was also approved by Federal Government. The 2nd Revised PC-I for the Land Acquisition and Resettlement has been approved on 30.04.2020 by ECNEC at rationalized cost of Rs.175 billion **(Annex-8)**, whereas, PC-I for Dam Civil Works has been approved at Rs.480 billion **(Annex-9)**. As such total approved update cost of DBD Dam part is Rs.655 billion. The updated PC-I for Power generation part attributable solely to Power Sector will be submitted for the approval subsequently.

For Acquisition of Land and Resettlement, Federal Government has approved to provide Cash Development Loans (CDL) and approved to finance part of Dam and associated expenditures as grant being Water Sector costs, whereas, it was approved that WAPDA will arrange the cost of Civil works including water ways i.e. intake, tunnels etc. required for power generation as self-sources (equity) and/or local & foreign loans.

WAPDA has repeatedly requested Federal Government to convert the amount of CDL into grant but the issue is still unresolved. The financing ratio of approved updated cost of LA&R Dam Civil works of DBD i.e. Dam part of DBD Project, in line with Federal Government approval works out as **64%** to Power Sector and **36%** to Water Sector as shown in the table below.

TABLE-1

	Updated Cost [Bln Rs.]	Allocation of Cost %age
Dam Part		
Acquisition of Land and Resettlement	175	
Dam and Civil Works	480	
Total Updated Cost	**655**	
Financing/ Allocation of Cost		
Water Sector		
Federal Government Grant	**238**	**36%**
Power Sector		
Federal Government CDL	175	
WAPDA	242	
Total	**417**	**64%**

The work to-date has been done in respect of Dam part and the instant petition has been structured accordingly as the power generation part has still to take effect.

Grounds of Petition

The instant Petition has been structured according to the tariff methodology adopted by NEPRA for WAPDA Power Wing Hydroelectric. In its last tariff determination for FY 2017-18, while calculating the revenue gap, NEPRA trued-up actual figures of audited accounts for FY 2015-16. In the instant tariff petition, projected Revenue Requirements of WAPDA-Hydroelectric for FY 2020-21, has been worked out on the basis of audited accounts for FY 2016-17 to FY 2018-19 and eight (8) months actual and last four (4) months (Jan-Jun) projected for FY 2019-20. The significant changes involved in projected Revenue Requirement for FY 2020-21 which formed the basis for this petition are as under:

1. Increase in Regulatory Assets Base (RAB) due to capital expenditures on rehabilitation/ replacement of aged generation plants as well as due to capital investment in the under-development hydropower projects.
2. ECNEC has approved 2nd Revised PC-I for Acquisition of Land and Resettlement for Rs.175 billion on 30-04-2020 whereas, PC-I for Dam Civil Works has been approved at Rs.480 billion. As such total approved update cost of DBD Dam part is Rs.655 billion. The financing ratio of approved updated cost of LA&R and Dam Civil works/ Dam part of DBD Project in line with Federal Government approval works out as **64%** to Power Sector and **36%** to Water Sector. Therefore, cost incurred on DBD has been accordingly included in the RAB.
3. Projected increase in O&M cost against O&M determined by NEPRA for FY 2017-18.
4. Increase in Depreciation charges due to completion and transfer of Tarbela 4th Ext. and Golen Gol hydropower projects in operation.
5. Change in Miscellaneous Income.
6. Arising of Regulatory Revenue Gap for the period from FY 2016-17 to FY 2019-20.
7. Recovery of mark up on loans taken on the directions of GoP for payment of regular/arrears of NHP to the Provinces.

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. The Generation License was subsequently modified by NEPRA on 9th January 2015 containing 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, including two (2) projects; 1,410 MW Tarbela 4th Extension and 108 MW Golen Gol Hydropower which started commercial operation during FY 2018-19.

Projected generation for FY 2019-20 is based on ten months actual and two months projected generation, whereas generation for FY 2020-21 has been forecasted considering the hydrology situation. Power Station Wise Generation plan is tabled bellow:

TABLE-2

Sr.No.	Hydel Power Station	Installed Capacity	Net Generation (Gwh)					
		MW	2015-16 (Actual)	2016-17 (Actual)	2017-18 (Actual)	2018-19 (Actual)	2019-20 (Projected)	2020-21 (Projected)
1	Tarbela	3,478	15,932	14,959	13,112	10,589	10,800	10,800
2	Warsak	243	917	981	913	1,000	1,094	774
3	Duber Khawar	130	653	586	511	592	600	595
4	Allai Khawar	121	568	396	275	461	449	463
5	Khan Khawar	72	36	195	167	233	256	299
6	Jabban	22	137	123	104	135	135	135
7	Dargai	20	114	105	95	109	99	89
8	Kuram Garhi	4	23	18	17	14	16	17
9	Chitral	1	4	4	3	4	4	4
10	Tarbela 4th Ext.	1,410	-	-	-	2,489	5,234	3,825
11	Golen Gol	108	-	-	-	116	185	444
	Total KP	5,609	18,384	17,366	15,199	15,742	18,872	17,445
12	Ghazi Brotha	1,450	6,644	6,808	6,364	6,476	6,600	6,600
13	Chashma	184	891	885	751	762	762	800
14	Jinnah HPP	96	290	286	224	219	172	298
15	Rasul	22	93	83	63	69	61	61
16	Nandipur	14	39	41	43	35	42	42
17	Shadiwal	14	25	30	25	28	28	31
18	Chichoki	13	33	33	31	28	31	31
19	Renala Khurd	1	1	2	2	2	2	3
	Total Punjab	1,794	8,016	8,168	7,503	7,620	7,698	7,866
20	Mangla	1,000	6,746	5,257	4,073	3,803	3,995	4,744
21	Gomal Zam	17	5	6	-	32	50	50
	Total AJK/FATA	1,017	6,751	5,263	4,073	3,835	4,045	4,794
	Total	8,420	33,151	30,797	26,775	27,196	30,615	30,104

1. COMPONENTS OF REVENUE REQUIREMENT

Revenue Requirement has been calculated based upon the audited financial statements from FY 2016-17 to FY 2018-19, whereas Revenue Requirement for FY 2019-20 has been worked out on the basis of actual expenses for the first eight (8) months and forecasted expenses during the remaining four (4) months. Revenue Requirement for FY 2020-21 has been projected according to the rationale of each of the component as explained below. It is further submitted that besides the consolidated schedules of O&M, Depreciation, Regulatory Assets Base, WACC and Return on Investment, power station wise detail is also appended at **(Annex-10)**.

2. O&M EXPENSES

The O&M expenses are classified into three broad categories i.e. Employees Cost, Repair & Maintenance and Administration Cost as under:

TABLE-3 (Mln. Rs)

	2016-17	2017-18	2017-18	2018-19	2019-20	2020-21
	Audited	NEPRA Det	Audited	Audited	Projected	Projected
Employees Cost	7,724	9,834	9,588	10,967	12,952	13,277
Repair& Maintenance (R&M)	886	1,773	1,317	927	2,016	2,117
Administrative Expenses	3,182	2,485	4,260	8,241	4,111	4,330
Total	11,792	14,092	15,165	20,136	19,079	19,724

2.1 EMPLOYEES COST

The employees cost is further sub classified into following accounts:

TABLE-4 (Mln. Rs)

	2016-17	2017-18	2017-18	2018-19	2019-20	2020-21
	Audited	NEPRA Det	Audited	Audited	Projected	Projected
Salaries and Wages	3,399	4,124	3,974	4,313	5,155	5,412
Employees Benefits	193	895	1,122	798	1,355	1,423
Post Retirement Benefits	4,132	4,815	4,493	5,857	6,442	6,442
Total	7,724	9,834	9,588	10,967	12,952	13,277

Employees Cost includes:

i) Employees' salaries & wages from FY 2016-17 to FY 2018-19 are requested on the basis of audited financial statement. For FY 2019-20 Salaries and Wages have been worked out on the basis of actual expenses for the first eight (8) months and forecasted expenses during the remaining four (4) months. Salaries and Wages for FY 2020-21 are projected on the basis of sanctioned manpower strength while taking into consideration an increase of 5% over FY 2019-20 to cater for annual increments;

ii) Similarly Employees benefits comprising different allowances are projected for FY 2020-21 with 5% increase over FY 2019-20, and

iii) Employees Retirement Benefits consist of Pension, Medical and Electricity benefits based upon Actuarial Valuation Report as per Projected Unit Credit "PUC" Cost method for the active/serving employees in line with IAS-19 (Employee Benefits).

Employee's retirement benefits from FY2016-17 to FY 2018-19 are as per Actuarial Valuation Report and audited financial statements, whereas Retiring Benefits for FY 2019-20 have been projected with 10% increase over the audited figure of FY 2018-19. Due to non-availability of actuarial valuation report for FY 2020-21, the retirement benefit for FY 2020-21 have been kept at the level of provisional figure of FY 2019-20 which will be trued-up in the succeeding tariff petition. Actuarial Valuation Report of WAPDA Hydroelectric NEPRA regulated business, for FY 2017-18 & FY 2018-19 has been attached to this petition **(Annex-11)**.

2.2 REPAIR & MAINTENANCE COST

The repair and maintenance cost has been sub-classified as under:

TABLE-5 (Mln. Rs)

	2016-17	2017-18	2017-18	2018-19	2019-20	2020-21
	Audited	NEPRA Det	Audited	Audited	Projected	Projected
Fuel Charges	24	57	28	30	60	63
Repair and Maintenance	804	1,454	1,081	832	1,678	1,762
Insurance	55	51	53	55	75	78
Consultancy	3	211	156	10	203	213
Total	886	1,773	1,317	927	2,016	2,117

Most of the Power Generation Plants, Civil Structures and Buildings of WAPDA Hydroelectric are very old and periodic repair & maintenance is necessary to ensure their smooth running. Repair and Maintenance expenses are projected to carryout daily, weekly and annual preventive routine repair & maintenance of Power Generation and General Plant & Assets as well as Civil structures & other Physical Properties scheduled for proper up-keeping of these Fixed Assets and to cater with the effect of inflation.

WAPDA Hydroelectric has managed plant availability factor through timely periodic (Annual/Bi-annual) preventive maintenance. Routine Repair and Maintenance "R&M" of all Hydel Power Stations has been planned to be carried out during FY 2020-21 in accordance with the recommendations of the manufacturers with in the maintenance hours allowed in the PPA.

Station-wise schedules containing technical data are appended as **(Annex-12)** of the Petition.

Pakistan Water & Power Development Authority LAHORE

2.3 ADMIN COST

Admin Cost comprises of following main components:

TABLE-6 (Mln. Rs)

	2016-17	2017-18	2017-18	2018-19	2019-20	2020-21
	Audited	NEPRA Det	Audited	Audited	Projected	Projected
Dams and Hydrology Monitoring Cost	857	478	709	944	944	944
Survey and Experiment	689	423	1,563	330	454	477
Power, Gas and Water	291	281	302	358	412	432
Management/Authority Overheads	784	636	1,182	1,008	1,129	1,186
Vehicle Running Expenses	188	187	199	217	354	372
NEPRA Fees	97	206	102	126	144	151
Other Operating Expenses	277	273	203	5,258	674	768
Total	3,182	2,485	4,260	8,241	4,111	4,330

Administration costs which mainly include Management charges, security contracts, vehicle running costs, hydrology monitoring and survey and experiment costs are projected with 5% increase over FY 2019-20 forecasted expenses. NEPRA at para-37 of its tariff determination for FY 2017-18 allowed Survey and Experiment cost for new power projects as part of O&M recognizing these expenses of recurring nature. Therefore, Rs.477 Mln has been proposed for Survey & Investigation during FY 2020-21.

In the above schedule of Admn. Cost, in FY 2018-19, other operating expenses includes Rs.4,576 mln on account of impairment loss on fixed assets recognized as a decrease in net carrying value of the fixed asset determined on revaluation of fixed assets.

Moreover, under other operating expenses Rs.60 mln have been included in Gomal Zam Dam in in FY- 2020-21 on account of local security agreement for posting of 89 number Badraggas, which was previously being paid by WAPDA out of PSDP allocation by the GoP. Keeping in view the Law and Order situation of the area local security arrangement of Badraggas on Gomal Zam Dam is still required during operation stage.

It is pertinent to mention here that in the last determination for FY 2017-18 WAPDA has proposed 10% escalation over preceding year's actual/audited admn expenses but in para-39 of its determination, NEPRA pointed out that the then inflation rate (average of 2016 & 2017) was reduced to 4.25% accordingly NEPRA assessed the reduced admn cost with 4.25% indexation. As per present statistics, inflation rate (average of 2019 & 2020) is 12% in view of the above, in the current petition, admn expenses for FY 2019-20 has been projected on the basis of actual expenses for the first eight (8) months and forecasted expenses during the remaining four (4) months and for FY 2020-21 admn expenses has been projected with an overall 5% increase over expenses during FY 2019-20.

3. DEPRECIATION CHARGE AND IJARA RENTALS

The depreciation charges calculated on the basis of historical/ carrying cost of Fixed Assets despite of revaluation adopted for Land, Building & Civil Works, Dam & Reservoir and Power Generation Plant Assets has been claimed for each year. Depreciation from FY 2016-17 to FY 2018-19 are as per audited financial statements, whereas increase in depreciation during FY 2018-19 is due to the full year depreciation of Tarbela 4th extension and Golen Gol hydel power stations.

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:

Land	0%
Building & Civil Works	2%
Power Generation Plant	2%-7%
Transmission Equipment	4%
Dam & Reservoirs	1%
General Plant Assets	10%
Office Equipment	10%
Furniture and Fixtures	10%-25%
Transportation Equipment	20%

Ijara Rentals relates to annuity based payments of Ijara Rentals of SUKUK-II and SUKUK-III companies for different units of Tarbela Hydel Power Station as per agreed schedules. SUKUK-II has been redeemed during FY 2017-18. In FY 2019-20 & FY 2020-21 Ijara Rental has been taken as per terms of Ijara Rental Agreements of SUKUK III.

	Profit Rate	Tenor	Grace Period	Repayment
SUKUK-II	6 M KIBOR (-) 0.25%	10 years	4 years	6 years
SUKUK-III	6 M KIBOR + 1.75%	8 years	1 years	7 years

Consolidated schedule of proposed charge of depreciation and Ijara Rentals for FY 2019-20 & FY 2020-21 is given in the table below, however power station wise detail is also given at **(Annex-10).**

TABLE- 7

(Mln Rs)

	2016-17 (Audited)	2017-18 (NPRA Det)	2017-18 (Audited)	2018-19 (Audited)	2019-20 (Projected)	2020-21 (Projected)
Depreciation (at carrying cost)	5,799	5,961	5,044	7,442	7,576	7,728
Ijara Rentals	3,037	2,589	2,571	1,842	1,857	1,690
Total Depreciation + Ijara	**8,836**	**8,550**	**7,616**	**9,284**	**9,433**	**9,418**

4. REGULATORY ASSETS BASE OF HYDEL POWER STATIONS

In the last tariff petition for FY 2017-18 it was projected that T-4 and Golen Gol would start operation in the last quarter of the FY 2017-18 but due to non-availability of

Taking Over Certificate (TOC) T-4 and Golen Gol were taken in fixed assets in operation in FY 2018-19.

In line with IAS-16, (Property Plant & Equipment) WAPDA has got certain classes of its fixed assets revalued and in the audited accounts of WAPDA Hydroelectric, fixed Assets in Operation are shown both at revalued and at historical cost. However, since NEPRA allowed ROI on historical cost hence Regulatory Assets Base has been calculated on the basis of historical cost.

Major portion of RAB of power stations comprise equity due to the fact that most of the debts of existing Hydel Power Stations have already been retired and further reducing each year with repayment of debt. However, in para-90 of tariff determination for FY 2015-16 dated 13-11-2015, and para-50 of the tariff determination for FY 2017-18 dated 22-11-2017, NEPRA allowed return for hydel power stations at benchmark debt equity ratio of 70%:30% instead of actual debt equity ratio claimed by WAPDA. In compliance with NEPRA's above decision, in the current tariff petition, debt equity ratio for power station has been claimed as 70%:30% as per bench mark set by NEPRA.

The Regulatory Assets Base of Hydel Power Stations, Debt Equity Ratio, WACC and Return on Investment from FY 2016–17 to FY 2018-19 has been calculated based on audited accounts, whereas for FY 2019–20 & FY 2020-21 budgeted CAPEX of Hydel Power Stations and further Capitalization of T-4 and Golen Gol HPPs have also been taken into account.

Projected Consolidated Net Regulatory Assets Base of Hydel Power Station (for return purpose i.e. excluding financing through grant) at the end of FY 2020-21 is estimated as Rs.245,497 Mln which represent debt financing of Rs. 171,848 million (70%) and equity, of Rs. 73,649 million (30%) as shown in the table below. In addition to consolidated statement given below, Power station wise detail is also place at **(Annex-13).**

TABLE-8

(Mln Rs)

	[Mln.Rs]				
	2016-17	2017-18	2018-19	2019-20	2020-21
	Audited	*Audited*	*Audited*	*Projected*	*Projected*
Fixed Assets in Operation (At Carrying Cost)					
Net Fixed Assets in Operation (Opening)	181,377	177,573	174,978	256,914	251,998
Additions					
Other Addition/(Deletion)	-	-	-	-	-
New Constructions(from CWIP)/Purchased	1,998	2,449	89,379	2,660	2,824
Total Addition	1,998	2,449	89,379	2,660	2,824
(Deletions)					
Depreciation on Fixed Assets (At Carrying Cost)	(5,799)	(5,044)	(7,442)	(7,576)	(7,728)
Transfer/Adjustment	(3)	-	-	-	-
Total Deletion	(5,802)	(5,044)	(7,442)	(7,576)	(7,728)
Net Fixed Assets in Operation (Closing)	177,573	174,978	256,914	251,998	247,094
Average Net Fixed Assets in Operation	179,475	176,275	215,946	254,456	249,546

TABLE-9 (Mln Rs)

		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
		Audited	Audited	Audited	Audited	Projected	Projected
Avg. Net Fixed Assets in Operation (at Carrying Cost)	(Mln Rs)		179,475	176,275	215,946	254,456	249,546
Less: Financing of Assets through Grant			2,454	2,360	4,057	5,217	4,049
Avg Net Fixed Assets for Return Purpose			177,021	173,915	211,889	249,239	245,497
Fixed Assets Financed By Debt/Equity							
Average Debt	(Mln Rs)		123,915	121,741	148,322	174,467	171,848
Average Equity	(Mln Rs)		53,106	52,175	63,567	74,772	73,649
Debt Equity Financing Ratio							
Debt	(%)		70%	70%	70%	70%	70%
Equity	(%)		30%	30%	30%	30%	30%
WACC							
Cost of Debt	(%)		14%	14%	14%	14%	14%
Return on Equity	(%)		17%	17%	17%	17%	17%
WACC	(%)		14.72%	14.64%	14.91%	14.99%	15.14%
Return on Assets	(Mln Rs)		26,054	25,468	31,585	37,367	37,163

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. 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. The Hydel Power Stations of Tarbela 4th Extension and Golen Gol were timely completed during FY 2017-18 and after successful testing transferred to operation during FY 2018-19 which has significantly enhanced the Net Fixed Assets in Operations. Although both Tarbela 4th Extension and Golen Gol HPPs are operative since FY 2018-19 certain allied works are still underway, during FY 2019-20 and FY 2020-21 additional capital investment will be made to complete these leftover works.

DBD was included in the Generation License of WAPDA in 2015, however, due to financing constraints the pace of development remained slow. Therefore, keeping in view the quantum of work and financing involved, Federal Government in 2016 decided to divide/split and pursue the completion of DBD Project in parts entailing preparation and approval of separate PC-1s for Land Acquisition, Dam/ Civil works and Power Houses.

Under phased approach, Federal Government has up till now approved total Rs.655 billion, comprising Rs.175 billion for Acquisition of Land and Resettlement and Rs.480 billion for Dam civil works, to be financed as Cash Development Loans (CDLs) of Rs.175 billion, Rs.242 billion as WAPDA equity and commercial loans, whereas, Rs.238 billion as Federal Government Grant being Water Sector costs. Resultantly allocation of approved cost between Water and Power Sector comes as 36% and 64% respectively. Whereas, the Power generation part, attributable solely to Power Sector, has still to take effect.

In recent years development works of DBD are gaining pace with Federal Government making regular allocations in PSDP. From FY 2018-19 Federal Government has been making allocations as grant, however, to date Federal Government has provided WAPDA Rs.86 billion as CDL for development of DBD on which interest is also charged from WAPDA annually. Acquisition of Land for DBD is near completion whereas Civil works contract has been signed with Power China-FWO JV on May 13, 2020. WAPDA has repeatedly requested Federal Government to convert the amount of CDL into grant but the issue is still unresolved. Since Federal Government has approved the cost of LA&R and Dam Civil works of DBD, cost incurred on DBD has been included in the RAB in the proportion of approved allocation.

WAPDA has in place major portion of financing as per the development requirements for Dasu Stage-1, however, progress on main Civil Works remained slow due to land acquisition issues. After resolution of land acquisition issues and mobilization of Civil Works Contractor, Electro-Mechanical Works Contract (Dasu-EM-01); having completion period of 62 months, has also been awarded. It is expected that generating units of Dasu Stage-1 will start to come on board in 2024.

Development of Keyal Khwar Hydropower Project has suffered major setbacks due to following reasons which are beyond the control of WAPDA and pushed the expected COD of Keyal Khwar HPP till FY 2025-26.

- The Civil Works Contract of Keyal Khwar HPP was awarded to M/s Sinohydro-Hajvery JV on 13.08.2016, but due to non-performance of the Contractor, the Contract was terminated on17.12.2018.
- Resultantly, WAPDA Authority has to annul the Bidding process for E&M Equipment Contract also.
- In Nov-2018, EIB withdraw its loan for Keyal Khwar HPP creating financial gap of Euro 100 million.
- WAPDA has to resort to explore alternative financing options through EAD to fill the financing gap and now M/S AFD has agreed to extend loan for the Project.
- These events coupled with inflation and exorbitant rise in exchange rate parity between Pak Rupee and EURO necessitates approval of 3rd Revised PC-I of Keyal Khwar HPP.

In order to secure and boost the life of present installed capacity of Tarbela, Mangla & Warsak Hydel power stations replacement, refurbishment, up-gradation and expansion activities have been initiated as per the recommendations of the feasibility studies expenditures incurred on these activities have also been included in CWIP.

It is worth mentioning that WAPDA is also developing Mohmand Dam as National priority project, which is reported under other development projects. Mohmand Dam is currently not included in the Generation License of WAPDA and its capital expenditures its financed by Federal Government as grant. As such no return on Mohmand Dam is included in the revenue requirements of WAPDA in the instant tariff petition. WAPDA will see the inclusion of Mohmand Dam in its Generation License from NEPRA at appropriate time through separate LPM.

In addition to above, WAPDA is also working on the survey and feasibility of Thakot and Azad Pattan HPPs.

TABLE-10

Investment in CWIP of Ongoing Development Projects					
	Yearly CWIP Investment (Mln Rs)				
	2016-17	2017-18	2018-19	2019-20	2020-21
T-4	22,330	11,647	3,148	8,378	3,265
Goen Gole	5,966	7,324	4,111	1,985	936
DBD	11,647	3,904	9,187	20,000	21,000
Dasu	25,387	4,236	8,562	50,181	80,069
Keyal	392	(183)	396	696	1,358
Mangla Rehabilitation	1,111	2,637	2,468	11,600	5,024
Warsak Rehabilitation	963	59	13	4,345	3,200
Others	-	(852)	16,576	7,500	7,500

6. REGULATORY ASSETS BASE OF HYDEL POWER PROJECTS

Regulatory Assets Base (**RAB**) of WAPDA Hydroelectric includes Average Capital Works in Progress (**CWIP**). Average RAB for CWIP has been calculated as per NEPRA decisions with following variables:

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

In para-90 of tariff determination for FY 2015-16 dated 13-11-2015, and para-50 of the tariff determination for FY 2017-18 dated 22-11-2017, NEPRA allowed return with debt equity ratio of 80%:20% for power projects as benchmark instead of actual debt equity ratio claimed by WAPDA. In compliance with NEPRA's above decision, in the current tariff petition, debt equity ratio for power projects has been claimed as 80%:20% as per bench mark set by NEPRA.

Return on RAB in respect of each Project is calculated exclusively at its respective Weighted Average Cost of Capital (WACC) transpires from bench mark of Debt-to-Equity Ratio of 80:20 allowed by NEPRA in last two tariff determinations of WAPDA Hydroelectric, as per the contracted cost of debts and Return on equity allowed @ 17%.

Consolidated Average Regulatory Assets Base, WACC and ROI of Hydel Power Projects for FY 2015-16 to FY 2018-19 (Audited), Budgeted for FY 2019–20 & projected for FY 2020-21 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 station wise detail is also place at **(Annex-14)**.

TABLE-11 (Mln Rs)

	Only DBD					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
	Audited	*Audited*	*Audited*	*Audited*	*Projected*	*Projected*
Capital Work In Progress (Excl. IDC) Opening	30,804	127,314	194,735	223,507	174,288	278,973
Add: Investment During the Year	30,846	67,795	28,771	44,461	104,685	122,352
Less: CWIP Transferred to Fixed Assets	-	(373)	-	(93,680)	-	-
Capital Work In Progress (Excl. IDC) Closing	61,650	194,735	223,507	174,288	278,973	401,325
Average Capital Work In Progress	46,227	161,025	209,121	198,897	226,630	340,149

TABLE-12 (Mln Rs)

		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
		Audited	*Audited*	*Audited*	*Audited*	*Projected*	*Projected*
Avg.Capital Work in Progress (Excluding IDC)		46,227	161,025	209,121	198,897	226,630	340,149
Less: Financing of RAB through Grant		-	701	3,105	16,615	40,382	66,592
Avg.Capital Work in Progress (For Return Purpose)	(Mln Rs)	46,227	160,324	206,016	182,282	186,248	273,557
Fixed Assets Financed By:							
Average Debt	(Mln Rs)	36,982	128,259	164,813	145,826	148,998	218,846
Average Equity	(Mln Rs)	9,245	32,065	41,203	36,456	37,250	54,711
Debt Equity Financing Ratio							
Debt	(%)	80%	80%	80%	80%	80%	80%
Equity	(%)	20%	20%	20%	20%	20%	20%
WACC							
Cost of Debt	(%)	11.0%	12.0%	12.2%	11.1%	10.2%	10.4%
Return on Equity	(%)	17%	17%	17%	17%	17%	17%
WACC	(%)	12.20%	12.99%	13.16%	12.24%	11.54%	11.73%
Return on Investment	(Mln Rs)	5,640	20,834	27,109	22,314	21,500	32,085

7. INCOME FROM ASSETS OTHER THAN FINANCIAL ASSETS

Actual other income derived from **"assets other than financial assets"** for the period from FY 2016-17 to FY 2018-19 (audited) ranges from Rs.697 Mln to Rs.1,374 Mln as against NEPRA determined Rs 366 Mln for FY 2017-18. Based upon the actual income for FY 2018-19 and considering the eight months actual income for FY 2019-20, misc. income for 2020-21 has been projected as Rs.697 Mln.

TABLE-13 (Mln Rs)

Income form assets other than financial assets					(Mln Rs)
	FY 2016-17	2017-18	2018-19	2019-20	2020-21
Amortization of Grant	1,126	144	279	279	279
Inocme form lease of other property	83	90	94	94	94
Miscellaneouse income	116	1,081	284	284	284
Inocme from non-utility operation	3	3	8	8	8
Interest income-advance to staff	1	2	1	1	1
Sales of scrap	16	32	29	29	29
Sale of stores	2	22	2	2	2
Total	1,347	1,374	697	697	697

8. REGULATORY REVENUE GAP

Regulatory Revenue Gap has been calculated from FY 2015-16 to FY 2019-20 which has arisen due the following reasons:

- The prudently incurred actual O&M expenses were higher than estimates made by NEPRA while determining revenue requirement.
- Late determination of tariff for FY 2017-18 followed by late notification of tariff by the GoP in Official Gazette. NEPRA determined tariff for FY 2017-18 took effect from 23-02-2018 after lapse of almost eight month.
- Revenue Gap for FY 2015-16 has been reworked only with ROI on capital investment made in DBD which was previously disallowed by NEPRA in last determination.
- Actual additions to the Capital Work in Progress (CWIP) remained higher than the estimates.
- On the directions of the Ministry of Water Resources letter No. PF-06(03)2016-88 dated 28-03-2016 & No.06(17)/2004-HP dated 22-12-2017, WAPDA has taken loan from commercial banks for advance payment of arrears/regular NHP to GoKP and Punjab. To comply with the MoWR above orders, WAPDA has to pay interest on the said loan from its revenue stream which was otherwise recoverable through tariff as pass through item. Accordingly interest of Rs. 11,024/- mln paid/accrued on the above loans have been included in the tariff petition.

Pakistan Water & Power Development Authority LAHORE

TABLE-14

(Mln Rs)

	2015-16	2016-17	2017-18	2018-19	2019-20
NEPRA Determined					
O&M		12,346	14,092	14,092	14,092
Depreciation (At Carrying Cost)		5,445	5,961	5,961	5,961
Ijara Rental		3,460	2,589	2,589	2,589
Return on Investment		26,110	28,202	28,202	28,202
Provision for Future Development	-	13,954	12,374	12,374	12,374
Misc. Income		(330)	(366)	(366)	(366)
Revenue Gap (apportioned)*		-	3,008	5,560	-
Total	-	60,985	65,860	68,412	62,852

* Apportioned in two years FY 2017-18 (23 Feb - 30 Jun) and FY 2018-19(1st July-22 Feb)

Accrued as per Audited/Provisional					
O&M	-	11,792	15,165	20,136	19,079
Depreciation (At Carrying Cost)	-	5,799	5,044	7,442	7,576
Ijara Rental	-	3,037	2,571	1,842	1,857
Return on Investment	-	26,054	25,468	31,585	37,367
Provision for Future Development	5,640	20,834	27,109	22,314	21,500
Misc. Income	-	(1,347)	(1,374)	(698)	(698)
Revenue Gap	-	-	3,008	5,560	-
	5,640	66,169	76,992	88,181	86,680

Revenue Gap					
O&M		(553)	1,073	6,044	4,987
Depreciation (At Carrying Cost)		354	(917)	1,481	1,615
Ijara Rental		(423)	(18)	(747)	(732)
Return on Investment		(56)	(2,734)	3,383	9,165
Provision for Future Development	5,640	6,880	14,735	9,940	9,126
Misc. Income		(1,017)	(1,008)	(332)	(332)
Revenue Gap		-	-	-	-
	5,640	5,184	11,132	19,769	23,828

Total Revenue Gap					
Sales Revenue Accrued (To be Billed)	5,640	66,169	76,992	88,181	86,680
Sales Revenue (Actually Billed)	-	65,233	59,317	67,230	63,079
Revenue Gap	5,640	936	17,675	20,950	23,600

9. REVENUE REQUIREMENTS WAPDA FOR FY 2020-21

Revenue Requirements of WAPDA Power Wing Hydroelectric comprising O&M expenses, Depreciation charges, Ijara Rentals, Return on Regulatory Asset Base (RAB) and Regulatory Revenue Gap. Consolidated Revenue Requirement for FY 2020-21 has been projected as under, however power station wise Revenue Requirement is appended at **(Annex-10).**

TABLE-15 (Mln Rs)

Revenue Components	Existing NEPRA Determined for FY 2017-18	Requested for FY 2020-21
	(Mln Rs)	(Mln Rs)
O&M Expenses	14,092	19,724
Depreciation (Repayment of Loan & Equity	5,917	7,728
Ijara Rentals (Sukuk Bond repayments)	2,589	1,690
Return on Investment-H/P stations	28,176	37,163
Return on Investment-H/P Projects	12,374	32,085
Deduction for Misc Income	(366)	(698)
Sub.total	**62,782**	**97,691**
Regulatory Revenue Gap	8,567	68,802
Mark-up on NHP Loans	-	11,024
Revenue Requirement WAPDA	**71,349**	**177,517**

10. Hydel Related Charges

10.1 Net Hydel Profit (NHP)

Article 161(2) of the Constitution of Pakistan 1973 provides for the payment of Net Hydel Profit to the Provinces. The payment of NHP has been proposed as per the CCI decision dated 29.02.2016 and CCI decision dated 16.12.2016 as well as NEPRA determinations dated 13.11.2015, 08.01.2016, 22.11.2017 and 14.12.2017 and GoP Gazette Notifications dated 07.03.2016, 24.06.2016 and 23.02.2018.

10.1.1 NHP Regular Payments

Pursuant to the above referred CCI decisions and NEPRA determinations, Payment of Regular NHP to the Provinces on the generation of hydropower stations situated in their territorial jurisdiction has been proposed at enhanced rate of Rs.1.213/kWh. Further in order to ensue uniformity in WUC rates for AJK as per the spirit of ECC decision dated 20.03.2019, NEPRA may approve the revised enhanced rates to take effect prospectively from the date of notification of revised tariff by MoWR, GoP, Islamabad in the Official Gazette.

10.1.2 NHP Arrears

NEPRA issued its revised order of WAPDA Hydroelectric Bulk Supply Tariff for FY 2017-18, wherein payment of Regular NHP to the Provinces during FY 2017-18 was approved at uncapped NHP rate of Rs.1.10 per kWh as per the actual generation from hydropower stations located in their territorial jurisdiction effective from 01.07.2017. Decision of NEPRA was notified by GoP on 23.02.2018, therefore, WAPDA Hydroelectric could not bill NHP at the revised rates till 22.02.2018. NHP arrears in respect of unbilled amount of Regular NHP from 01.07.2017 to 22.02.2018 during FY 2017-18 works out to Rs.618 million for KPK and Rs.5,842 million for Punjab as under:

TABLE-16

Arrears - NHP to KP

Sr. No.	Power Station	Capacity	2017-18 - 1st jul-22 feb)		
			Generation	Rate	Amount
		(MW)	(GWh)	(Rs/kWh	(Mln Rs)
1	Tarbela	3,478	10,106	0.055	556
2	Warsak	243	560	0.055	31
3	Duber Khawar	130	261	0.055	14
4	Allai Khawar	121	114	0.055	6
5	Khan Khawar	72	80	0.055	4
6	Jabban	22	52	0.055	3
7	Dargai	20	51	0.055	3
8	Kuram Garhi	4	9	0.055	0
9	Chitral	1	1	0.055	0
10	Tarbela 4th Ext.		-		-
11	Golen Gol		-		-
	Total	4,091	11,234		618

Arrears - NHP to Punjab

Sr. No.	Power Station	Capacity	2017-18 - 1st jul-22 feb)		
			Generation	Rate	Amount
		(MW)	(GWh)	(Rs/kWh	(Mln Rs)
1	Ghazi Brotha	1450	4,323	1.155	4,993
2	Chashma	184	493	1.155	569
3	Jinnah HPP	96	131	1.155	151
4	Rasul	22	49	1.155	57
5	Nandipur	14	26	1.155	30
6	Shadiwal	14	16	1.155	18
7	Chichoki	13	20	1.155	23
8	Renala Khurd	1	1	1.155	1
	Total	1,794	5,058		5,842

10.2 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 the NPERA at Sr.1 of the tariff determination dated 14.12.2017.

Later, WAPDA filed a Tariff Modification Petition vide letter No.GMFP/CPCC/4525/241 dated 28.11.2019 (**Annex-15**) for enhancement of WUC rates from Rs.0.15/kWh to Rs.1.155/kWh payable to GoAJ&K at par with the rate of NHP payable to provinces as necessitated in ECC decision 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-16**). NEPRA has held the hearing on this petition on 03.06.2020, however, decision of NEPRA on this Tariff Modification Petition is still to come.

Through instant Petition, NEPRA is requested to determine/ approve the revised rate of Rs.1.213/kWh (at par with above proposed revised rate of NHP payable to provinces) in respect of WUC payable to GoAJ&K on the generation of Mangla HPS which shall be applied /paid prospectively only, once the recovery through tariff begins after notification of NEPRA determined tariff by MoWR, GoP Islamabad, in compliance of the instructions of GoP contained at Sr.No. i & vii of the aforementioned ECC decision.

10.3 IRSA Charges

In the tariff determination dated 14.12.2017 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-17**) and S.R.O. (1)/2017 dated 10th Feb 2017 (**Annex-18**). 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.

11. REVENUE REQUIREMENTS HYDEL LEVIES FOR FY 2020-21

Revenue Requirements of Hydel Levies comprising NHP, WUC and IRSA charge for FY 2020-21 has been projected as under:

TABLE-17 (Mln Rs)

	Existing NEPRA Determined for FY 2017-18	Requested for FY 2020-21
	Mln.Rs	Mln.Rs
Regular		
NHP- Govt. of KP	21,825	21,156
NHP- Govt. of Punjab	10,002	9,539
WUC Govt. of AJK	899	5,753
Total	32,726	36,448
IRSA	168	151
Total Hydel Levies - Regular	**32,894**	**36,599**
Arrears of NHP		
Govt. of KP	24,298	618
Govt. of Punjab	61,965	5,842
Total Arrears of NHP/WUC	**86,263**	**6,460**
Total Hydel Levies	**119,157**	**43,058**

12. RELIEF SOUGHT

NEPRA is requested to approve the following revised Bulk Supply Tariff of WAPDA Hydroelectric power stations for FY 2020-21 and recommend to MoWR for notification in the Official Gazette.

TABLE-18

					Wapda Tariff				Hydel Levies Tariff			
Sr.No.	Power Stations	Province	Capacity	NEO	Variable Rate	Fixed Rate	Revenue Gap	Interest on Loans for NHP	NHP Regular	WUC	NHP Arrears	IRSA
			MW	GWh	Rs/kWh	Rs/kW/M	Rs/kW/M	Rs/kW/M	Rs/kWh	Rs/kWh	Rs/kW/M	Rs/kWh
1	Tarbela	KPK	3,478	10,800	0.045	568.39	24	63.84	1.2128	-	13.32	0.005
2	Warsak	KPK	243	774	0.114	925.61	536	63.84	1.2128	-	10.56	0.005
3	Duber Khawar	KPK	130	595	0.335	2,777.77	3,035	63.84	1.2128	-	9.19	0.005
4	Allai Khawar	KPK	121	463	0.337	2,393.80	3,373	63.84	1.2128	-	4.32	0.005
5	Khan Khawar	KPK	72	299	0.345	2,615.47	3,263	63.84	1.2128	-	5.10	0.005
6	Jabban	KPK	22	135	0.333	3,584.98	6,732	63.84	1.2128	-	10.86	0.005
7	Dargai	KPK	20	89	0.131	1,274.50	691	63.84	1.2128	-	11.77	0.005
8	Kuram Garhi	KPK	4	17	0.325	2,538.28	2,243	63.84	1.2128	-	10.31	0.005
9	Chitral	KPK	1	4	1.148	6,893.67	8,735	63.84	1.2128	-	4.58	0.005
10	Tarbela 4th Ext.	KPK	1,410	3,825	0.162	818.90	853	-	1.2128	-	-	0.005
11	Golen Gol	KPK	108	444	0.532	4,309.92	5,342	-	1.2128	-	-	0.005
12	Ghazi Brotha	PUNJAB	1,450	6,600	0.086	969.75	861	366.50	1.2128	-	286.95	0.005
13	Chashma	PUNJAB	184	800	0.216	1,839.55	2,022	366.50	1.2128	-	257.63	0.005
14	Jinnah HPP	PUNJAB	96	298	0.450	2,563.28	2,704	366.50	1.2128	-	131.20	0.005
15	Rasul	PUNJAB	22	61	0.173	1,107.24	440	366.50	1.2128	-	215.94	0.005
16	Nandipur	PUNJAB	14	42	0.222	1,401.60	575	366.50	1.2128	-	178.26	0.005
17	Shadiwal	PUNJAB	14	31	0.299	1,399.29	639	366.50	1.2128	-	107.05	0.005
18	Chichoki	PUNJAB	13	31	0.306	1,491.18	726	366.50	1.2128	-	144.90	0.005
19	Renala Khurd	PUNJAB	1	3	0.795	4,124.83	4,722	366.50	1.2128	-	96.25	0.005
20	Mangla	AJK	1,000	4,744	0.077	928.91	562	-	-	1.2128	-	0.005
21	Gomal Zam	FATA	17	50	0.915	4,510.93	2,251	-	-	-	-	0.005

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

BH298544

Rupees 50 ۵۰ روپیہ

BEFORE THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

M. HAMZA ASIF * Advocate * OATH COMMISSIONER * Distt. Courts, Lahore

AFFIDAVIT

I, Naveed Asghar Chaudhry, 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 # GMF/ CPCC/ 4525/ 703 dated June 29, 2020 including all supporting documents are true and correct to the best of my knowledge and belief and that nothing has been concealed. I also affirm that all further documentation and information to be provided by me in connection with the accompanying petition shall be true to the best of my knowledge and belief.

DEPONENT

(Naveed Asghar Chaudhry)
General Manager Finance (Power)

ATTESTED

M. Hamza Asif
Advocate High Court
OATH COMMISSIONER
Distt. Courts, Lahore

طارق محمود اشٹام فروش مزنگ لاہور

لائسنس نمبر 33 بابت اشٹام

نوید اختر صدیقی ولد عبدالرشید

پیشہ ملازمت عمر 41 سال

بذریعہ مقدمہ

اشٹام سادہ جاری کیا گیا ہے

کسی قسم کی تحریر کے ہم ذمہ دار نہ ہونگے

دستخط

3520J-0341347

بذریعہ

BH298545

Rupees 50 ۵۰ روپیہ

M. HAMZA ASIF OATH COMMISSIONER Distt. Courts, Lahore

Verified on oath this 29th day of June, 2020 that the contents hereof are true and correct to the best of my knowledge and belief and nothing has been concealed.

DEPONENT

(Naveed Asghar Ch.)
General Manager Finance (Power)

ATTESTED
M. Hamza Asif
Advocate High Court
OATH COMMISSIONER
Distt. Courts, Lahore

طارق محمود اشٹام فروش مزنگ لاہور

مورخہ [illegible] نمبر 331 مالیت اشٹام [illegible]

نام [illegible] ولد [illegible] برائے پبلک ولیو بی نمبر 1 بذریعہ [illegible]

اشٹام سادہ جاری کیا گیا ہے
کسی قسم کی تحریر کے ہم ذمہ دار نہ ہوں گے

دستخط

35202-0341134-7

Annex No.	Office order No. and date
Annex-1	PPA amended on 01-10-2015
Annex-2	WAPDA Authority vide resolution dated 25th June, 2020
Annex-3	para-6, Leave for Review for FY 2017-18 dated December 14, 2017 adjustment on account of determination of NHP, WAPDA allowed to charge the CPPA-G tariff
Annex-4	NEPRA determined tariff notified by the GoP in the Official Gazette dated 23-02-2018
Annex-5	WAPDA's request to MoWR for revision/ modification of relending policy vide letter No.35/DFHD/2018/Relending Policy/Vol-IV/20 dated: 18.07.2018
Annex-6	MOWR vide letter 1(1)/2015-HP dated: 07.01.2020 requested EAD for revision of the interest rates.
Annex-7	MOW&P letter dated 1/12/2016 on Financing Strategy for DBD, and directed WAPDA to submit separate updated PC-Is for dam part and power generation.
Annex-8	Decision of ECNEC dated 30-04-2020 regarding approval of Rs.175,436 M.
Annex-9	PC-I of DBD for Dam Civil Works has been approved at Rs.480 billion.
Annex-10	Power Station wise Revenue Requirement for FY 2020-21
	Power station wise detail proposed charge of depreciation and Ijara Rentals for FY 2019-20 & FY 2020-21.
Annex-11	Actuarial Valuation Report of WAPDA Hydroelectric NEPRA regulated business.
Annex-12	Technical Data of power stations
Annex-13	Power station wise **(Generation block)** detail of Average Regulatory Assets Base, WAAC and ROI of Hydel Power Projects for FY 2015-16 to FY 2018-19 (Audited), Budgeted for FY 2019–20 & projected for FY 2020-21.
Annex-14	Power station wise **(Development block)** detail of Average Regulatory Assets Base, WAAC and ROI of Hydel Power Projects for FY 2015-16 to FY 2018-19 (Audited), Budgeted for FY 2019–20 & projected for FY 2020-21.
Annex-15	WAPDA filed a Tariff Modification Petition vide letter No.GMFP/CPCC/4525/241 dated 28.11.2019
Annex-16	ECC decision 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-17	NEPRA determined IRSA Charges S.R.O. (1)/2011 dated 25th August 2011
Annex-18	IRSA Charges S.R.O. (1)/2017 dated 10th Feb 2017
Annex-19	Audited financial statement for FY 2017-18 & FY 2018-19
Annex-20	Power Station wise commissioning dates

Water & Power Development Authority LAHORE.

Annex- 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, - 01 OCTOBER 2015

Pakistan Water & Power Development Authority LAHORE

THIS AMENDMENT NO 3 TO POWER PURCHASE AGREEMENT DATED 24th JANUARY 2011 (this "Agreement") is made as of the October 04, 2016 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 on 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.

LAHORE

2. NTDC is a government-owned company, incorporated under the Companies Ordinance, 1984 vide Certificate of Incorporation No. L09689 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 ("PPAA") 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 the Amendment Agreement signed in Islamabad on _____, 2015.

Central Power Purchasing Agency (Guarantee) Limited

By: _____

Title: Chief Executive Officer

National Transmission and Despatch Company Limited

By: Muhammad Arshad

Title: Managing Director

The Pakistan Water & Power Development Authority

By: _____

Title: MEMBER (POWER) WAPDA

Witness: _____

Name: _____

Witness: _____

Name: _____

Pakistan Water & Power Development Authority LAHORE

Subject: - **Authorization for Filing of Bulk Supply Tariff Petition for FY 2020-21 for Revision of Tariff for Generation from WAPDA Hydel Power Stations**

1. WAPDA filed the previous tariff petition on 30.03.2017 **(Annex-I)** which was finally notified by the Ministry of Water Resources on 23-02-18 **(Annex-II)**. The annual Revenue requirement for FY 2020-21 has significantly increased from that determined by NEPRA for FY 2017-18 and in view of this a fresh Tariff Petition for FY 2020-21 **(Annex-III)** has been prepared for submission to NEPRA for revision of tariff, as per NEPRA Tariff Standard & Procedure Rules, 1998. WAPDA has to nominate officers for finalizing the same with NEPRA.

2. WAPDA Authority is therefore requested to please allow GM Finance (Power) to file tariff petition for revision of tariff in NEPRA for FY 2020-21. 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 (C&M) Water
iv. Director Law

15/6/2020
Dy. GM Finance (Power)

3. GMF (P)/Member (Finance) 15/06/2020.

4. Member (Power) Akhtar 25/6/2020

4. Member (Water) 25/06/2020

5. Chairman (WAPDA) 25/06/2020

Annex-A3

National Electric Power Regulatory Authority
Islamic Republic of Pakistan

Registrar

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/TRF-383/WAPDA (Hydro)-2017/20295-20297
December 14, 2017

Subject: **Decision of the Authority in the matter of Motion for Leave for Review on the Determination of Bulk Supply Tariff of WAPDA Hydroelectric for Financial Year 2017-18 [Case No. NEPRA/TRF-383/WAPDA(Hydro)-2017]**

Dear Sir,

This is in continuation of this office letter No. NEPRA/TRF-383/WAPDA(Hydro)-2017/19079-19081 dated November 22, 2017 whereby Determination of the Authority in the matter of Bulk supply Tariff for WAPDA Hydroelectric for Financial Year 2017-18 was sent to the Federal Government for notification in the official Gazette.

2. Please find enclosed herewith the subject decision of the Authority along with Annex-I (05 Pages) in the matter of Motion for Leave for Review filed by WAPDA Hydroelectric.

3. The Decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

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

Enclosure: As above

14.12.17
(Syed Safeer Hussain)

Secretary
Ministry of Energy
'A' Block, Pak Secretariat
Islamabad

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.

Pakistan Water & Power Development Authority LAHORE

(d) In the fixed component the following was included;

a) WAPDA Hydroelectric fixed revenue requirement @ 95% while 5% being made a part of each power plants variable rate
b) Revenue gap pertaining to FY 2014-15, FY 2015-16, & FY 2016-17
c) NHP arrear to KPK and Punjab

(e) The Petitioner states that the above order does not distinguish and identify the annual NHP arrear payments payable to province of KPK and Punjab pursuance to the CCI decisions. Rule 17 (3) (xiii) of Tariff Standard and Procedure Rules 1998 provides that

Tariffs should be comprehensible, free of misinterpretation and shall state explicitly each component thereof.

(f) In pursuance to the above cited rule, the Authority considers that it will be in fitness of things to provide break up of fixed component of each power plant's tariff. This break up will bring transparency and will identify each component including NHP component separately. The power purchaser will also ensure that NHP as ordained in the CCI decision is timely paid to WAPDA and onwards to the Provinces.

6. In view thereof the Determination is revised as under:

REVISED ORDER

1. For the reasons recorded in the order on the review motion filed by WAPDA Hydroelectric (Petitioner), subject to adjustment on account of determination of net hydel profits, Petitioner is allowed 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

Sr.No.	Power Stations	Province	Current FY 2017-18			12 months
			Capacity	Variable Rate	Fixed Rate	Revenue Gap
			MW	Rs/kWh	Rs/kW / Month	Rs/kW / Month
1	MANGLA	AJK	1,000	0.056	626.710	103.428
2	GOMAL ZAM	FATA	17	1.384	6,393.383	103.428
3	TARBELA	KPK	3,478	0.030	307.035	103.428
4	WARSAK	KPK	243	0.072	572.424	103.428
5	CHITRAL	KPK	1	0.655	4,240.658	103.428
6	K. GARHI	KPK	4	0.273	1,823.760	103.428
7	DARGAI	KPK	20	0.094	836.555	103.428
8	JABBAN	KPK	22	0.332	2,961.172	103.428
9	KHAN KHWAR	KPK	72	0.375	2,316.349	103.428
10	ALLAI KHWAR	KPK	121	0.254	2,071.091	103.428
11	DUBAIR KHWAR	KPK	130	0.339	2,686.269	103.428
12	Tarbela 4	KPK	1,410	0.152	322.654	-
13	Golen Gol	KPK	106	0.228	1,370.610	-
14	GHAZI BAROTHA	PUJNAB	1,450	0.089	769.975	103.428
15	CHASHMA	PUNJAB	184	0.146	1,418.173	103.428
16	JINNAH	PUNJAB	96	0.229	1,841.312	103.428
17	SHADIWAL	PUNJAB	14	0.234	993.012	103.428
18	NANDIPUR	PUNJAB	14	0.228	1,126.760	103.428
19	CHICHOKI	PUNJAB	13	0.207	926.840	103.428
20	RENALA	PUNJAB	1	0.676	3,303.750	103.428
21	RASUL	PUNJAB	22	0.079	791.065	103.428

NEPRA AUTHORITY

Hydel Levies Tariff

Sr. No.	Power Stations	Province	Current FY 2017-18				12 months	Jul 2018 to Jun 2019	Jul 2019 to Jun 2020
			Capacity	NHP Arrears	(WUC)/ (NHP)	(IRSA)	NHP Arrears	NHP Arrears	NHP Arrears
			MW	Rs/kW / Month	Rs/kWh	Rs/kWh	Rs/kW / Month	Rs/kW / Month	Rs/kW / Month
1	MANGLA	AJK	1,000	-	0.150	0.005			
2	GOMAL ZAM	FATA	17	-	-	0.005			
3	TARBELA	KPK	3,478	305.549	1.155	0.005	189.399	305.549	-
4	WARSAK	KPK	243	305.549	1.155	0.005	189.399	305.549	-
5	CHITRAL	KPK	1	305.549	1.155	0.005	189.399	305.549	-
6	K. GARHI	KPK	4	305.549	1.155	0.005	189.399	305.549	-
7	DARGAI	KPK	20	305.549	1.155	0.005	189.399	305.549	-
8	JABBAN	KPK	22	305.549	1.155	0.005	189.399	305.549	-
9	KHAN KHWAR	KPK	72	305.549	1.155	0.005	189.399	305.549	-
10	ALLAI KHWAR	KPK	121	305.549	1.155	0.005	189.399	305.549	-
11	DUBAIR KHWAR	KPK	130	305.549	1.155	0.005	189.399	305.549	-
12	Tarbela 4	KPK	1,410		1.155	0.005			-
13	Golen Gol	KPK	106	-	1.155	0.005	-	-	-
14	GHAZI BAROTHA	PUNAB*	1,450	-	1.155	0.005	2,878.344	690.264	690.264
15	CHASHMA	PUNAB*	184	-	1.155	0.005	2,878.344	690.264	690.264
16	JINNAH	PUNAB*	96	-	1.155	0.005	2,878.344	690.264	690.264
17	RASUL	PUNAB*	22	-	1.155	0.005	2,878.344	690.264	690.264
18	SHADIWAL	PUNAB*	14	-	1.155	0.005	2,878.344	690.264	690.264
19	NANDIPUR	PUNAB*	14	-	1.155	0.005	2,878.344	690.264	690.264
20	CHICHOKI	PUNAB*	13	-	1.155	0.005	2,878.344	690.264	690.264
21	RENALA	PUNAB*	1	-	1.155	0.005	2,878.344	690.264	690.264

*This include 1st and 2nd instalment of Rs 38.1 billion & Rs 14.88 billion respectively pertaining to Punjab NHP arrear payment.

2. The tariff with Revenue Gap/prior year adjustment as indicated above, shall be applicable for a period of one year from date of its notification by GoP, after which the tariff without Revenue Gap/prior year adjustment shall be applicable.

3. Any over/under recovery of cost/revenue requirement due to factors beyond control of the Petitioner will be adjusted, after due consideration by the Authority, at the time of next tariff determination.

4. The order is to be intimated to the Federal Government for notification in the official Gazette under section 31 (4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

AUTHORITY

(Himayat Ullah Khan) 14.12.17
Member

(Syed Masood ul Hassan Naqvi) 14/12/17
Member

(Saidullah Chattha) 14.12.2017
Member/Vice Chairman

(Brig. (R) Tariq Saddozai)
Chairman

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

14.12.17

Annex 4

REGISTERED No. M - 302 / L.-7646

The Gazette of Pakistan

EXTRAORDINARY
PUBLISHED BY AUTHORITY

ISLAMABAD, TUESDAY, MARCH 6, 2018

PART II

Statutory Notifications (S.R.O.)

GOVERNMENT OF PAKISTAN
MINISTRY OF WATER RESOURCES

NOTIFICATION

Islamabad, the 23rd February, 2018

S.R.O. 290 (I)/2018.—In pursuance of sub-section (4) of section 31 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997), The Federal Government is pleased to notify the NEPRA's following approved tariff at the bus bar of each WAPDA hydroelectric power stations connected directly or indirectly to the transmission system of NTDC, namely:—

Price : Rs. 3.00

[5486(2018)/Ex. Gaz.]

Sr.No.	Power Stations	Province	Current FY 2017-18			12 months
			Capacity	Variable Rate	Fixed Rate	Revenue Gap
			MW	Rs./kWh	Rs./kW/ Month	Rs./kW/ Month
1	MANGLA	AJK	1,000	0.156	626,710	103,428
2	GOMAL ZAM	FATA	17	1,324	6,393,363	103,428
3	TARBELA	KPK	3,478	0.030	207,035	103,428
4	WARSAK	KPK	243	0.072	372,424	103,428
5	CHITRAL	KPK	1	0.055	4,240,658	103,428
6	K. GAPHI	KPK	4	0.273	1,823,750	103,428
7	DARGAI	KPK	20	0.084	839,665	103,428
8	JABBAR	KPK	22	0.332	2,561,172	103,428
9	KHAN KHWAR	KPK	22	0.375	2,316,349	103,428
10	ALLAI KHWAR	KPK	121	0.254	2,071,691	103,428
11	DUBAIR KHWAR	KPK	130	0.339	2,686,269	103,428
12	Tarbela 4	KPK	1,410	0.152	322,554	-
13	Golen Gol	KPK	106	0.228	1,370,610	-
14	GHAZI BAROTHA	PUNJAB	1,450	0.069	769,975	103,428
15	CHASHMA	PUNJAB	184	0.146	1,418,173	103,428
16	JINNAH	PUNJAB	96	0.229	1,801,512	103,428
17	SHADIWAL	PUNJAB	14	0.234	993,012	103,428
18	HANDIPUR	PUNJAB	14	0.238	1,125,760	103,428
19	CHICHOKI	PUNJAB	13	0.207	926,840	103,428
20	RENALA	PUNJAB	1	0.676	3,003,750	103,428
21	RASUL	PUNJAB	22	0.079	791,065	103,428

Hydel Levies Tariff

Sr. No.	Power Stations	Province	Current FY 2017-18				12 months	Jul. 2018 to Jun. 2019	Jul. 2019 to Jun. 2020
			Capacity	NHP Arrears	(WUC) (NHP)	(IRSA)	NHP Arrears	NHP Arrears	NHP Arrears
			MW	Rs./kW/ Month	Rs./kWh	Rs./kWh	Rs./kW/ Month	Rs./kW/ Month	Rs./kW/ Month
1	MANGLA	AJK	1,000	-	0.150	0.005	-		
2	GOMAL ZAM	FATA	17	-	-	0.005	-		
3	TARBELA	KPK	3,478	305,549	1.155	0.005	189,399	305,549	-
4	WARSAK	KPK	243	305,549	1.155	0.005	189,399	305,549	-
5	CHITRAL	KPK	1	305,549	1.155	0.005	189,399	305,549	-
6	K. GAPHI	KPK	4	305,549	1.155	0.005	189,399	305,549	-
7	DARGAI	KPK	20	305,549	1.155	0.005	189,399	305,549	-
8	JABBAR	KPK	22	305,549	1.155	0.005	189,399	305,549	-
9	KHAN KHWAR	KPK	22	305,549	1.155	0.005	189,399	305,549	-
10	ALLAI KHWAR	KPK	121	305,549	1.155	0.005	189,399	305,549	-
11	DUBAIR KHWAR	KPK	130	305,549	1.155	0.005	189,399	305,549	-
12	Tarbela 4	KPK	1,410	-	1.155	0.005	-		
13	Golen Gol	KPK	106		1.155	0.005	-		
14	GHAZI BAROTHA	PUNJAB	1,450		1.155	0.005	2,878,344	690,264	690,264
15	CHASHMA	PUNJAB	184		1.155	0.005	2,878,344	690,264	690,264
16	JINNAH	PUNJAB	96		1.155	0.005	2,878,344	690,264	690,264

Sr. No.	Power Stations	Province	Current FY 2017-18				12 months	Jul. 2018 to Jun. 2019	Jul. 2019 to Jun. 2020
			Capacity	NHP Arrears	(WUC) (NHP)	(IRSA)	NHP Arrears	NHP Arrears	NHP Arrears
			MW	Rs./kW/ Month	Rs./kWh	Rs./kWh	Rs./kW/ Month	Rs./kW/ Month	Rs./kW/ Month
17	RASUL	PUNJAB*	22	-	1.155	0.005	2,878,344	690,264	690,264
18	SHADIWAL	PUNJAB*	14	-	1.155	0.005	2,878,344	690,264	690,264
19	HANDIPUR	PUNJAB*	14	-	1.155	0.005	2,878,344	690,264	690,264
20	CHICHOKI	PUNJAB*	13	-	1.155	0.005	2,878,344	690,264	690,264
21	RENALA	PUNJAB*	1	-	1.155	0.005	2,878,344	690,264	690,264

*The amounts 1st and 2nd installment of Rs.28.1 billion and Rs.14.25 billion respectively remaining to Punjab NHP arrears payment.

1. The tariff with Revenue Gap/prior year adjustment as indicated above, shall be applicable for a period of one year from date of this Notification, after which the tariff without Revenue Gap/prior year adjustment shall be applicable.

2. Any over/under recovery of cost/revenue requirement due to factors beyond control of the Petitioner will be adjusted, after due consideration by the Authority, at the time of next tariff determination.

[No. 6(18)/2017-HP.]

SAJEEL SAEED,
Section Officer (Hydropower).

PRINTED BY THE MANAGER, PRINTING CORPORATION OF PAKISTAN PRESS, ISLAMABAD.
PUBLISHED BY THE DEPUTY CONTROLLER, STATIONERY AND FORMS, UNIVERSITY ROAD, PESHAWAR.

Annex-5

PAKISTAN
WATER & POWER DEVELOPMENT AUTHORITY

Ph. # 042-99203762
Fax # 042-99203763

O/o General Manager Finance (Power)
608 - WAPDA House, Lahore

No.35/DFHD/2018/Relending Policy/Vol-IV/ -20 Date: 18 /07/2018

Mr. Muhammad Zeeshan Ishaq
Section Officer (HP)
Ministry of Water Resources
Government of Pakistan
Islamabad

Subject:- RELENDING POLICY OF FOREIGN LOANS/CREDITS TO AUTONOMOUS BODIES

It is intimated that WAPDA is implementing Hydropower Projects as per mandate laid down in WAPDA Act, 1958. GoP borrows foreign loans at concessional terms from different donor agencies which are relent to WAPDA at higher interest rates. The repayment terms and relending interest rate for Autonomous Bodies and Corporations contained in the existing relending policy circulated by EAD vide their Office Memorandum dated 8th September, 2016 are as under:-

Institutions	Existing Policy 2009 (%)	Revised Proposed Relending Terms (%) w.e.f. 29.08.2016
1. Provincial Governments	Relending is made on same terms as borrowed by Federal Government	No change
2. Autonomous Bodies	15.00	12.00
a) Average Borrowing Cost	4.50	3.50
b) Fixed Admn. Charges	0.75	0.75
c) ERC	6.80	5.10
d) Spread	3.00	2.65

As per the procedure in vogue, the donor agencies disburse the loans during the construction period of the project on submission of withdrawal requests by the project offices. WAPDA repays the said loans to GoP in Pak Rupees from the earnings of sale of power to CPPA-G. The debt service cost in respect of foreign relent loans is added in the power sale tariff as a pass through cost and this high rate of interest adversely affect the electricity consumers.

Now, NEPRA through its Letter No.NEPRA/TRF-383/WAPDA(Hydro)-2017/19079-19081 dated November 22, 2017 (copy enclosed) has directed WAPDA to submit a summary to the GoP for reduction of relending rates at actual terms and conditions, as admissible to GoP (similar to Provincial Governments).

Contd ... P/2

National Water & Power Development Authority LAHORE

In view of position explained above, it is requested that Economic Affairs Division may be approached to get approval of the ECC for revision of the interest rates at on-lending rates so that the debt servicing cost can be reduced and its benefit passed on to the end consumers.

(Naveed Asghar Ch.)
GM Finance (Power)

C.M.F. (Power)
Diary No. 6/1
Date 16/1/20

Government of Pakistan
Ministry of Water Resources
*****

542
22-01-2020

No. 1(1)/2015-HP

Islamabad, January 07, 2020

OFFICE MEMORANDUM

Subject: **RELENDING POLICY OF FOREIGN LOANS/CREDITS TO AUTONOMOUS BODIES.**

The undersigned is directed to refer to WAPDA's letter No. 35/M(A&F)HD/2019/Relending Policy/Vol-IV/1661-63 dated 22.11.2019, on the subject cited above which is self explanatory.

2. WAPDA is implementing Hydropower Projects as per given mandate laid down in WAPDA Act, 1958. Government of Pakistan borrows foreign loans at concessional terms from different donor agencies, which relent to WAPDA at higher interest rates. While, Provincial governments, relend these foreign loans / credits on same terms as borrowed by Federal government.

3. WAPDA repays the said loans to GoP in Pak rupees from earnings of sale of power to CPPA-G. The debt service cost in respect of foreign relent loans is added in the power sale tariff as a pass through cost and this high rate of interests adversely affect the electricity consumers.

4. In this regard, it is further highlighted that, NEPRA, vide its determination letter dated 22.11.2017 (F/A), directed the petitioner (WAPDA) to submit summary to the GoP for modification of the relending rates at actual terms & conditions available to GoP, so that in the next petition, the cost of debt can be reduced and its benefit can be passed on to the consumer.

5. Foregoing in view, Economic Affairs Division is requested to consider the request and matter may be referred to the ECC for approval of revision of the interest rates for **WAPDA** at **on-lending rates** so that the debt servicing cost can be reduced and its benefit be passed on to the end consumers of electricity.

(Muhammad Zeeshan Ishaq)
Section Officer (HP)
051-9244923

The Secretary,
Economic Affairs Division,
Government of Pakistan,
Islamabad.

DM (A&F) CP-I
For R&R pls
23/1

CC:

- Chairman WAPDA, WAPDA House, **Lahore**.
- PS to Secretary, Ministry of Water Resources, **Islamabad**
- APS to Joint Secretary (W), Ministry of Water Resources, **Islamabad**

Attachment - A

MOST IMMEDIATE

GOVERNMENT OF PAKISTAN
MINISTRY OF WATER AND POWER
*****

No. 7(3)/2012-HP

Islamabad, December 01, 2016.

Chairman WAPDA,
Wapda House,
Lahore.

Subject: FINANCING FOR DIAMER BHASHA DAM.

I am directed to enclose herewith a copy of the power point presentation citing the financing strategy for Diamer Basha Dam Project and to state that WAPDA shall immediately initiate necessary action for submitting two updated PC-Is (one for dam part and the other for power generation) as stipulated in the presentation.

2. Further, WAPDA is also advised to hire international consultants to review the project design and other activities related to the Project.

3. This may please be accorded Top Priority.

(Sajeel Saeed)
Section Officer (HP)
Tele: 051-9244923

Cc:

PSO to Secretary, Water and Power, Islamabad.
SPS to Additional Secretary-II, Ministry of Water and Power, Islamabad.

SECRET

Case No.ECNEC-24/4/2020
Dated: 30th April, 2020

DIAMER BASHA DAM PROJECT (ACQUISITION OF LAND AND RESETTLEMENT), 2ND REVISED PC-I

DECISION

The Executive Committee of the National Economic Council (ECNEC) considered the summary dated 28th April, 2020 submitted by the Ministry of Planning, Development and Special Initiatives regarding Diamer Basha Dam Project (Acquisition of land and Resettlement), 2nd Revised PC-I and approved the project at revised cost of Rs.17[illegible] million including IDC of Rs.11,386 million with the direction that the legal, financial and codal formalities will be complied by the Sponsors/Executers.

II. The ECNEC also directed Ministry of Water Resources to rationalize the cost of Pay & Allowances and Admn Expenses component of the project.

***

No. 7(3)/2012-HP
Government of Pakistan
Ministry of Water & Power

Islamabad the March 25, 2015

Chairman, WAPDA,
Wapda House,
Lahore.

Subject: ADMINISTRATIVE APPROVAL

I am directed to convey the administrative approval of the Government of Pakistan for execution of the Project "Acquisition of Land and Resettlement Diamer Basha Dam Project-Revised PC-I (AL&R)" approved by the ECNEC in its meeting held on 02-03-2015. Decision is reproduced below:-

"The Executive Committee of the National Economic Council considered the summary dated 19th February, 2015 submitted by the Ministry of Planning, Development and Reform on "Acquisition of Land and Resettlement Diamer Basha Dam Project (Revised-PC-I) and approved the project at a total cost of Rs. 101,372 million with nil FEC".

2. Cost Summary of the project is given as under:-

(Rs. in Million)

Sr. No.	Item Description	Approved cost
A	Compensation of Land & Assets	
1.	Acquisition of Land	42,004
2.	Compensation of Assents	7,882
	Subject: Total (A)	49,886
B	Social Safeguards	
1.	Monitoring & Evaluation Plan	186
2.	Relocation Management Plan	397
3.	Cultural Heritage Management Plan	267
4.	Gender Action Plan	76
5.	Public Consultation & Information Plan & Capacity Building Training Programme.	78
6.	Human Immunodeficiency Virus (HIV) and Sexually Transmitted Diseases (STDs) Management Plan.	24
7.	Fisheries Management Plan	398
8.	Labour Camp Management Plan	30
9.	Project NGO	175
10.	Livelihood Interventions (project & community share)	1,400
11.	Social Safety Net	2,445
12.	Education Sector Development Plan	1,753
13.	Health Service Plan	217

14.	Business/Livelihood Restoration Plan	1,177
15.	Independent Technical Panel	25
16.	Social Impact Assessment/Research Studies.	20
	Sub Total (B)	8,668
C. Environment Management		
1.	Environmental Managements Plan	634
	Sub Total (C)	634
D. Resettlement Related Infrastructures.		
1.	3 Nos. Composite Model Villages	8,668
2.	Right Bank Periphery Road	11,863
3.	Integrated Area Development Plan	3,500
	Sub: Total(D)	24,031
1.	Pay & Allowances and Administrative Expenses	3,634
2.	Engineering, Consultancy & Contract Management @ 3% of D	721
3.	Contingencies/Miscellaneous (Lum Sum)	1,000
4.	Authority Overheads @ 1 of Total	832
5.	Escalation	11,966
	Total Cost	101,372

4. The monthly progress report in respect of above mentioned scheme should be submitted regularly.

5. All codal formalities and guidelines may be observed strictly while implementing the scheme.

(SAJEEL SAEED)
Section Officer (HP)
051-9244872

Copy forwarded to:-

1. Secretary Finance, Finance Division Islamabad.
2. Joint Secretary (Committee) Cabinet Division, Islamabad.
3. DFA (WAP) Islamabad.
4. Assistant Chief, PIA Section, Ministry of Planning, Development & Reform Islamabad.
5. CEA/CFFC, Islamabad.
6. Accounts Officer (B&A), Ministry of Water and Power, Islamabad.
7. AC (Dev) Ministry of Water and Power, Islamabad.
8. Section Officer (Progress-II) Cabinet Division, Islamabad

Annex-1

No. 1(20)/2002-AC
Government of Pakistan
Ministry of Water Resources
6-Ataturk Avenue, G-5/1, Islamabad

December 12, 2018

Chairman WAPDA,
WAPDA House,
Lahore.

Subject:- **ADMINISTRATIVE APPROVAL –DIAMER BASHA DAM PROJECT (INCLUSION OF TANGIR HYDROPOWER PROJECT**

I am directed to state in continuation of this Ministry's correspondence on the subject cited above, bearing even number dated 22-05-2018, that pursuant to the provision laid down at paragraph 6.32 to 6.34 of Manual for Development Projects June 1991 and amended from time to time, this Ministry conveys the Administrative Approval of the Government of Pakistan for execution of the project "Diamer Basha Dam Project (Inclusion of Tangir Hydropower Project)" at cost of Rs. 479.686 billion including FEC of Rs. 154.000 billion in accordance with the ECNEC decision vide M/o PD&R O.M No. 10(853)PIA-II/PD/2018 dated 28-11-2018 and corrigendum No. 10(853)PIA-II/PD/2018 dated 28-11-2018 (copies attached) as re-considered and approved by ECNEC in its meeting held on 14-11-2018. Decision of the forum is reproduced below, so that the Project Director/Executing Agency shall be fully aware of his responsibilities in complying with the conditions imposed by the approving body, before, during and after the implementation of the project.

2. Decision of the forum:-

"The Executive Committee of the National Economic Council considered the summary dated 7th November, 2018 submitted by the Ministry of Planning, Development and Reform regarding the Diamer Basha Dam Project (Inclusion of Tangir Hydropower Project) and approved the project with inclusion of Tangir Hydropower Project component amounting to Rs. 5.686 billion in the Diamer Basha Dam Project. The cost of Diamer Basha Dam stands revised to Rs. 479.686 billion (Diamer Basha Dam Project cost of Rs. 474 billion THPP Cost of Rs. 5.686 billion) including FEC of Rs. 154 billion".

3. The new/adjusted approved cost summary of the project is given below:-

(Rs. in billion)

Sr.No	Items	Local	FEC	Approved Cost
A	**Cost before Inclusion of Tangir Hydropower Project**	-	-	-
i	Contract Package MW-I	135.000	98.000	233.000
ii	Contract Package HM-I	4.000	32.000	36.000
iii	Consultancy Services	6.000	5.000	11.000
iv	Project Office	6.000	0.000	6.000

(Rs. in billion)

Sr.No	Items	Local	FEC	Approved Cost
v	Physical Contingency	12.000	1.000	13.000
vi	Duties and Taxes	2.000	0.000	2.000
vii	Escalation During Construction	88.000	18.000	106.000
viii	WAPDA's Overhead	10.000	0.000	10.000
ix	KKH Relocation	57.000	0.000	57.000
	Subtotal (A)	320.000	154.000	474.000
B	Cost of Tangir Hydropower Project	5.686	0.000	5.686
	Total Cost (A+B)	325.686	154.000	479.686

4. The implementation period of the project is 60 months as per the directions conveyed vide Ministry of Planning, Development and Reform's O.M No. 10(853)PIA-II/PD/2018 dated 28-11-2018.

5. The monthly progress report in respect of the above mentioned project shall be submitted regularly duly complying with the directions of the approving forum as noted in the decision. PC-III of the scheme shall be submitted to the Ministry within 20 days of the closing of each quarter, and PC-IV shall be submitted on completion of the project.

6. All codal formalities, guidelines shall be observed strictly while implementing the scheme. Being sponsor, this Ministry shall be kept on board during all the important stages involved in the project life cycle.

(Muhammad Saleem Sajid)
Assistant Chief (Dev.)

Copy forwarded to:-

1) Secretary, Ministry of Planning, Development and Reform (5 copies).
2) Secretary, Cabinet Division, Islamabad.
3) Secretary, Finance Division Islamabad.
4) DFA (WR) Islamabad.
5) Assistant Chief, PIA Section, Ministry of Planning, Development & Reform Islamabad.
6) CEA/CFFC, Islamabad.
7) Accounts Officer (B&F), Water Resources Division, Islamabad.
8) S.O (DW), Water Resources Division, Islamabad.
9) PS to Secretary, Ministry of Water Resources, Islamabad.

Action By | For Info
MW, Advisor (D)
GM DBD

(Muhammad Saleem Sajid)
Assistant Chief (Dev.)
051-9244920

ent

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
t	Tarbela	Warsak	Dubair	Allai	Khan	Jabban	Dargai	Ker. Garhi	Chitral	T-4	Golen Gol	G. Barotha	Chashma	Jinnah	Rsul	Nandipur	Shadiwal	Chichoki	Renala	Mangla	Gomal Zam	TOTAL
)	10,800	774	595	463	299	135	89	17	4	3,825	444	6,600	800	298	61	42	31	31	3	4,744	50	30,104
)	3,478	243	130	121	72	22	20	4	1	1,410	108	1,450	184	96	22	14	14	13	1	1,000	17	8,420
)	6,476	1,444	232	254	320	165	220	103	77	865	185	2,859	1,521	665	177	165	164	153	46	3,574	257	19,724
)	319	98	61	656	300	143	6	4	2	1,769	608	1,469	510	535	7	8	12	13	1	994	213	7,726
)	1,690	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,690
)	1,361	242	3,695	2,215	1,443	592	10	4	4	9,791	3,932	7,292	1,481	1,634	32	17	11	25	3	2,841	539	37,163
)	14,580	1,019	545	507	302	92	84	17	4	2,053	1,097	6,078	771	402	92	59	59	54	4	4,192	73	32,085
)	(225)	(16)	(0)	(1)	(2)	(1)	(2)	(1)	(0)	(1)	(0)	(56)	(48)	(149)	(5)	(4)	(1)	(3)	(3)	(85)	(94)	(898)
)	24,204	2,788	4,533	3,632	2,363	991	318	127	87	14,477	5,822	17,442	4,235	3,087	305	245	244	242	52	11,513	988	97,691
	2,842	199	108	99	59	18	16	3	1	-	-	1,185	150	78	18	11	11	11	1	817	14	5,840
	(13,989)	(339)	3,093	2,167	1,466	725	2	28	36	-	-	3,868	1,843	1,535	(7)	29	8	7	26	(328)	753	936
	92	616	1,993	1,934	1,101	533	69	44	37	-	-	5,953	1,613	490	66	54	53	41	23	2,502	458	17,675
	5,689	399	(339)	299	18	364	6	6	2	7,119	3,607	2,036	272	211	(10)	(11)	(6)	1	(3)	1,466	(372)	20,950
	6,380	685	(119)	399	176	137	72	27	30	7,309	3,116	1,943	587	800	49	14	41	54	7	2,265	(392)	23,660
	1,014	1,562	4,735	4,898	2,819	1,777	165	106	105	14,427	6,923	14,985	4,465	3,116	116	97	107	113	57	6,743	470	68,802
	25,217	4,349	9,267	8,530	5,182	2,769	463	235	192	28,904	12,745	32,427	8,700	6,203	419	341	353	353	109	16,256	1,458	166,493
												6,377	809	422	97	62	62	57	4	-	-	11,024
	2,664	186	100	93	55	17	15	3	1	-	-											
	27,881	4,536	9,367	8,623	5,237	2,786	499	238	192	28,904	12,745	38,804	9,509	6,625	516	403	413	412	113	16,256	1,458	177,517

Annexure-I

Ref. No. 000923/18

October 13, 2018

General Manager (Finance) Power
Pakistan Water & Power Development Authority (WAPDA)
Room No. 713
WAPDA House
LAHORE

Subject: *Report on IAS -19 Disclosures as at 30.06.2018*

Dear Sir,

Please find attached Valuation Report containing IAS-19 disclosures (based on the revised version of IAS-19) for the Post-Retirement Free Electricity Scheme of WAPDA Hydroelectric for the year 2017–18.

Please, do not hesitate in contacting us if you have any queries regarding the Report.

Yours faithfully,

TANVEER ALAM
Associate of the Society of Actuaries, USA
Associate of Pakistan Society of Actuaries
CEO & Consulting Actuary
+92-333-4266448

Pakistan Water & Power Development Authority LAHORE

October 13, 2018

VALUATION REPORT

WAPDA HYDROELECTRIC

POST-RETIREMENT FREE ELECTRICITY SCHEME - DISCLOSURES AS PER THE REQUIREMENTS OF THE REVISED VERSION OF INTERNATIONAL ACCOUNTING STANDARD – 19 AS AT 30.06.2018

TABLE OF CONTENTS

Executive Summary

1. Purpose of the Report

The Actuarial Report provides accounting entries/disclosures in respect of the Post-Retirement Free Electricity provided by WAPDA Hydroelectric. The disclosures are prepared in accordance with the requirements of the revised version of International Accounting Standard 19 (IAS-19).

The objective of the Report is to assist the Entity in preparing its annual accounts. Therefore, the figures in this report should be used for reporting purposes only and not for the funding of benefits.

2. Valuation Data

A summary of the data used for the valuation is as follows:

	Number of Members
Active Employees	7,287
Pensioners	8,411

Details of the valuation data is given in the next Section of the Report.

3. Amount to be Recognised in Profit & Loss Account for the Current Year

	PKR 000's
Amount to be recognized as expense during the year 2017–18	281,574

4. Amount to be Recognised in Other Comprehensive Income (OCI)

	PKR 000's
Amount to be recognized in OCI during the year 2017–18	(122,800)

5. Statement of Financial Position as at the End of Year

	PKR 000's
Amount to be recognised as Net Defined Benefit (i.e. Post-Retirement Free Electricity) Liability as at June 30, 2018	2,222,753

6. Reconciliation of Liability

Net Defined Benefit Liability as at 30th June 2017	2,148,227
Expense Chargeable to P&L during the year	281,574
Amount Chargeable to OCI during the year	(122,800)
Benefit paid during the year	(84,248)
Net Defined Benefit Liability as at 30th June 2018	**2,222,753**

Category	Liability
Active Employees	821,893
Pensioners	1,400,860
Total	**2,222,753**

7. Split of P&L Charge and Liability

Active Employees:

PKR 000's

Formation	P&L Charge	Liability
ARE HPS RENALA	839	5,024
CE (P) TARBELA	12,402	74,250
CE (HPS) CHASHMA	8,802	52,697
CE 3HHP BESHAM	1,197	7,169
CE&PD CB CRBC CHASHMA	11,494	68,817
CE(NORTH) WARSAK	19,245	115,218
CE(P) GB BAROTHA ATTOCK	13,683	81,922
CE/PD 4TH EXT. TARBELA	220	1,315
DF (HD)	81	484
DG (P&D) WAPDA	402	2,405
GM (HYDEL)	1,070	6,409
GM (MDO) MANGLA	18,750	112,257
GM (TDP)	23,186	138,812
GM FINANCE (POWER)	4,367	26,146
GM HYDRO PLANNING	475	2,841
GM(GBHP) HATTIAN	7,496	44,879
MF (HYDEL OPERATION)	141	842
PD MANGLA WATERSHED MANAGEMENT RAWALPINDI	284	1,701
RE (HPS) DARGAI	1,182	7,079
RE (HPS) GOMAL ZAM D.I.KHAN	807	4,832
RE (HPS) JABBAN	768	4,598
RE (HPS) KURRAM GARHI BANNU	737	4,411
RE (HPS) WAPDA CHITRAL	342	2,050
RE (JHPS) KALABAGH MIANWALI	2,358	14,117
RE (PS) CHICHOKI	838	5,014
RE (PS) MANGLA	3,587	21,475
RE (PS) NANDIPUR	635	3,802
RE (PS) RASUL	591	3,538
RE (PS) SHADIWAL	447	2,675
RE HPS AKP BESHAM	296	1,773
RE HPS DKP BESHAM	185	1,105
RE HPS GOLEN GOL, CHITRAL	62	369
RE HPS KKP BESHAM	188	1,123
SE (SHPS) MANGLA	123	744
Total	137,280	821,893

Pensioners:

PKR 000's

LRO/Office	P&L Charge	Liability
GM (D. BASHA DAM) (BDP)	632	6,133
CE/PD CHASHMA BARRAGE & CJ LINK PROJECT (CBJ)	8,378	81,347
RESIDENT ENGINEER (HPS) WAPDA CHITRAL (CHC)	165	1,602
PURCHASE & DISPOSAL(P&D)DIRECTORATE (DGP)	1,670	16,212
RE (HPS), DUBAIR KHWAR BESHAM (DKB)	29	280
RE POWER STATION WAPDA DARGAI (DPS)	771	7,483
CE/PD GBHP WAPDA GHAZI BROTHA (GBH)	5,381	52,245
PD, GOLEN GOL HYDROPOWER PROJECT, WAPDA CHITRAL (GGC)	100	970
RE HYDEL POWER STATION NANDIPUR (GHN)	595	5,777
SE (SMALL HYDEL POWER STATION) MANGLA (GHS)	5,050	49,025
GM (GHAZI BROTHA HATTIAN) (GMH)	3,992	38,759
G.M (HYDEL) (GNH)	3,145	30,540
RE GOMAL ZAM HYDEL POWER STATION D.I.KHAN (GPS)	360	3,494
CE (POWER) TARBELA (GPT)	13,727	133,270
GM (HYDRO PLANNING) (HEP)	5,241	50,867
CE (O&M) POWER, 3-HHP WAPDA BESHAM (HKK)	636	6,169
GM (FINANCE) POWER (HOP)	10,339	100,384
CE/PD DASU HPP (HPD)	359	3,484
ARE HYDEL POWER STATION RENALA (HPR)	193	1,877
RE JINNAH HYDEL POWER STATION (JHM)	781	7,584
SE/PROJECT DIRECTOR (REHAB) JABBAN HEPS PROJECT DARGAI (JHS)	128	1,242
A (RE) KURRAM GARHI POWER STATION BANNU (KGB)	158	1,533
CE/PD KEYAL KHWAR HYDRO POWER PROJECT (KKH)	162	1,568
CE/PD MANGLA REFURBISHMENT PROJECT (MRP)	75	724
PD (MANGLA WATER SHED MANAGEMENT PROJECT) WAPDA (MWP)	1,190	11,549
SE R&L GBHP WAPDA GHAZI (PHB)	1,034	10,043
DIRECTOR PATAN & THAKOT (P&T) (PPD)	13	128
RE HYDEL POWER STATION CHICHOKI MILLIAN (RCH)	738	7,165
CHIEF ENGINEER (Civil) MANGLA DAM ORGNIZATION (RDM)	13,647	132,489
G.M (TDP)	42,660	414,161
RE HYDEL POWER STATION CHASHMA (REC)	1,125	10,920
RE (PS) MANGLA	7,492	72,733
RE HYDEL POWER STATION SHADIWAL GUJRAT (RES)	224	2,177
RE HYDEL POWER STATION RASUL (RSL)	685	6,647
HYDRO POWER TRAINING INSTITUTE (SPM)	17	162
CE/PD TARBELA 4TH EXT HYDROPOWER PROJECT (TXT)	110	1,069

LAHORE.

CE WARSAK (WAR)	13,264	128,777
CE/PD 2ND REHAB PROJECT, WARSAK (WRP)	28	271
Total	144,294	1,400,860

Main Report

Key Information

Date of Valuation

The valuation is conducted, using the prescribed Actuarial Method, as at June 30, 2018.

Post-Retirement Free Electricity

A summary of the benefit structure of Post-Retirement Free Electricity provided by WAPDA Hydroelectric is given in Appendix-II of the Report.

Risks Associated with the Post-Retirement Free Electricity Scheme

- The Entity provides Post-Retirement Free Electricity to all of its regular employees.
- The Post-Retirement Free Electricity Scheme is an un-funded Scheme. This mean that the cost incurred by WAPDA on providing this benefit is not paid from any Fund.
- The Post-Retirement Free Electricity liability reflected in the Entity's Accounts provides a reasonable security of the accrued rights.
- The Post-Retirement Free Electricity Scheme is categorised as a post-employment defined benefit scheme in accordance with the provisions of IAS-19. The liabilities of the scheme are sensitive to the increases in electricity cost in future.

Valuation Data

The data used for the valuation has been checked for any inaccuracies. However, no audit of the data has been conducted. The details are as follows:

	Number of Members
Active Employees	7,287
Pensioners	8,411

Formation-wise breakup of Active Employees:

Formation	No. of Employees
ARE HPS RENALA	27
CE (P) TARBELA	696
CE (HPS) CHASHMA	322
CE 3HHP BESHAM	44
CE&PD CB CRBC CHASHMA	368
CE(NORTH) WARSAK	632
CE(P) GB BAROTHA ATTOCK	480
CE/PD 4TH EXT. TARBELA	64
DF (HD)	29
DG (P&D) WAPDA	14
GM (HYDEL)	87
GM (MDO) MANGLA	744
GM (TDP)	1,169
GM FINANCE (POWER)	134
GM HYDRO PLANNING	208
GM(GBHP) HATTIAN	624
MF (HYDEL OPERATION)	46
PD MANGLA WATERSHED MANAGEMENT RAWALPINDI	24
RE (HPS) DARGAI	105
RE (HPS) GOMAL ZAM D.I.KHAN	81
RE (HPS) JABBAN	67
RE (HPS) KURRAM GARHI BANNU	64
RE (HPS) WAPDA CHITRAL	34
RE (JHPS) KALABAGH MIANWALI	256
RE (PS) CHICHOKI	68
RE (PS) MANGLA	432
RE (PS) NANDIPUR	94
RE (PS) RASUL	98
RE (PS) SHADIWAL	85
RE HPS AKP BESHAM	56
RE HPS DKP BESHAM	45
RE HPS GOLEN GOL, CHITRAL	19
RE HPS KKP BESHAM	48
SE (SHPS) MANGLA	23
Total	**7,287**

LRO-wise breakup of Pensioners:

LRO/Office	No. of Pensioners
GM (D. BASHA DAM) (BDP)	27
CE/PD CHASHMA BARRAGE & CJ LINK PROJECT (CBJ)	510
RESIDENT ENGINEER (HPS) WAPDA CHITRAL (CHC)	6
PURCHASE & DISPOSAL(P&D)DIRECTORATE (DGP)	103
RE (HPS), DUBAIR KHWAR BESHAM (DKB)	1
RE POWER STATION WAPDA DARGAI (DPS)	41
CE/PD GBHP WAPDA GHAZI BROTHA (GBH)	276
PD, GOLEN GOL HYDROPOWER PROJECT, WAPDA CHITRAL (GGC)	4
RE HYDEL POWER STATION NANDIPUR (GHN)	33
SE (SMALL HYDEL POWER STATION) MANGLA (GHS)	294
GM (GHAZI BROTHA HATTIAN) (GMH)	177
G.M (HYDEL) (GNH)	174
RE GOMAL ZAM HYDEL POWER STATION D.I.KHAN (GPS)	15
CE (POWER) TARBELA (GPT)	809
GM (HYDRO PLANNING) (HEP)	319
CE (O&M) POWER, 3-HHP WAPDA BESHAM (HKK)	27
GM (FINANCE) POWER (HOP)	695
CE/PD DASU HPP (HPD)	13
ARE HYDEL POWER STATION RENALA (HPR)	9
RE JINNAH HYDEL POWER STATION (JHM)	44
SE/PROJECT DIRECTOR (REHAB) JABBAN HEPS PROJECT DARGAI (JHS)	5
A (RE) KURRAM GARHI POWER STATION BANNU (KGB)	6
CE/PD KEYAL KHWAR HYDRO POWER PROJECT (KKH)	6
CE/PD MANGLA REFURBISHMENT PROJECT (MRP)	4
PD (MANGLA WATER SHED MANAGEMENT PROJECT) WAPDA (MWP)	85
SE R&L GBHP WAPDA GHAZI (PHB)	43
DIRECTOR PATAN & THAKOT (P&T) (PPD)	1
RE HYDEL POWER STATION CHICHOKI MILLIAN (RCH)	41
CHIEF ENGINEER (Civil) MANGLA DAM ORGNIZATION (RDM)	816
G.M (TDP)	2,506
RE HYDEL POWER STATION CHASHMA (REC)	47
RE (PS) MANGLA	419
RE HYDEL POWER STATION SHADIWAL GUJRAT (RES)	10
RE HYDEL POWER STATION RASUL (RSL)	38
HYDRO POWER TRAINING INSTITUTE (SPM)	1
CE/PD TARBELA 4TH EXT HYDROPOWER PROJECT (TXT)	4

CE WARSAK (WAR)	801
CE/PD 2ND REHAB PROJECT, WARSAK (WRP)	1
Total	8,411

Method & Assumptions

Valuation Method Used

IAS-19 mandates Projected Unit Credit (PUC) Method (which is an Actuarial Technique) to determine the present value of defined benefit obligations, current service cost and past service cost. The same method is used in the underlying valuation.

Assumptions

The economic and demographic assumptions used in the valuation are unbiased, mutually compatible and best estimates as per the requirements of IAS-19. Financial assumptions are based on market expectations as at the valuation date. These assumptions are as follows:

Discount Rate

The market of high quality corporate bonds is not deep enough in Pakistan. Therefore, discount rate is based on market yields on government bonds as at the valuation date. In general, the duration of Post-Retirement Free Electricity liabilities is significantly long. Government bonds of similar duration are not available. It may be appropriate to assume same reinvestment interest rate as can be earned at the currently available government bonds. Thus the discount rate used for the valuation is 11.75% per annum which is consistent with the relevant guidelines of the Pakistan Society of Actuaries.

Rate of Growth in Electricity Cost

Cost of Post-Retirement Free Electricity for a retiree/beneficiary is expected to increase in excess of inflation growth and general salary increases. It has been deemed appropriate to assume that the average rate of growth in Post- Retirement Electricity cost will be 10.75% per annum.

Post-Retirement Free Electricity Cost

The retirees and their dependants are entitled to 50% of the free electricity facility as compared to the active employees.

In the absence of relevant information, an appropriate approach would be to take average electricity cost (by dividing total retirees' electricity cost by the total number of retirees/beneficiaries) to determine Post-Retirement Electricity Benefit liability for actives and pensioners. This method assumes that every retiree/beneficiary utilises electricity facility at the average cost. The same approach is adopted in this report.

Electricity Cost of retirees/beneficiaries was not available. The entity provided the total electricity cost (i.e. for both in-service employees + pensioners) incurred during the year. It has been deemed appropriate to assume a 2/3:1/3 ratio of electricity cost between the active employees and pensioners respectively. The total cost for 2017-18 intimated by the entity is Rs.252,744,332.

The resulting estimated total Electricity Cost incurred by the retirees/beneficiaries during 2017-18 is Rs.84,248,111. The average annual Electricity Cost per retiree works out to Rs.10,016. This average cost was Rs.10,755.

Mortality, Withdrawal, Disability Retirement Rates

The mortality rates used for active employees are based on SLIC (2001-05) Mortality Table. The previous actuarial valuation was based on EFU (61-66) Mortality Table.

The mortality rates used for Pensioners are adjusted to reflect mortality improvements occurred. However, no future mortality improvements have been taken into account.

The rates for withdrawal from service and retirement on ill-health grounds are based on industry/country experience. These rates are given in the Appendix-I.

Comparison of Assumptions with previous Financial Year

The change in economic assumptions as compared with previous year's basis is as follows:

	2017-18	2016-17
Discount rate	11.75%	11.00%
Expected rate of increase in Post-Retirement Free Electricity cost in future years	10.75%	10.00%

The gaps between economic assumptions are critical for the actuarial valuation of Post-Retirement Free Electricity benefits. The most important difference in this respect is between Discount Rate and the rate of increase in Post-Retirement Free Electricity cost. Any changes in this gap can generate significant gain/loss during the inter-valuation period.

The critical gap between discount rate and Post-Retirement Free Electricity cost increase rate as at 30.06.2018 is one percentage point (1%) which is consistent with previous year assumptions.

Since the critical gap between economic assumptions is same as used in the previous year, therefore, there will be no significant actuarial gain/loss as at 30.06.2018 due to changes in economic assumptions.

Actuarial Gain/Loss Recognition

The amount of gains/losses has been charged immediately to Other Comprehensive Income as per the provisions of the revised version of IAS-19.

IAS-19 Disclosures

All figures given in this section are in Pak Rupees and in 000's:

Statement of Financial Position as at Beginning of the Year (BoY)

	2017-18	2016-17
Present Value of Defined Benefit Obligations as at 30th June	2,148,227	2,112,826
Less Fair Value of Plan Assets	-	-
Defined Benefit Liability as at 30th June BoY	**2,148,227**	**2,112,826**

Reconciliation of Present Value of Defined Benefit Obligations

	2017-18	2016-17
Present Value of Defined Benefit Obligations as at 30th June BoY	2,148,227	2,112,826
Service Cost (Current Service Cost + Past Service Cost + Gains/Losses on Settlements)	49,903	65,284
Interest on Defined Benefit Obligation	231,671	232,411
Benefits Paid during the Year	(84,248)	(262,294)
Actuarial (Gains)/Losses	(122,800)	-
Present Value of Defined Benefit Obligations as at 30th June EoY	**2,222,753**	**2,148,227**

Amount Chargeable to Profit & Loss for the Current Year

	2017-18	2016-17
Service Cost	49,903	65,284
Net Interest on Net Defined Benefit Liability (Asset)	231,671	232,411
Total Amount Chargeable to P&L Account	**281,574**	**297,695**

Remeasurements of Net Defined Benefit Liability

	2017-18	2016-17
Actuarial (Gains)/Losses due to changes in Demographic Assumptions	-	-
Actuarial (Gains)/Losses due to changes in Financial Assumptions	-	-
Actuarial (Gains)/Losses due to experience adjustments	(122,800)	-
Return on Plan Assets	-	-
Effect of Changes in Asset Ceiling	-	-
Amount Chargeable to Other Comprehensive Income (OCI)	**(122,800)**	**-**

LAHORE

Statement of Financial Position as at End of the Year (EoY)

	2017-18	2016-17
Present Value of Defined Benefit Obligations as at 30th June EoY	2,222,753	2,148,227
Less Fair Value of Plan Assets	-	-
Net Defined Benefit Liability as at 30th June EoY	**2,222,753**	**2,148,227**

Expense Chargeable to Profit & Loss for the Next Year

	2018-19	2017-18
Service Cost (Current Service Cost + Past Service Cost + Gains/Losses on Settlements)	52,556	49,903
Net Interest Cost on Net Defined Benefit Liability	261,173	231,671
Total Amount Chargeable to P&L Account for the Next Year	**313,729**	**281,574**

Reconciliation of Net Defined Benefit Liability

	2017-18	2016-17
Defined Benefit Liability as at BoY	2,148,227	2,112,826
Cost Chargeable to P&L during the Year	281,574	297,695
Cost Chargeable to OCI	(122,800)	-
Benefits Paid during the Year	(84,248)	(262,294)
Net Defined Benefit Liability as at EoY	**2,222,753**	**2,148,227**

	2017-18
Average Expected Remaining Working Lifetime of Members	9 Years
Average duration of the liabilities (actives + pensioners)	26 Years

Sensitivity Analysis as at 30.06.2018

	Discount Rate + 1%	Discount Rate - 1%	Electricity Cost Increase + 1%	Electricity Cost Increase - 1%
PVDBO	1,964,243	2,543,768	2,469,180	2,016,330

TANVEER ALAM
Associate of the Society of Actuaries, USA

Appendix-I

Age	Death Rate	Withdrawal Rate	Ill-health Rate	Age	Death Rate	Withdrawal Rate	Ill-health Rate
20	0.000958	0.14344	0.00000	53	0.008244	0.00506	0.00162
21	0.000974	0.13388	0.00000	54	0.009150	0.00506	0.00185
22	0.000991	0.12431	0.00000	55	0.010135	0.00506	0.00210
23	0.001011	0.11475	0.00000	56	0.011198	0.00506	0.00238
24	0.001032	0.10519	0.00000	57	0.012336	0.00506	0.00268
25	0.001057	0.09563	0.00000	58	0.013544	0.00506	0.00300
26	0.001084	0.08944	0.00000	59	0.014813	0.00506	0.00335
27	0.001115	0.08438	0.00000	60	0.000000	0.00000	0.00000
28	0.001150	0.07819	0.00000				
29	0.001190	0.07256	0.00000				
30	0.001235	0.06694	0.00003				
31	0.001287	0.06188	0.00005				
32	0.001345	0.05738	0.00008				
33	0.001413	0.05288	0.00010				
34	0.001489	0.04781	0.00013				
35	0.001577	0.04275	0.00015				
36	0.001678	0.03881	0.00018				
37	0.001793	0.03431	0.00020				
38	0.001924	0.03038	0.00023				
39	0.002075	0.02588	0.00026				
40	0.002248	0.02138	0.00030				
41	0.002445	0.01913	0.00034				
42	0.002671	0.01744	0.00039				
43	0.002928	0.01519	0.00045				
44	0.003221	0.01294	0.00051				
45	0.003554	0.01069	0.00058				
46	0.003932	0.00956	0.00066				
47	0.004360	0.00900	0.00074				
48	0.004842	0.00788	0.00084				
49	0.005384	0.00675	0.00095				
50	0.005991	0.00619	0.00109				
51	0.006668	0.00563	0.00124				
52	0.007418	0.00563	0.00142				

Appendix-II

Summary of the Benefit Structure of WAPDA Hydroelectric Post-Retirement Free Electricity Scheme

WAPDA Hydroelectric provides Free Electricity benefits to its pensioners.

The free electricity to which a retired employee (or his /her spouse) is entitled depends upon the employee's basic pay scale (BPS) at the time of leaving entity's service.

The rate of the benefit is 50% of the number of units to which he/she was entitled during active service, the following table shows the BPS wise number of units allowed per month for a retiree:

BPS at Retirement	Free Electricity Units Allowed Per Month
1-4	50
5-10	75
11-15	100
16	150
17	225
18	300
19	440
20	550
21	650
22	650

Annex-1 1/2

Ref. No. 000921/18

October 13, 2018

General Manager (Finance) Power
Pakistan Water & Power Development Authority (WAPDA)
Room No. 713
WAPDA House
LAHORE

Subject: *Report on IAS -19 Disclosures as at 30.06.2018*

Dear Sir,

Please find attached Valuation Report containing IAS-19 disclosures (based on the revised version of IAS-19) for the Post-Retirement Medical Benefit Scheme of WAPDA Hydroelectric for the year 2017–18.

Please, do not hesitate in contacting us if you have any queries regarding the Report.

Yours faithfully,

TANVEER ALAM
Associate of the Society of Actuaries, USA
Associate of Pakistan Society of Actuaries
CEO & Consulting Actuary
+92-333-4266448

Pakistan Water & Power Development Authority LAHORE

October 13, 2018

VALUATION REPORT

WAPDA HYDROELECTRIC

POST-RETIREMENT MEDICAL BENEFIT SCHEME - DISCLOSURES AS PER THE REQUIREMENTS OF THE REVISED VERSION OF INTERNATIONAL ACCOUNTING STANDARD 19 AS AT 30-06-2018

TABLE OF CONTENTS

Executive Summary

1. Purpose of the Report

The Actuarial Report provides accounting entries/disclosures in respect of the Post-Retirement Medical Benefits provided by WAPDA Hydroelectric. The disclosures are prepared in accordance with the requirements of the revised version of International Accounting Standard 19 (IAS-19).

The objective of the Report is to assist the Entity in preparing its annual accounts. Therefore, the figures in this report should be used for reporting purposes only and not for the funding of benefits.

2. Valuation Data

A summary of data used for the valuation is as follows:

	Number of Members
Active Employees	7,287
Pensioners	8,411

Details of the valuation data are given in the next Section of the Report.

3. Amount to be Recognised in Profit & Loss Account for the Current Year

	PKR 000's
Amount to be recognized as expense during the year 2017–18	435,011

4. Amount to be Recognised in Other Comprehensive Income (OCI)

	PKR 000's
Amount to be recognized in OCI during the year 2017–18	9,739

5. Statement of Financial Position as at the End of Year

	PKR 000's
Amount to be recognised as Net Defined Benefit (i.e. Post-Retirement Medical Benefits) Liability as at June 30, 2018	3,403,426

6. Reconciliation of Liability

Net Defined Benefit Liability as at 30th June 2017	3,131,821
Expense Chargeable to P&L during the year	435,011
Amount Chargeable to OCI during the year	9,739
Benefit paid during the year	(173,145)
Net Defined Benefit Liability as at 30th June 2018	**3,403,426**

Category	Liability
Active Employees	1,302,975
Pensioners	2,100,451
Total	**3,403,426**

7. Split of P&L Charge and Liability

Active Employees:

PKR 000's

Formation	P&L Charge	Liability
ARE HPS RENALA	869	4,880
CE (P) TARBELA	25,789	144,886
CE (HPS) CHASHMA	9,161	51,469
CE 3HHP BESHAM	800	4,494
CE&PD CB CRBC CHASHMA	11,811	66,354
CE(NORTH) WARSAK	19,111	107,366
CE(P) GB BAROTHA ATTOCK	13,888	78,022
CE/PD 4TH EXT. TARBELA	1,514	8,507
DF (HD)	1,019	5,723
DG (P&D) WAPDA	366	2,055
GM (HYDEL)	2,643	14,850
GM (MDO) MANGLA	21,950	123,321
GM (TDP)	38,957	218,864
GM FINANCE (POWER)	4,843	27,211
GM HYDRO PLANNING	7,386	41,497
GM(GBHP) HATTIAN	19,636	110,319
MF (HYDEL OPERATION)	1,580	8,876
PD MANGLA WATERSHED MANAGEMENT RAWALPINDI	690	3,876
RE (HPS) DARGAI	4,101	23,038
RE (HPS) GOMAL ZAM D.I.KHAN	1,832	10,292
RE (HPS) JABBAN	1,984	11,146
RE (HPS) KURRAM GARHI BANNU	2,210	12,418
RE (HPS) WAPDA CHITRAL	1,100	6,178
RE (JHPS) KALABAGH MIANWALI	7,234	40,643
RE (PS) CHICHOKI	2,248	12,628
RE (PS) MANGLA	14,702	82,600
RE (PS) NANDIPUR	3,675	20,645
RE (PS) RASUL	3,289	18,479
RE (PS) SHADIWAL	2,686	15,090
RE HPS AKP BESHAM	1,074	6,032
RE HPS DKP BESHAM	1,175	6,601
RE HPS GOLEN GOL, CHITRAL	668	3,753
RE HPS KKP BESHAM	1,026	5,762
SE (SHPS) MANGLA	906	5,100
Total	231,923	1,302,975

Pensioners:

PKR 000's

LRO/Office	P&L Charge	Liability
GM (D. BASHA DAM) (BDP)	889	9,196
CE/PD CHASHMA BARRAGE & CJ LINK PROJECT (CBJ)	11,793	121,969
RESIDENT ENGINEER (HPS) WAPDA CHITRAL (CHC)	232	2,402
PURCHASE & DISPOSAL(P&D)DIRECTORATE (DGP)	2,350	24,308
RE (HPS), DUBAIR KHWAR BESHAM (DKB)	41	419
RE POWER STATION WAPDA DARGAI (DPS)	1,085	11,221
CE/PD GBHP WAPDA GHAZI BROTHA (GBH)	7,575	78,334
PD, GOLEN GOL HYDROPOWER PROJECT, WAPDA CHITRAL (GGC)	141	1,454
RE HYDEL POWER STATION NANDIPUR (GHN)	838	8,663
SE (SMALL HYDEL POWER STATION) MANGLA (GHS)	7,107	73,508
GM (GHAZI BROTHA HATTIAN) (GMH)	5,619	58,116
G.M (HYDEL) (GNH)	4,428	45,792
RE GOMAL ZAM HYDEL POWER STATION D.I.KHAN (GPS)	507	5,239
CE (POWER) TARBELA (GPT)	19,321	199,825
GM (HYDRO PLANNING) (HEP)	7,370	76,267
CE (O&M) POWER, 3-HHP WAPDA BESHAM (HKK)	894	9,250
GM (FINANCE) POWER (HOP)	14,553	150,516
CE/PD DASU HPP (HPD)	505	5,224
ARE HYDEL POWER STATION RENALA (HPR)	272	2,814
RE JINNAH HYDEL POWER STATION (JHM)	1,100	11,372
SE/PROJECT DIRECTOR (REHAB) JABBAN HEPS PROJECT DARGAI (JHS)	180	1,862
A (RE) KURRAM GARHI POWER STATION BANNU (KGB)	222	2,299
CE/PD KEYAL KHWAR HYDRO POWER PROJECT (KKH)	227	2,352
CE/PD MANGLA REFURBISHMENT PROJECT (MRP)	105	1,085
PD (MANGLA WATER SHED MANAGEMENT PROJECT) WAPDA (MWP)	1,674	17,316
SE R&L GBHP WAPDA GHAZI (PHB)	1,456	15,058
DIRECTOR PATAN & THAKOT (P&T) (PPD)	19	192
RE HYDEL POWER STATION CHICHOKI MILLIAN (RCH)	1,039	10,744
CHIEF ENGINEER (Civil) MANGLA DAM ORGNIZATION (RDM)	19,207	198,655
G.M (TDP)	60,045	620,998
RE HYDEL POWER STATION CHASHMA (REC)	1,583	16,374
RE (PS) MANGLA	10,544	109,056
RE HYDEL POWER STATION SHADIWAL GUJRAT (RES)	316	3,265
RE HYDEL POWER STATION RASUL (RSL)	964	9,966
HYDRO POWER TRAINING INSTITUTE (SPM)	24	243
CE/PD TARBELA 4TH EXT HYDROPOWER PROJECT (TXT)	155	1,602

LAHORE

CE WARSAK (WAR)	18,669	193,088
CE/PD 2ND REHAB PROJECT, WARSAK (WRP)	39	407
Total	**203,088**	**2,100,451**

Main Report

Key Information

Date of Valuation

The valuation is conducted, using the prescribed Actuarial Method, as at June 30, 2018.

Post-Retirement Medical Benefits

A summary of the benefit structure of Post-Retirement Medical Benefit provided by WAPDA Hydroelectric is given in Appendix-II of the Report.

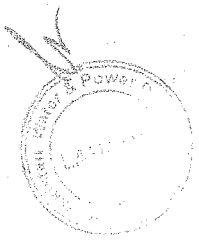
Risks Associated with the Post-Retirement Medical Benefit Scheme

- The Entity provides Post-Retirement Medical Benefits to all of its regular employees.
- The Post-Retirement Medical Benefits Scheme is an un-funded Scheme. In general, there is no practice in the local market to have a funded Post-Employment Medical Benefit Scheme.
- There is no minimum funding requirements for a Post-Retirement Medical Benefit Scheme which leads to relatively less secured Post-Retirement Medical Benefits. The Post-Retirement Medical Benefits liability reflected in the Entity's Accounts provides a reasonable security of the accrued rights.
- The Post-Retirement Medical Benefit Scheme is categorised as a post-employment defined benefit scheme in accordance with the provisions of IAS-19. The liabilities of the scheme are sensitive to the increases in medical cost incurred by retirees in future.

Valuation Data

The data used for the valuation has been checked for any inaccuracies. However, no audit of the data has been conducted. The details are as follows:

	Number of Members
Active Employees	7,287
Pensioners	8,411



Formation-wise breakup of Active Employees:

Formation	No. of Employees
ARE HPS RENALA	27
CE (P) TARBELA	696
CE (HPS) CHASHMA	322
CE 3HHP BESHAM	44
CE&PD CB CRBC CHASHMA	368
CE(NORTH) WARSAK	632
CE(P) GB BAROTHA ATTOCK	480
CE/PD 4TH EXT. TARBELA	64
DF (HD)	29
DG (P&D) WAPDA	14
GM (HYDEL)	87
GM (MDO) MANGLA	744
GM (TDP)	1,169
GM FINANCE (POWER)	134
GM HYDRO PLANNING	208
GM(GBHP) HATTIAN	624
MF (HYDEL OPERATION)	46
PD MANGLA WATERSHED MANAGEMENT RAWALPINDI	24
RE (HPS) DARGAI	105
RE (HPS) GOMAL ZAM D.I.KHAN	81
RE (HPS) JABBAN	67
RE (HPS) KURRAM GARHI BANNU	64
RE (HPS) WAPDA CHITRAL	34
RE (JHPS) KALABAGH MIANWALI	256
RE (PS) CHICHOKI	68
RE (PS) MANGLA	432
RE (PS) NANDIPUR	94
RE (PS) RASUL	98
RE (PS) SHADIWAL	85
RE HPS AKP BESHAM	56
RE HPS DKP BESHAM	45
RE HPS GOLEN GOL, CHITRAL	19
RE HPS KKP BESHAM	48
SE (SHPS) MANGLA	23
Total	**7,287**

LRO-wise breakup of Pensioners:

LRO/Office	No. of Pensioners
GM (D. BASHA DAM) (BDP)	27
CE/PD CHASHMA BARRAGE & CJ LINK PROJECT (CBJ)	510
RESIDENT ENGINEER (HPS) WAPDA CHITRAL (CHC)	6
PURCHASE & DISPOSAL(P&D)DIRECTORATE (DGP)	103
RE (HPS), DUBAIR KHWAR BESHAM (DKB)	1
RE POWER STATION WAPDA DARGAI (DPS)	41
CE/PD GBHP WAPDA GHAZI BROTHA (GBH)	276
PD, GOLEN GOL HYDROPOWER PROJECT, WAPDA CHITRAL (GGC)	4
RE HYDEL POWER STATION NANDIPUR (GHN)	33
SE (SMALL HYDEL POWER STATION) MANGLA (GHS)	294
GM (GHAZI BROTHA HATTIAN) (GMH)	177
G.M (HYDEL) (GNH)	174
RE GOMAL ZAM HYDEL POWER STATION D.I.KHAN (GPS)	15
CE (POWER) TARBELA (GPT)	809
GM (HYDRO PLANNING) (HEP)	319
CE (O&M) POWER, 3-HHP WAPDA BESHAM (HKK)	27
GM (FINANCE) POWER (HOP)	695
CE/PD DASU HPP (HPD)	13
ARE HYDEL POWER STATION RENALA (HPR)	9
RE JINNAH HYDEL POWER STATION (JHM)	44
SE/PROJECT DIRECTOR (REHAB) JABBAN HEPS PROJECT DARGAI (JHS)	5
A (RE) KURRAM GARHI POWER STATION BANNU (KGB)	6
CE/PD KEYAL KHWAR HYDRO POWER PROJECT (KKH)	6
CE/PD MANGLA REFURBISHMENT PROJECT (MRP)	4
PD (MANGLA WATER SHED MANAGEMENT PROJECT) WAPDA (MWP)	85
SE R&L GBHP WAPDA GHAZI (PHB)	43
DIRECTOR PATAN & THAKOT (P&T) (PPD)	1
RE HYDEL POWER STATION CHICHOKI MILLIAN (RCH)	41
CHIEF ENGINEER (Civil) MANGLA DAM ORGNIZATION (RDM)	816
G.M (TDP)	2,506
RE HYDEL POWER STATION CHASHMA (REC)	47
RE (PS) MANGLA	419
RE HYDEL POWER STATION SHADIWAL GUJRAT (RES)	10
RE HYDEL POWER STATION RASUL (RSL)	38
HYDRO POWER TRAINING INSTITUTE (SPM)	1
CE/PD TARBELA 4TH EXT HYDROPOWER PROJECT (TXT)	4

CE WARSAK (WAR)	801
CE/PD 2ND REHAB PROJECT, WARSAK (WRP)	1
Total	**8,411**

Method & Assumptions

Valuation Method Used

IAS-19 mandates Projected Unit Credit (PUC) Method (which is an Actuarial Technique) to determine the present value of defined benefit obligations, current service cost and past service cost. The same method is used in the underlying valuation.

Assumptions

The economic and demographic assumptions used in the valuation are unbiased, mutually compatible and best estimates as per the requirements of IAS-19. Financial assumptions are based on market expectations as at the valuation date. These assumptions are as follows:

Discount Rate

The market of high quality corporate bonds is not deep enough in Pakistan. Therefore, discount rate is based on market yields on government bonds as at the valuation date. In general, the duration of Post-Retirement Medical Benefit liabilities is significantly long. Government bonds of similar duration are not available. It may be appropriate to assume same reinvestment interest rate as can be earned at the currently available government bonds. Thus the discount rate used for the valuation is 11.75% per annum which is consistent with the relevant guidelines of the Pakistan Society of Actuaries.

Rate of Growth in Post-Retirement Medical Cost

Cost of Post-Retirement Medical Benefits for a retiree/beneficiary increases both with his/her age and due to inflation. It has been deemed appropriate to assume that the average rate of growth in Post- Retirement Medical cost due to increase in age and inflation (combined) will be 10.75% per annum.

Post-Retirement Medical Cost

Detailed following data (gathered over a long period) is generally required related to pensioners to develop sickness rates and estimate medical costs:

- medical costs incurred by a sick retiree/beneficiary (along with their ages) in a year
- cost incurred by each retiree/beneficiary per Hospital/Dispensaries visit
- number of visits by each retiree/beneficiary to Hospital/Dispensaries in a year
- number of retirees/beneficiaries (along with their ages) utilizing medical facility in a year

In the absence of relevant information, an appropriate approach would be to take average medical cost (by diving total retirees' medical cost by the total number of retirees/beneficiaries) to determine Post-Retirement Medical Benefit liability for actives and pensioners. This method assumes that every retiree/beneficiary utilises medical facility at the average cost. The same approach is adopted in this report.

Medical Cost of retirees/beneficiaries was not available. The entity provided the total medical cost (i.e. for both in-service employees + pensioners) incurred during the year. It has been deemed appropriate to assume a 50%-50% ratio of medical cost between the active employees and pensioners. The total cost for 2017-18 intimated by the entity is Rs.346,290,530.

The resulting estimated total Medical Cost incurred by the retirees/beneficiaries during 2017-18 is Rs.173,145,265. The average annual Medical Cost works out to Rs.20,586. The average annual Medical Cost used in the previous valuation was Rs.14,455. It has been deemed appropriate to assume average Medical Cost per retiree/beneficiary family equal to average of the above two figures which works out to Rs.17,521.

Mortality, Withdrawal, Disability Retirement Rates

The mortality rates used for active employees are based on SLIC (2001-05) Mortality Table. The previous actuarial valuation was based on EFU (61-66) Mortality Table.

The mortality rates used for Pensioners are adjusted to reflect mortality improvements occurred. However, no future mortality improvements have been taken into account.

The rates for withdrawal from service and retirement on ill-health grounds are based on industry/country experience. These rates are given in the Appendix-I.

Comparison of Assumptions with previous Financial Year

The change in economic assumptions as compared with previous year's basis is as follows:

	2017-18	2016-17
Discount rate	11.75%	11.00%
Expected rate of increase in Post-Retirement Medical cost in future years	10.75%	10.00%

The gaps between economic assumptions are critical for the actuarial valuation of Post-Retirement Medical Benefits. The most important difference in this respect is between Discount Rate and the rate of increase in Post-Retirement Medical Benefits cost. Any changes in this gap can generate significant gain/loss during the inter-valuation period.

The critical gap between discount rate and Post-Retirement Medical Benefits increase rate as at 30.06.2018 is one percentage point (1%) which is consistent with previous year assumptions.

Since the critical gap between economic assumptions is same as used in the previous year, therefore, there will be no significant actuarial gain/loss as at 30.06.2018 due to changes in economic assumptions.

Actuarial Gain/Loss Recognition

The amount of gains/losses has been charged immediately to Other Comprehensive Income as per the provisions of the revised version of IAS-19.

Pakistan Water & Power Development Authority LAHORE

IAS-19 Disclosures

All figures given in this section are in Pak Rupees and in 000's:

Statement of Financial Position as at Beginning of the Year (BoY)

	2017-18	2016-17
Present Value of Defined Benefit Obligations as at 30th June	3,131,821	3,052,000
Less Fair Value of Plan Assets	-	-
Defined Benefit Liability as at 30th June BoY	**3,131,821**	**3,052,000**

Reconciliation of Present Value of Defined Benefit Obligations

	2017-18	2016-17
Present Value of Defined Benefit Obligations as at 30th June BoY	3,131,821	3,052,000
Service Cost (Current Service Cost + Past Service Cost + Gains/Losses on Settlements)	100,034	79,181
Interest on Defined Benefit Obligation	334,977	335,720
Benefits Paid during the Year	(173,145)	(335,080)
Actuarial (Gains)/Losses	9,739	-
Present Value of Defined Benefit Obligations as at 30th June EoY	**3,403,426**	**3,131,821**

Amount Chargeable to Profit & Loss for the Current Year

	2017-18	2016-17
Service Cost	100,034	79,181
Net Interest on Net Defined Benefit Liability (Asset)	334,977	335,720
Total Amount Chargeable to P&L Account	**435,011**	**414,901**

Remeasurements of Net Defined Benefit Liability

	2017-18	2016-17
Actuarial (Gains)/Losses due to changes in Demographic Assumptions	-	-
Actuarial (Gains)/Losses due to changes in Financial Assumptions	-	-
Actuarial (Gains)/Losses due to experience adjustments	9,739	-
Return on Plan Assets	-	-
Effect of Changes in Asset Ceiling	-	-
Amount Chargeable to Other Comprehensive Income (OCI)	9,739	-

Statement of Financial Position as at End of the Year (EoY)

	2017-18	2016-17
Present Value of Defined Benefit Obligations as at 30th June EoY	3,403,426	3,131,821
Less Fair Value of Plan Assets	-	-
Net Defined Benefit Liability as at 30th June EoY	**3,403,426**	**3,131,821**

Expense Chargeable to Profit & Loss for the Next Year

	2018-19	2017-18
Service Cost (Current Service Cost + Past Service Cost + Gains/Losses on Settlements)	107,196	100,034
Net Interest Cost on Net Defined Benefit Liability	399,903	334,977
Total Amount Chargeable to P&L Account for the Next Year	507,099	435,011

Reconciliation of Net Defined Benefit Liability

	2017-18	2016-17
Defined Benefit Liability as at BoY	3,131,821	3,052,000
Cost Chargeable to P&L during the Year	435,011	414,901
Cost Chargeable to OCI	9,739	-
Benefit Paid during the Year	(173,145)	(335,080)
Net Defined Benefit Liability as at EoY	**3,403,426**	**3,131,821**

	2017-18
Average Expected Remaining Working Lifetime of Members	9 Years
Average duration of the liabilities (actives + pensioners)	26 Years

Sensitivity Analysis as at 30.06.2018

	Discount Rate + 1%	Discount Rate - 1%	Medical Cost Increase + 1%	Medical Cost Increase - 1%
PVDBO	3,008,395	3,894,482	3,783,815	3,085,318

TANVEER ALAM
Associate of the Society of
Actuaries, USA

Appendix-I

Age	Death Rate	Withdrawal Rate	Ill-health Rate	Age	Death Rate	Withdrawal Rate	Ill-health Rate
20	0.000958	0.14344	0.00000	53	0.008244	0.00506	0.00162
21	0.000974	0.13388	0.00000	54	0.009150	0.00506	0.00185
22	0.000991	0.12431	0.00000	55	0.010135	0.00506	0.00210
23	0.001011	0.11475	0.00000	56	0.011198	0.00506	0.00238
24	0.001032	0.10519	0.00000	57	0.012336	0.00506	0.00268
25	0.001057	0.09563	0.00000	58	0.013544	0.00506	0.00300
26	0.001084	0.08944	0.00000	59	0.014813	0.00506	0.00335
27	0.001115	0.08438	0.00000	60	0.000000	0.00000	0.00000
28	0.001150	0.07819	0.00000				
29	0.001190	0.07256	0.00000				
30	0.001235	0.06694	0.00003				
31	0.001287	0.06188	0.00005				
32	0.001345	0.05738	0.00008				
33	0.001413	0.05288	0.00010				
34	0.001489	0.04781	0.00013				
35	0.001577	0.04275	0.00015				
36	0.001678	0.03881	0.00018				
37	0.001793	0.03431	0.00020				
38	0.001924	0.03038	0.00023				
39	0.002075	0.02588	0.00026				
40	0.002248	0.02138	0.00030				
41	0.002445	0.01913	0.00034				
42	0.002671	0.01744	0.00039				
43	0.002928	0.01519	0.00045				
44	0.003221	0.01294	0.00051				
45	0.003554	0.01069	0.00058				
46	0.003932	0.00956	0.00066				
47	0.004360	0.00900	0.00074				
48	0.004842	0.00788	0.00084				
49	0.005384	0.00675	0.00095				
50	0.005991	0.00619	0.00109				
51	0.006668	0.00563	0.00124				
52	0.007418	0.00563	0.00142				

Appendix-II

Summary of the Benefit Structure of WAPDA Hydroelectric Post-Retirement Medical Benefit Scheme

WAPDA Hydroelectric provides Free Medical benefits to its pensioners.

The level of Post-Retirement Medical Benefit for a retiree (or beneficiaries) depends on whether the retiree opted for Cash Medical Allowance during service or not.
Pensioners eligible for full medical benefits are allowed to use all medical and surgical facilities available at WAPDA Hospitals and Dispensaries. Specialist consultation is also provided if considered necessary by WAPDA Medical Officer.

Employees with BPS 1 to 15 can opt to take Cash Medical Allowance (CMA).

Retirees who opted CMA are entitled to the following benefits only:

- In-door hospital treatment in case of acute illness or accident
- Consultation from WAPDA Medical Officer (or a Specialist if considered necessary by WAPDA Medical Officer)
- X-rays and Pathological tests
- Dental treatment

Employees having disease requiring prolonged treatment may revise CMA, subject to the approval by Medical Board, and become entitled to full Post-Retirement Medical benefits.

Annex-A/3

Ref. No. 000920/18

October 13, 2018

General Manager (Finance) Power
Pakistan Water & Power Development Authority (WAPDA)
Room No. 713
WAPDA House
LAHORE

Subject: *Report on IAS -19 Disclosures as at 30.06.2018*

Dear Sir,

Please find attached Valuation Report containing IAS-19 disclosures (based on the revised version of IAS-19) for the Pension Scheme of WAPDA Hydroelectric for the year 2017–18.

Please, do not hesitate in contacting us if you have any queries regarding the Report.

Yours faithfully,

TANVEER ALAM
Associate of the Society of Actuaries, USA
Associate of Pakistan Society of Actuaries
CEO & Consulting Actuary
+92-333-4266448

Pakistan Water & Power Development Authority LAHORE

October 13, 2018

VALUATION REPORT

WAPDA HYDROELECTRIC

PENSION SCHEME - DISCLOSURES AS PER THE REQUIREMENTS OF THE REVISED VERSION OF INTERNATIONAL ACCOUNTING STANDARD – 19 AS AT 30.06.2018

TABLE OF CONTENTS

Table of Contents

Executive Summary

1. Purpose of the Report

The Actuarial Report provides accounting entries/disclosures in respect of the Pension benefits provided by WAPDA Hydroelectric. The disclosures are prepared in accordance with the requirements of the revised version of International Accounting Standard 19 (IAS-19).

The objective of the Report is to assist the Entity in preparing its annual accounts. Therefore, the figures in this report should be used for reporting purposes only and not for the funding of benefits.

2. Valuation Data

A summary of the data used for the valuation is as follows:

	Number of Members	Pensionable Salary
Active Employees	7,287	Rs.182,870,563

	Number of Members	Monthly Pension
Pensioners	8,411	Rs.162,067,514

Details of the data received are given in the next Section of the Report.

3. Amount to be Recognised in Profit & Loss Account for the Current Year

	PKR 000's
Amount to be recognized as expense during the year 2017–18	3,610,940

4. Amount to be Recognised in Other Comprehensive Income (OCI)

	PKR 000's
Amount to be recognized in OCI during the year 2017–18	9,748,179

5. Statement of Financial Position as at the End of Year

	PKR 000's
Amount to be recognised as Net Defined Benefit (i.e. Pension) Liability as at June 30, 2018	35,987,168

6. Reconciliation of Liability

Net Defined Benefit Liability as at 30th June 2017	27,512,147
Expense Chargeable to P&L during the year	3,610,940
Amount Chargeable to OCI during the year	9,748,179
Benefits paid during the year	(4,884,098)
Net Defined Benefit Liability as at 30th June 2018	**35,987,168**

Category	**Liability**
Active Employees	17,304,551
Pensioners	18,682,617
Net Defined Benefit Liability as at 30th June 2018	**35,987,168**

7. Split of P&L Charge and Liability

Active Employees:

PKR 000's

Formation	P&L Charge	Liability
ARE HPS RENALA	7,202	52,744
CE (P) TARBELA	328,945	2,408,990
CE (HPS) CHASHMA	82,458	603,874
CE 3HHP BESHAM	6,621	48,483
CE&PD CB CRBC CHASHMA	84,876	621,581
CE(NORTH) WARSAK	167,571	1,227,189
CE(P) GB BAROTHA ATTOCK	153,659	1,125,303
CE/PD 4TH EXT. TARBELA	26,324	192,783
DF (HD)	16,551	121,207
DG (P&D) WAPDA	8,109	59,385
GM (HYDEL)	54,718	400,714
GM (MDO) MANGLA	186,853	1,368,401
GM (TDP)	375,650	2,751,028
GM FINANCE (POWER)	83,510	611,578
GM HYDRO PLANNING	110,464	808,968
GM(GBHP) HATTIAN	144,162	1,055,759
MF (HYDEL OPERATION)	23,145	169,502
PD MANGLA WATERSHED MANAGEMENT RAWALPINDI	8,589	62,903
RE (HPS) DARGAI	40,748	298,418
RE (HPS) GOMAL ZAM D.I.KHAN	21,966	160,865
RE (HPS) JABBAN	18,071	132,342
RE (HPS) KURRAM GARHI BANNU	21,885	160,269
RE (HPS) WAPDA CHITRAL	8,214	60,156
RE (JHPS) KALABAGH MIANWALI	42,829	313,656
RE (PS) CHICHOKI	20,318	148,793
RE (PS) MANGLA	174,966	1,281,345
RE (PS) NANDIPUR	32,401	237,284
RE (PS) RASUL	26,519	194,207
RE (PS) SHADIWAL	25,437	186,285
RE HPS AKP BESHAM	11,599	84,946
RE HPS DKP BESHAM	11,738	85,960
RE HPS GOLEN GOL, CHITRAL	10,722	78,523
RE HPS KKP BESHAM	13,386	98,034
SE (SHPS) MANGLA	12,710	93,076
Total	**2,362,916**	**17,304,551**

Pensioners:

PKR 000's

LRO/Office	P&L Charge	Liability
GM (D. BASHA DAM) (BDP)	16,745	221,404
CE/PD CHASHMA BARRAGE & CJ LINK PROJECT (CBJ)	57,048	754,271
RESIDENT ENGINEER (HPS) WAPDA CHITRAL (CHC)	1,696	22,420
PURCHASE & DISPOSAL(P&D)DIRECTORATE (DGP)	28,705	379,526
RE (HPS), DUBAIR KHWAR BESHAM (DKB)	137	1,806
RE POWER STATION WAPDA DARGAI (DPS)	6,306	83,379
CE/PD GBHP WAPDA GHAZI BROTHA (GBH)	55,694	736,354
PD, GOLEN GOL HYDROPOWER PROJECT, WAPDA CHITRAL (GGC)	1,473	19,473
RE HYDEL POWER STATION NANDIPUR (GHN)	5,068	67,016
SE (SMALL HYDEL POWER STATION) MANGLA (GHS)	33,716	445,782
GM (GHAZI BROTHA HATTIAN) (GMH)	52,948	700,058
G.M (HYDEL) (GNH)	65,818	870,243
RE GOMAL ZAM HYDEL POWER STATION D.I KHAN (GPS)	3,567	47,169
CE (POWER) TARBELA (GPT)	128,024	1,692,692
GM (HYDRO PLANNING) (HEP)	77,320	1,022,326
CE (O&M) POWER, 3-HHP WAPDA BESHAM (HKK)	9,616	127,140
GM (FINANCE) POWER (HOP)	178,014	2,353,663
CE/PD DASU HPP (HPD)	8,765	115,886
ARE HYDEL POWER STATION RENALA (HPR)	1,214	16,050
RE JINNAH HYDEL POWER STATION (JHM)	11,142	147,320
SE/PROJECT DIRECTOR (REHAB) JABBAN HEPS PROJECT DARGAI (JHS)	1,225	16,202
A (RE) KURRAM GARHI POWER STATION BANNU (KGB)	1,575	20,831
CE/PD KEYAL KHWAR HYDRO POWER PROJECT (KKH)	4,133	54,642
CE/PD MANGLA REFURBISHMENT PROJECT (MRP)	443	5,859
PD (MANGLA WATER SHED MANAGEMENT PROJECT) WAPDA (MWP)	11,660	154,166
SE R&L GBHP WAPDA GHAZI (PHB)	10,508	138,936
DIRECTOR PATAN & THAKOT (P&T) (PPD)	151	1,989
RE HYDEL POWER STATION CHICHOKI MILLIAN (RCH)	5,944	78,586
CHIEF ENGINEER (Civil) MANGLA DAM ORGNIZATION (RDM)	115,214	1,523,332
G.M (TDP)	335,583	4,436,978
RE HYDEL POWER STATION CHASHMA (REC)	9,647	127,558
RE (PS) MANGLA	66,974	885,522
RE HYDEL POWER STATION SHADIWAL GUJRAT (RES)	1,442	19,071
RE HYDEL POWER STATION RASUL (RSL)	4,901	64,799
HYDRO POWER TRAINING INSTITUTE (SPM)	95	1,255

CE/PD TARBELA 4TH EXT HYDROPOWER PROJECT (TXT)	3,874	51,232
CE WARSAK (WAR)	95,854	1,267,359
CE/PD 2ND REHAB PROJECT, WARSAK (WRP)	785	10,322
Total	**1,413,024**	**18,682,617**

Pakistan Water & Power Development Authority LAHORE

Main Report

Key Information

Date of Valuation

The valuation is conducted, using the prescribed Actuarial Method, as at June 30, 2018.

Pension Benefits

A summary of the Pension Benefits provided by WAPDA Hydroelectric is given in Appendix-II of the Report.

Pension Fund Assets

The market value of Pension Fund Assets of **Rs.3.000 billion** as at the valuation date is provided by WAPDA Hydroelectric.

Risks Associated with the Pension Scheme

- The Entity provides Pension benefits to all of its regular employees.
- The Pension Scheme is an un-funded Scheme. There is no minimum funding requirement for a Pension Scheme which leads to relatively less secured Pension benefits. The Pension benefit liability reflected in the Entity's Accounts provides a reasonable security of the accrued rights because it is likely that the accrued Pension benefits could be considered as high priority debt in case of insolvency of the sponsor.
- The Pension Scheme is a defined benefit scheme with benefits based on service and last drawn salary. Therefore, the liabilities of the scheme are sensitive to the salary increases and pension increases.

Valuation Data

The data used for the valuation has been checked for any inaccuracies. However, no audit of the data has been conducted. The details are as follows:

	Number of Members	Pensionable Salary
Active Employees	7,287	Rs.182,870,563

	Number of Members	Monthly Pension
Pensioners	8,411	Rs.162,067,514

Formation-wise breakup of Active Employees:

Formation	No. of Employees	Pensionable Salary
ARE HPS RENALA	27	666,540
CE (P) TARBELA	696	21,562,450
CE (HPS) CHASHMA	322	7,515,492
CE 3HHP BESHAM	44	833,760
CE&PD CB CRBC CHASHMA	368	6,577,405
CE(NORTH) WARSAK	632	13,893,920
CE(P) GB BAROTHA ATTOCK	480	12,673,325
CE/PD 4TH EXT. TARBELA	64	2,251,190
DF (HD)	29	1,102,940
DG (P&D) WAPDA	14	716,690
GM (HYDEL)	87	3,830,970
GM (MDO) MANGLA	744	15,977,805
GM (TDP)	1,169	27,923,393
GM FINANCE (POWER)	134	5,656,140
GM HYDRO PLANNING	208	7,605,070
GM(GBHP) HATTIAN	624	13,319,190
MF (HYDEL OPERATION)	46	1,534,800
PD MANGLA WATERSHED MANAGEMENT RAWALPINDI	24	683,730
RE (HPS) DARGAI	105	2,606,810
RE (HPS) GOMAL ZAM D.I.KHAN	81	1,984,460
RE (HPS) JABBAN	67	1,482,330
RE (HPS) KURRAM GARHI BANNU	64	1,417,470
RE (HPS) WAPDA CHITRAL	34	704,100
RE (JHPS) KALABAGH MIANWALI	256	4,976,739
RE (PS) CHICHOKI	68	1,548,300
RE (PS) MANGLA	432	12,380,244
RE (PS) NANDIPUR	94	2,225,980
RE (PS) RASUL	98	2,025,470
RE (PS) SHADIWAL	85	1,944,140
RE HPS AKP BESHAM	56	1,384,500
RE HPS DKP BESHAM	45	1,061,130
RE HPS GOLEN GOL, CHITRAL	19	769,780
RE HPS KKP BESHAM	48	1,247,200
SE (SHPS) MANGLA	23	787,100
Total	**7,287**	**182,870,563**

LRO-wise breakup of Pensioners:

LRO/Office	No. of Pensioners	Monthly Pension
GM (D. BASHA DAM) (BDP)	27	1,525,966
CE/PD CHASHMA BARRAGE & CJ LINK PROJECT (CBJ)	510	6,676,675
RESIDENT ENGINEER (HPS) WAPDA CHITRAL (CHC)	6	140,408
PURCHASE & DISPOSAL(P&D)DIRECTORATE (DGP)	103	3,395,245
RE (HPS), DUBAIR KHWAR BESHAM (DKB)	1	11,094
RE POWER STATION WAPDA DARGAI (DPS)	41	673,222
CE/PD GBHP WAPDA GHAZI BROTHA (GBH)	276	5,973,869
PD, GOLEN GOL HYDROPOWER PROJECT, WAPDA CHITRAL (GGC)	4	133,242
RE HYDEL POWER STATION NANDIPUR (GHN)	33	547,446
SE (SMALL HYDEL POWER STATION) MANGLA (GHS)	294	3,995,450
GM (GHAZI BROTHA HATTIAN) (GMH)	177	5,133,124
G.M (HYDEL) (GNH)	174	7,108,919
RE GOMAL ZAM HYDEL POWER STATION D.I.KHAN (GPS)	15	324,031
CE (POWER) TARBELA (GPT)	809	14,559,477
GM (HYDRO PLANNING) (HEP)	319	9,259,538
CE (O&M) POWER, 3-HHP WAPDA BESHAM (HKK)	27	888,001
GM (FINANCE) POWER (HOP)	695	23,292,768
CE/PD DASU HPP (HPD)	13	733,995
ARE HYDEL POWER STATION RENALA (HPR)	9	119,510
RE JINNAH HYDEL POWER STATION (JHM)	44	1,243,290
SE/PROJECT DIRECTOR (REHAB) JABBAN HEPS PROJECT DARGAI (JHS)	5	110,466
A (RE) KURRAM GARHI POWER STATION BANNU (KGB)	6	133,454
CE/PD KEYAL KHWAR HYDRO POWER PROJECT (KKH)	6	355,582
CE/PD MANGLA REFURBISHMENT PROJECT (MRP)	4	50,289
PD (MANGLA WATER SHED MANAGEMENT PROJECT) WAPDA (MWP)	85	1,474,714
SE R&L GBHP WAPDA GHAZI (PHB)	43	966,198
DIRECTOR PATAN & THAKOT (P&T) (PPD)	1	21,923
RE HYDEL POWER STATION CHICHOKI MILLIAN (RCH)	41	645,483
CHIEF ENGINEER (Civil) MANGLA DAM ORGNIZATION (RDM)	816	13,383,157
G.M (TDP)	2,506	38,726,652
RE HYDEL POWER STATION CHASHMA (REC)	47	895,770
RE (PS) MANGLA	419	7,302,030
RE HYDEL POWER STATION SHADIWAL GUJRAT (RES)	10	131,079
RE HYDEL POWER STATION RASUL (RSL)	38	515,505
HYDRO POWER TRAINING INSTITUTE (SPM)	1	11,445

Water & Power Dev. LAHORE

CE/PD TARBELA 4TH EXT HYDROPOWER PROJECT (TXT)	4	326,279
CE WARSAK (WAR)	801	11,217,049
CE/PD 2ND REHAB PROJECT, WARSAK (WRP)	1	65,169
Total	**8,411**	**162,067,514**

Method & Assumptions

Valuation Method Used

IAS-19 mandates Projected Unit Credit (PUC) Method (which is an Actuarial Technique) to determine the present value of defined benefit obligations, current service cost and past service cost. The same method is used in the underlying valuation.

Assumptions

The economic and demographic assumptions used in the valuation are unbiased, mutually compatible and best estimates as per the requirements of IAS-19. Financial assumptions are based on market expectations as at the valuation date. These assumptions are as follows:

Discount Rate

The market of high quality corporate bonds is not deep enough in Pakistan. Therefore, discount rate is based on market yields on government bonds as at the valuation date. In general, the duration of Pension liabilities is significantly long. Government bonds of similar duration are not available. It may be appropriate to assume same reinvestment interest rate as can be earned at the currently available government bonds. Thus the discount rate used for the valuation is 11.75% per annum which is consistent with the relevant guidelines of the Pakistan Society of Actuaries.

Rate of Growth in Salary

Pensionable Salary includes Basic Pay, Special Pay, Qualification Pay and Senior Post Allowance. In view of the market expectations and long-term monetary policy of the State Bank regarding inflation, it has been assumed that the average rate of long-term future Salary increases will be 10.75% per annum.

Rate of Pension Increase

Keeping in view assumptions regarding future interest rate/discount rate, inflation and rate of salary growth, it has been assumed that the monthly pension will increase at an average rate of 6.75% per annum in future.

Mortality, Withdrawal, Disability Retirement Rates

The mortality rates used for active employees are based on SLIC (2001-05) Mortality Table. The previous actuarial valuation was based on EFU (61-66) Mortality Table.

The mortality rates used for Pensioners are adjusted to reflect mortality improvements occurred. However, no future mortality improvements have been taken into account.

The rates for withdrawal from service and retirement on ill-health grounds are based on industry/country experience. These rates are given in the Appendix-I.

Comparison of Assumptions with previous Financial Year

The change in assumptions for discount rate, salary growth rate and pension increase rate is as follows:

	2017-18	2016-17
Discount rate	11.75%	11%
Expected rate of salary increase in future years	10.75%	10%
Expected rate of future pension increases	6.75%	6%

The gaps between economic assumptions are critical for the actuarial valuation of Pension benefits. The most important differences in this respect are between:

- discount rate and salary increase rate
- discount rate and pension increase rate

Any changes in these gaps can generate significant gain/loss during the inter-valuation period.

	2017-18	2016-17
Difference between Discount rate & Salary increase rate	1%	1%
Difference between Discount rate & Pension increase rate	5%	5%

The critical gap between discount rate and salary increase rate as at 30.06.2018 is one percentage point (1%) which is consistent with previous year assumptions.

The critical gap between discount rate and pension increase rate as at 30.06.2018 is five percentage points (5%) which is consistent with previous year assumptions.

Since the critical gaps between economic assumptions are same as used in the previous year, therefore, there will be no significant actuarial gain/loss as at 30.06.2018 due to changes in economic assumptions.

Actuarial Gain/Loss Recognition

The amount of gains/losses has been charged immediately to Other Comprehensive Income as per the provisions of the revised version of IAS-19.

IAS-19 Disclosures

All figures given in this section are in Pak Rupees and in 000's:

Statement of Financial Position

	2016-17	2015-16
Present Value of Defined Benefit Obligations as at 30th June	27,512,147	26,088,165
Less Fair Value of Plan Assets	-	-
Defined Benefit Liability as at 30th June	**27,512,147**	**26,088,165**

Reconciliation of Present Value of Defined Benefit Obligations

	2017-18	2016-17
Present Value of Defined Benefit Obligations as at 30th June BoY	27,512,147	26,088,165
Service Cost (Current Service Cost + Past Service Cost + Gains/Losses on Settlements)	853,229	549,837
Interest on Defined Benefit Obligation	2,922,711	2,869,698
Benefits Paid during the Year	(1,884,098)	(1,995,553)
Actuarial (Gains)/Losses	9,583,179	-
Present Value of Defined Benefit Obligations as at 30th June EoY	**38,987,168**	**27,512,147**

Reconciliation of Fair Value of Plan Assets

	2017-18	2016-17
Fair Value of Plan Assets as at 31st December BoY	-	-
Contributions + Direct Benefit Payments made during the Year 3,000,000 + 1,884,098	4,884,098	1,995,553
Interest Income during the year	165,000	-
Benefits Paid during the Year	(1,884,098)	(1,995,553)
Return on Plan Assets excluding Interest Income	(165,000)	-
Fair Value of Plan Assets as at 31st December EoY	**3,000,000**	-

Amount Chargeable to Profit & Loss for the Current Year

	2017-18	2016-17
Service Cost	853,229	549,837
Net Interest on Net Defined Benefit Liability (Asset)	2,757,711	2,869,698
Total Amount Chargeable to P&L Account	3,610,940	3,419,535

Remeasurements of Net Defined Benefit Liability

	2017-18	2016-17
Actuarial (Gains)/Losses due to changes in Demographic Assumptions	-	-
Actuarial (Gains)/Losses due to changes in Financial Assumptions	-	-
Actuarial (Gains)/Losses due to experience adjustments	9,583,179	-
Return on Plan Assets	165,000	-
Effect of Changes in Asset Ceiling	-	-
Amount Chargeable to Other Comprehensive Income (OCI)	9,748,179	-

Statement of Financial Position as at End of the Year (EoY)

	2017-18	2016-17
Present Value of Defined Benefit Obligations as at 30th June EoY	38,987,168	27,512,147
Less Fair Value of Plan Assets	(3,000,000)	-
Net Defined Benefit Liability as at 30th June EoY	35,987,168	27,512,147

Expense Chargeable to Profit & Loss for the Next Year

	2018-19	2017-18
Service Cost (Current Service Cost + Past Service Cost + Gains/Losses on Settlements)	918,074	853,229
Net Interest Cost on Net Defined Benefit Liability	4,117,801	2,757,711
Total Amount Chargeable to P&L Account for the Next Year	**5,035,875**	**3,610,940**

Reconciliation of Net Defined Benefit Liability

	2017-18	2016-17
Net Defined Benefit Liability as at BoY	27,512,147	26,088,165
Cost Chargeable to P&L during the Year	3,610,940	3,419,535
Cost Chargeable to OCI	9,748,179	-
Contributions + Direct Benefit Payments made during the Year	(4,884,098)	(1,995,553)
Net Defined Benefit Liability as at EoY	**35,987,168**	**27,512,147**

	2017-18
Average Expected Remaining Working Lifetime of Members	9 Years
Average duration of the liabilities (actives + pensioners)	26 Years

Sensitivity Analysis as at 30.06.2018

	Discount Rate + 1%	Discount Rate - 1%	Salary Increase + 1%	Salary Increase - 1%
PVDBO	35,759,343	42,835,471	40,212,900	37,885,303

	Pension Increase Rate + 1%	Pension Increase Rate - 1%
PVDBO	41,532,254	36,784,019

TANVEER ALAM
Associate of the Society of
Actuaries, USA

Punjab Power Development Board Authority LAHORE.

Appendix-I

Age	Death Rate	Withdrawal Rate	Ill-health Rate	Age	Death Rate	Withdrawal Rate	Ill-health Rate
20	0.000958	0.14344	0.00000	53	0.008244	0.00506	0.00162
21	0.000974	0.13388	0.00000	54	0.009150	0.00506	0.00185
22	0.000991	0.12431	0.00000	55	0.010135	0.00506	0.00210
23	0.001011	0.11475	0.00000	56	0.011198	0.00506	0.00238
24	0.001032	0.10519	0.00000	57	0.012336	0.00506	0.00268
25	0.001057	0.09563	0.00000	58	0.013544	0.00506	0.00300
26	0.001084	0.08944	0.00000	59	0.014813	0.00506	0.00335
27	0.001115	0.08438	0.00000	60	0.000000	0.00000	0.00000
28	0.001150	0.07819	0.00000				
29	0.001190	0.07256	0.00000				
30	0.001235	0.06694	0.00003				
31	0.001287	0.06188	0.00005				
32	0.001345	0.05738	0.00008				
33	0.001413	0.05288	0.00010				
34	0.001489	0.04781	0.00013				
35	0.001577	0.04275	0.00015				
36	0.001678	0.03881	0.00018				
37	0.001793	0.03431	0.00020				
38	0.001924	0.03038	0.00023				
39	0.002075	0.02588	0.00026				
40	0.002248	0.02138	0.00030				
41	0.002445	0.01913	0.00034				
42	0.002671	0.01744	0.00039				
43	0.002928	0.01519	0.00045				
44	0.003221	0.01294	0.00051				
45	0.003554	0.01069	0.00058				
46	0.003932	0.00956	0.00066				
47	0.004360	0.00900	0.00074				
48	0.004842	0.00788	0.00084				
49	0.005384	0.00675	0.00095				
50	0.005991	0.00619	0.00109				
51	0.006668	0.00563	0.00124				
52	0.007418	0.00563	0.00142				

Appendix-II

Summary of the Benefit Structure of WAPDA Hydroelectric Pension Scheme

The Pension Scheme Members of WAPDA Hydroelectric are entitled to the following pension benefits on normal and early retirement, death and disability as at the valuation date:

Normal Retirement Pension

The normal retirement age is 60 years.

If service is less than 5 years:

- Nil Benefit

If service is greater than 5 and less than 10 years:

- A lump sum gratuity is payable. The rate of gratuity is calculated as per the following formula:

  Gratuity = Last Drawn Pensionable Salary x Pensionable Service

If service is greater than 10 years:

- The rate of pension at normal retirement age is 7/300 of the last drawn pensionable salary for each year of service subject to a maximum service period of 30 years. The maximum pension amount is thus limited to 70% of the last drawn pensionable salary.

  The employees can surrender up to a maximum of 35% of the gross pension in lieu of a lumpsum-commuted value. The commuted value at age 60 shall be calculated as per the following formula:

  Commuted Value = 12.3719 x amount of pension surrendered x 12

Retiree receives fully indexed gross pension after the expiry of Years of Commutation.

Early Retirement Pension

Early retirement is applicable on the completion of 25 years of continuous service.

- The rate of pension at early retirement age is 7/300 of the last drawn pensionable salary for each year of service subject to a maximum service period of 30 years. The maximum pension amount is thus limited to 70% of the last drawn pensionable salary.

  The employees can surrender up to a maximum of 35% of the gross pension in lieu of a lumpsum-commuted value.

Death in Service

If service is less than 5 years:

- Nil

If service is greater than 5 and less than 10 years:

- A lump sum gratuity is payable. The rate of gratuity is calculated as per the following formula:

  Gratuity = 1.5 x Last Drawn Pensionable Salary x Service

If service is greater than 10 years:

- The basic pension shall be 7/300 of the last drawn pensionable salary for each year of service subject to a maximum service period of 30 years

  Widow's Pension = 75% x basic pension

  Widow's pension is paid to eligible children in case of death of the widow. Eligible children are defined as legal male child under the age of 21 years and legal unmarried daughter.

  In addition to the above, the widow is entitled to 25% of the commuted value of gross pension. The age based commutation factors are set out in the table (later in this Appendix).

Death after Retirement

In case of death after retirement, the widow is entitled to receive 75% of the pension being received by the retiree.

Widow's pension is paid to eligible children in case of death of the widow. Eligible children are defined as legal male child under the age of 21 years and legal unmarried daughter. In the absence of widow and eligible children, the pension is payable to the dependents (such as parents, widow daughter etc.) for the remaining guaranteed period only.

Ill-health Pension

If service is less than 5 years:

- Nil

If service is greater than 5 and less than 10 years:

- A lump sum gratuity is payable. The rate of gratuity is calculated as per the following formula:

  Gratuity = 1.5 x Last Drawn Pensionable Salary x Service

If service is greater than 10 years:

- The basic pension is 7/300 of the last drawn pensionable salary for each year of service subject to a maximum service period of 30 years.

  The employees can surrender up to a maximum of 35% of the gross pension in lieu of a lumpsum-commuted value.

Commutation Table

Following is the age – based commutation table showing commutation factors at ages 20 – 60.

Age	Commutation Factors	Age	Commutation Factors	Age	Commutation Factors
20	40.5043	36	28.3362	52	17.0050
21	39.7341	37	27.5908	53	16.3710
22	38.9653	38	26.8482	54	15.7517
23	38.1974	39	26.1009	55	15.1478
24	37.4307	40	25.3728	56	14.5602
25	36.6651	41	24.6406	57	13.9888
26	35.9006	42	23.9126	58	13.4340
27	35.1372	43	23.1840	59	12.8953
28	34.3750	44	22.4713	60	12.3719
29	33.6143	45	21.7592		
30	32.8071	46	21.0538		
31	32.0974	47	20.3555		
32	31.3412	48	19.6653		
33	30.5869	49	18.9841		
34	29.8343	50	18.3129		
35	29.0841	51	17.6526		

Annex - 12

WAPDA HYDROELECTRIC

O&M MANPOWER DATA FY 2019-20

	Name of Power Stations	CATEGORIES							
		Operational & Technical	Civil Infrastructure Maintenance		Account & Admn	Security	Transport	Education & Allied Staff	G. Total
			Technical	Non-Technical					
1	Tarbela	575	90	264	49	-	93	116	1,187
2	Warsak	211	8	184	73	259	38	19	792
3	Duber Khawar	76	3	30	10	5	7	-	131
4	Allai Khwar	95	4	21	8	4	7	6	145
5	Khan Khwar	63	3	25	12	5	13	-	121
6	Jabban	47	-	34	3	13	2	2	101
7	Dargai	55	12	38	15	14	5	-	139
8	Kuram Garhi	31	-	50	2	-	1	3	87
9	Chitral	26	1	15	3	17	1	-	63
10	Tarbela 4th Ext	32	279	42	31	-	-	-	384
11	Golen Gole	33		20	8	12	3	-	76
									-
12	Ghazi Brotha	386	28	70	45	14	54	70	667
13	Chashma	168	10	25	34	86	28	22	373
14	Jinnah	92	-	39	36	128	15	19	329
15	Rasul	49	-	53	6	20	4	-	132
16	Nandipur	57	2	36	11	22	4	2	134
17	Shadiwal	58	4	12	12	18	4	3	111
18	Chichoki	57	1	25	9	20	4	3	119
19	Renala Khurd	21		3	2	7	1	1	35
									-
20	Mangla (AJ&K)	354	1	29	50	3	33	113	583
21	Gomal Zam (FATA)	52	4	25	19	24	5	-	129
		2,538	450	1,040	438	671	322	379	5,838

Pakistan Water & Power Development Authority LAHORE

TARBELA POWER STATION

INTRODUCTION

Tarbela power station is located on right bank of river Indus at Tarbela in Distt. Swabi about 100 KM North West of Islamabad having 14 generating units with total installed capacity of 3478 MW. It is the biggest Hydel Power Station which was completed in four different phases during the period from 1977 to 1993. Salient technical features are as under:

Dam Type	=	Earth and Rock fill
Reservoir Capacity		
Gross Storage	=	6.8560 MAF
Live Storage	=	6.0494 MAF
Height	=	485 Ft. (above river bed)
Max Operating Level	=	1550 ft SPD
Min Operating Level	=	1392 ft SPD
Total installed capacity	=	3478 MW

The installed capacity, make and dates of commissioning of the Power Station are given as under.

Unit No.	Installed capacity (MW)	Make			Commissioning Dates
		Turbine	Generator	Transformer	
1-4	4x175=700	Hitachi Japan	Hitachi Japan	J-Schneider France	1977
5-8	4x175=700	DEW Canada	CGE Canada	5&6 ASEA Canada 7-Hitachi Japan 8-Chinese (Shen Yang Transformer Co)	1982
9-10	2x175=350	DBS Canada	Hitachi Japan	Jeumont-France	1985
11-14	4x432=1728	DBS Canada	Siemen-ABB Germany	Ansaldo Italy	1992-93
Total	3478				

1. ENERGY STATISTICS

Description	2017-18	2018-19	2019-20 (Forecast)	2020-21 (Estimated)
Net Electrical Output (GWh)	13,112	10,589	10,800	10,800
Plant Utilization factor (%)	43.28	34.86	45.60	45.15
Plant Availability Factor (%)	90.19	75.95	86.03	86.57

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE

- Daily/Weekly Maintenance of all Units and Allied Equipments
- Monthly Maintenance of all Units and Allied Equipments. It also involves shutdown of the Unit for 5- hrs.
- Annual Maintenance of 5 Units from Units 1-10 each year on alternate basis whereas Annual Maintenance of Units 11-14 in each year. It involves shut down of the units for 30-45 days.
- Annual Maintenance Schedule (2016-17, 2017-18, 2018-19, 2019-20 & 2020-21)

Unit No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2016-17	-	720	-	-	720	-	-	720	-	720	600	600	600	600
2017-18	720	-	720	720	-	720	720	-	720	-	600	600	600	600
2018-19	-	720	-	-	720	-	-	720	-	720	600	600	600	600
2019-20	720	-	720	720	-	720	720	-	720	-	600	600	600	600
2020-21	-	720	-	-	720	-	-	720	-	720	600	600	600	600

2.2 SPECIAL REPAIR & MAINTENANCE UNDER USAID GRANT (FARA)

WAPDA planned to implement a short term Repair & Maintenance program to enhance the reliability and to restore the lost capacity of its plants. Meanwhile, USAID offered financial assistance to improve the condition of WAPDA's old plants. Following programme is being implemented at Tarbela.

2.2.1 FARA PHASE-I (2010~2016)

Fixed Amount Re-Imbursement Agreement (FARA) amounting to US$ 16.5 million was signed on April 30, 2010 between Govt of Pakistan through WAPDA & Govt of USA through USAID for rehabilitation / up gradation of Tarbela Power Station. Following activities were complete under this grant:-

Sr. No	Detail of Works	Completion Date
1	Up-gradation of Station Drainage System Units 1~10	2012-13
2	Replacement of worn out seals of Relief Valves Units 1~10	2012-13
3	Replacement of Dewatering Pumps of Unit 1~10	2012-13
4	Training of WAPDA Engineers	2012-13
5	Up-gradation of existing Electromechanical Governors of Units 1~10, with lasts state of the art Digital Governors.	2015-16
6	Up-gradation of existing SCADA System	2015-16
7	Replacement of existing Class-B Stator Winding of Units 1, 3 & 4 with Class-F Windings.	2015-16

2.2.2 FARA PHASE-II (2014~2018)

The second agreement (FARA Phase-II) amounting to US$ 25 million was signed on August 8, 2014. It includes following activities:-

Sr. No	Detail of Works	Completion Date
1	Generator Surface Air Coolers for Units 1~4.	2014
2	Generator Surface Air Coolers for Units 11~14.	2014
3	Replacement of Excitation System of Units 5 & 6.	2014
4	Supply & installation of 02 Screw Air Compressors	2016
5	Supply & installation of 60 Ton Mobile Crane	2015
6	Replacement of Excitation System of Units 7 & 8.	2017
7	Rehabilitation of 2x300 Ton EOT Cranes	2017
8	Replacement of Excitation System of Units 1~4. (Design, Supply, Installation, Testing & Commissioning)	2017
9	Services for the Installation of Static Excitation System for Units 1~4	2017
10	Design, manufacturing, model testing and supply of stainless steel Runner of modified design for Units 5 ~ 8.	Installation Pending
11	Design, manufacturing, Supply, Erection, Testing and commissioning of 220 KV Switch Yard Equipment.	pending

2.3 OTHER MAJOR WORKS

2018-19

Procurement of new sets of stator windings for Units 9 & 10 were made and replacement of repaired stator windings of Unit 10 carried out from 02-10-18 to 27-03-19, while replacement of stator windings of Unit No. 9 is underway.

3. CIVIL WORKS COMPLETED:

2016-17

- Construction of Fiber Glass Shed in (R.V.C) Masjid and E & F Quarters of River View Colony for Rain Protection at Right Bank Tarbela.
- Repair/Resurfacing (Bituminous Carpeting) of Internal Roads at R.B.C Tarbela.
- Improvement of Sewerage System Re-Construction of Damaged Manholes & Sewerage lines.
- Establishment of Ladies/Children parks at Right Bank Colonies, Tarbela.
- Construction of 22 Nos. Dust Bins at Right Bank Colonies, Tarbela.
- Replacement of wiring of residential Buildings at Right Bank Colonies, Tarbela.
- Replacement of external water supply pipe Lines at Right Bank Colonies Tarbela.
- Replacement of distribution boards of residential/Non-residential buildings at Right Bank Colonies, Tarbela.

2017-18

- Replacement of deteriorated wire gauze doors at Right Bank Colonies, Tarbela.
- Construction of Boundary wall at Right Bank Colony for Security reasons.
- Construction of parking area (Tuff tiles) at Power station Tarbela.
- A.M & R painting works of residential and non-residential buildings at Right Bank Colony, Tarbela.
- Repair/Resurfacing (Bituminous carpeting) of internal roads of R.B.C, Tarbela.
- Repair/reconstruction of damage manhole/sewerage lines at R.B.C Tarbela.
- Construction of security wall around residential & Non-residential Buildings at Right Bank Colonies.
- Repair/renovation work in bachelor officers Hostel at R.V.C Right Bank, Tarbela.
- Replacement of wiring of residential buildings at R.B.C colonies, Tarbela.
- Replacement of external water supply lines at R.B.C colonies, Tarbela.
- Replacement of Distribution boards of residential/non-residential buildings at Right Bank Colony Tarbela.
- Supply/installation/testing and commissioning of Two Nos. new centrifugal pumps at sewerage plant R.V.C, Tarbela.
- Providing/Fixing of split A.C for Rest House at R.V.C & Refrigerators for Bachelor Hostel and Wapda Schools at R.B.C Tarbela.
- Construction of Fiber Glass shades at E, F & G Type quarters for weather protection.

2018-19

- Construction of Security wall around Pump House colony.
- Construction of wash rooms at Tarbela switchyard.
- Renovation of Toilets/Kitchens of B-Type & C-type Bungalows.
- Replacement of deteriorated Wire Guaze doors/Ward Robes at Right Bank Colonies Tarbela.
- Providing Qaleen Safs, Carpet & Underly Material for Jamia Masjid at Right Bank Colonies Tarbela.
- Repair/Re-Construction of damage Manhole/Sewerage lines at Right Bank Colonies Tarbela.
- Providing/Fixing of Benches at open area of power house Tarbela.
- Repair/Re-surfacing (Bituminous carpeting) of internal roads Main roads patch works in R.B.C Tarbela.
- Roof Treatment/Repair Floor etc. of Residential Buildings at Right Bank Colonies, Tarbela.
- A.M & R painting white washing etc. of C, D, E, F & G type residential building at Right Bank Colonies, Tarbela.
- A.M & R painting of Non-Residential Buildings at Right Bank Colonies, Tarbela.

- Improvement/renovation of service station and transport pool at Right Bank Colonies, Tarbela.
- Replacement of wiring residential buildings at Right Bank Colonies, Tarbela.
- Replacement of distribution boards of residential buildings at Right Bank Colonies, Tarbela.
- Replacement of distribution boards of Non-Residential buildings at Right bank colonies, Tarbela.
- Installation of one No. 60HP Motor/Pump with assembly etc. at sewerage plant R.V.C Tarbela.

2019-20

- Miscellaneous works are in progress.
- Procurement of new vehicles as a replacement of old ones.

2020-21

- Construction of security wall against Residential Buildings at R.B.C Tarbela.
- A.M & R Painting work of Residential Buildings at Right Bank Colonies Tarbela.
- Replacement of Distribution Boards Residential/Non-Residential Buildings at R.B.C.
- Replacement of deteriorated Wire Guaze Door/Ward Robes at Right Bank Colonies Tarbela.
- Replacement of Wiring of Residential Buildings at R.B.C.
- Renovation of Rooms/Toilets, kitchens remaining Residential Buildings at R.B.C Tarbela.
- Roof Treatment/Floor Repair of Residential/Non-Residential Buildings at Right Bank Colonies Tarbela.
- Replacement of External Water Supply Line at R.B.C.
- A.M&R Painting Work of Non-Residential Buildings At Right Bank Colonies, Tarbela.
- Improvement/Re-surfacing of existing sewerage system at Right Bank Colonies, Tarbela.
- Repair/Re-surfacing (Bituminous carpeting) of internal road at R.B.C, Tarbela.
- Procurement of AM&R material for civil/E&M divn. Right bank colonies through store.

4. MAN POWER (2019-20)

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Account & Admn	Security	Transport	Education & Allied Staff	G. Total
		Technical	Non-Technical					
HPS Tarbela	575	90	264	49	-	93	116	1187

PROJECTED STATUS (2020-21)

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Account & Admn	Security	Transport	Education & Allied Staff	G. Total
		Technical	Non-Technical					
HPS Tarbela	575	90	264	49	-	93	116	1187

WARSAK POWER STATION

INTRODUCTION

Warsak power station is located on the river Kabul about 30 km from Peshawar having four (4) units (1-4) of 40 MW each and two (2) units (5-6) of 41.48 MW each with total capacity of 242.96 MW. The power station was completed in two phases. In phase 1, units 1 to 4 were installed in 1960 and in phase 2, units 5 & 6 were installed in 1980.

The installed capacity, make and years of commissioning of generating units are as under;-

Unit No.	Installed capacity (MW)	Make			Commissioning Year
		Turbine	Generator	Transformer	
1-4	4x40=160	Dominion Canada	CGE Canada	Sarranti, Canada	1960
5-6	2x41.48=82.96	Dominion Canada	CGE Canada	Westinghouse	1981
Total	242.96				

1. ENERGY STATISTICS

Description	2016-17	2017-18	2018-19	2019-20 (Forecast)	2020-21 (Estimated)
Net Electrical Output (GWh)	980.706	913.498	999.731	1094	744
Plant Factor (%)	87.67	90.96	88.90	90.55	≥ 90
Plant Availability Factor (%)	74.71	80.87	80.63	≥ 82	≥ 82

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE.

- Annual Maintenance of 5 units carried out each year involving shutdown of the units for 25~30 days.
- Major Overhauling (MOH) of one unit is also carried out each year. It involves shutdown of the unit for 180 days.
- The unit-wise Annual Maintenance / Major Overhauling hours for 2016-17, 2017-18 2019-20(estimated) & 2020-21 (estimated) is as under:-

Unit No.	1	2	3	4	5	6	TOTAL
2016-17	840:25	940:10	4596:20*	986:25	436:10	4474:17	12273:47
2017-18	705:07	759:45	674:25	5139:05*	1057:55	1128:00	9464:17
2018-19	534:45	4430:23*	696:20	2286:47	627:25	637:20	9213:00
2019-20	701:49	744:00	744:00	600:00	3456*	744:00	6989:49
2020-21	3456*	744:00	744:00	744:00	744:00	744:00	7176:00

* Major overhaul.

Remaining entries stand for Annual maintenance.

2.2 MAJOR R&M OF GENERATION ASSETS COMPLETED

2016-17

The outlived Trash Racks and the Trash Rack Cleaning Machine has been replaced with the latest one.

New Hoisting System for Spillway Gates

The existing system for the operation of spillway gates is outlived and frequent damages of hoist system were experienced. During high inflows, raising of some of the spillway gates was not possible due to problems in their operating mechanism. WAPDA awarded a Contract on 05.12.2014 for installation of a new modern hoisting system. The work will be completed during current financial year.

Unit No:1

Annual maintenance of the unit completed with following activity. (Unit synchronized with the system on 12.01.2017).

- Irregular portion of runner blade pieces were trimmed and new runner blade pieces were welded at discharge passage.
- Shaft seal system was dismantled and the re-assembled after necessary work.
- Shaft seal seat was polished in workshop.
- Generator bearing and turbine guide bearing were properly cleaned and oil was added in it to normal level.
- Cleaning and welding work in generator surface coolers also completed.
- After assembling all parts of the machine, unit brought back in service.

Unit No:2

Annual maintenance of the unit completed with the following activities:-

- Irregular portions of runner blade pieces were trimmed.
- Shaft seal system was dismantled and then reassembled after necessary maintenance.
- Generator air surface cooler were properly cleaned.
- Leaking portion of the Head Cover, repaired.
- Turbine guide bearing made in WAPDA Workshop Warsak, refitted in the unit. Old bearing is replaced due to vibration.
- All the dismantled parts reassembled, draft tube gates lifted and unit brought back in service at 1350 hours dated 10.10.2016.

Unit No.3

Major Overhaul of the unit is in progress since 22.09.2016 with following activity.

- Machining work on bottom ring has been complete with Rotary Lathe Machine.
- Rehabilitated runner has been coupled with the shaft and lowered in the turbine pit and all the rehabilitated wicket gates has been fitted at their position in the bottom ring and adjusted.
- Head cover was lowered in the pit, fitted at its position and aligned with the bottom ring.
- Thrust / generator bearing bracket along with the shaft was shifted to the turbine pit and fitted at its position.
- All the links and levers, and levers, bearing housing, operating ring and two servomotors were installed at their positions in the pit.
- Rehabilitated turbine bearing was shifted from Workshop and fitted at its position.
- Centring and plumbing of the machine was carried out.
- Draft tube gates were lifted from the tailrace area.
- Unit started and brought on bar for commercial operation.

Unit No.4

Unit is under Annual Maintenance since 28.10.2016.

- Irregular portions of runner blade pieces were trimmed.
- Shaft sealing system was dismantled and reassembled after necessary repair and cleaning.
- Shaft seal seat was polished in Workshop.

- Generator bearing and turbine guide bearing were properly cleaned.
- Cleaning and welding work in generator air surface coolers also carried out.
- Cooling line of generator bearing was dismantled and reassembled after cleaning and necessary welding.
- Minor insitu welding on runner and guide vanes carried out.
- 11 new runner blade pieces have been welded in the runner at the discharge ends.
- After completion of maintenance/repair work unit brought back in service for commercial operation.

Unit No.5

Annual maintenance of the unit completed with the following activity.

- Unit shutdown and dewatered.
- Inspection windows of Spiral Case and Draft Tube opened.
- Turbine bearing, generator air surface coolers and shaft sealing system dismantled.
- Generator air surface coolers were properly cleaned.
- Shaft sealing system properly cleaned, its seat was polished at WAPDA Workshop Warsak.
- Above mentioned dismantled parts reassembled and 100 liters of lubrication oil added to the Turbine guide bearing.
- Leaking portion of generator guide bearing repaired and 50 liters of lubrication oil added to the bearing.
- Weld and grind repair on runner and other underwater parts.
- All the parts reassembled, draft tube gates lifted and unit brought back in service at 1245 hours dated 28.10.2016.

Unit No.6

Major overhaul of the unit was started on 21.12.2016 with following activities.

- Dismantling and removing of rotor assembly, generator parts, exciter cables and PMG were carried out.
- Cleaning of stator winding was started.
- Power supply was connected to display panel of newly installed flow meters system.
- Draft tube gates lowered and both windows (Draft tube and Spiral Case) have been opened.
- Dismantling of the unit is in progress.
- Inside the Scroll Case, Chinese team is engaged for installation of flow meters.
- Re-assembling of the unit completed.
- Rehabilitated runner and wicket gates received from M/s Popular Engineering and installed in the unit.
- Head cover, bottom ring, Operating ring, bearing housing, links and levers were rehabilitated at WAPDA Workshop Warsak and installed in the unit.
- Plumbing of shaft and centering of main unit was carried out successfully.
- Re-babitting of turbine bearing and its machining was also carried out at WAPDA Workshop Warsak.
- 840 Liters and 210 Liters of turbine oil added to generator bearing and of turbine bearing respectively.
- Draft Tube and Scroll case windows were closed.
- Priming of the Scroll case carried out through bypass valve.
- Draft Tube gates were lifted, unit started and synchronized with the system.

2017-18

Unit No.1

Unit was shut down for Annual Maintenance on 01-11-2017 with the following activities:

- Unit dewatered.
- Spiral case and draft tube inspection windows opened.
- Platform/stage fitted just beneath the runner in draft tube.
- Damaged blade pieces at discharge end of runner were cut and new MS pieces of same dimensions were welded.
- Other weld / grind repair on runner was also carried out.
- Turbine guide bearing and shaft sealing system dismantled and cleaning of the same were carried out.
- Generator air surface cooler were cleaned with caustic soda.
- After successful completion of maintenance all the parts were reassembled.
- 100 liters of turbine oil added in turbine bearing.
- Spiral case and draft tube windows closed and priming of the unit carried out.
- After completion of maintenance/repair work unit brought back in service for commercial operation.

Unit No.2

Unit is under Annual Maintenance since 02-10-2017 with following activities.

- Unit dewatered, spiral case and draft tube inspection windows opened.
- Platform / stage fitted just below the runner in draft tube.
- Cutting of damaged runner blade pieces at discharge end carried out and new MS pieces of same dimension were welded.
- Other welding / grinding repairs on runner were also carried out.
- Turbine guide bearing and shaft sealing system dismantled and cleaning of the same carried out.
- Generator air surface cooler cleaned properly.
- Weld repair on draft tube window carried out and damaged nut bolts replaced with new one.
- All parts were reassembled after carrying out all necessary maintenance.
- 160 liters of turbine oil added in turbine and generator bearings.
- After completion of under water parts repairs, spiral case and draft tube windows Closed and unit brought back in service for commercial operation.

Unit No.3

PTW No: 12/18 dated 17.01.2018 was avail for carrying out Annual Maintenance of the unit. Draft tube gates were lower and unit is dewatered successfully and spiral case and draft tube inspection windows were open. Stage is just fitted beneath the runner in draft tube. Dismantling and cleaning of Turbines guide bearing, shaft sealing system is carried out followed by grinding works. Generator surface coolers cleaning and checking is in progress. Welding of discharge ends of the runner blades carried out followed by grinding works. Wicket gate adjustment carried out and in between gap was measured with feeler gauge.

- Flow raters cleaning of the unit carried out with kerosene oil vide SP Tag No. 1 dated 12.01.2018.
- Draft tube gates were lowered and unit was dewatered successfully and spiral case and draft tube inspection windows were opened.
- Stage just fitted beneath the runner in draft tube.
- Turbine guide bearing and shaft sealing system dismantled, cleaned and assembled.
- Generator surface coolers cleaned.
- Wicket gate adjustment carried out and in between gap was measured with filler gauge.
- Governor adjustment and dry test carried out.
- General cleaning of all Mechanical equipment carried out.
- All the parts were resemble after carrying out necessary maintenance.

LAHORE

- Draft tube gates lifted vide PTW No: 28/18 and 32/18 dated 13.02.2018 and 14.02.2018 respectively.
- Spiral case and draft windows closed.
- Priming of the spiral case and draft tube carried out and unit was successfully brought on bar on 14.02.2018.
- Inlet valve disk seal adjustment of the unit carried out vide PTW No: 26/18 dated 06.02.2018 was availed.
- After completion of maintenance/repair work unit brought back in service for commercial operation.

Unit No.4

Major overhaul of the unit started on 20.09.2017 with following activities :-

- Draft tube gates lowered.
- Unit dewatered.
- Unit completely dismantled.
- Runner, head cover, operating ring, turbine and guide bearing and other related components have been removed.
- Runner, head cover, operating ring, turbine and guide bearing and other related components have been removed and shifted to workshop for their rehabilitation.
- After completion of maintenance / weld repair / rehabilitation work its re-assembling started.
- New Bottom ring leveled and locked.
- Bronze bushings in the head cover, bottom ring also fitted.
- Machining of its bronze bushings for wicket gates stem also carried out.
- Head cover shifted to power house centered, leveled and locked.
- Runner and shaft coupled via Tentac bolt tensioner.
- New runner having 13 blades and new wicket gate (20 Nos) also installed.
- Servomotors, operating rings link levers, shear levers also installed.
- New wicket gates (20 Nos) also installed.
- Multiple valves of different dimension also utilized.
- Surface coolers cleaning with the caustic soda also carried.
- Re-babitted turbine bearing also installed.
- Lubricating oil 210 ltrs and 840 ltrs added to Turbine guide bearing and generator bearing respectively.
- Generator shaft coupling bolts tightened.
- New nut guard on runner studs and nuts also installed.
- Governor adjustment also carried out.
- General cleaning of all the mechanical equipment's carried out.
- All parts were reassembled after carrying out necessary maintenance. Priming of the spiral case and draft tube carried out and draft tube gates were lifted vide PTW 80/18 dated 17.04.2018 and unit was successfully brought on bar on 22.04.2018.

Unit No.5

Annual maintenance of unit was availed for carrying out on 02.12.2017 vide PTW# 321/17 with the following activities:-

- Unit was dewatered and spiral case and draft tub inspection windows are opened.
- Platform/stage fitted just beneath the runner draft tube.
- Turbines guide bearing and shaft sealing system dismantled and cleaning of the same carried out and also 210 liters of oil added to turbine bearing.
- Gen surface coolers cleaned with the caustic soda. New cooling coils were installed in generator bearing as the old were weak and leaked at different points.
- Generator brake assembly No 1,2,3,4 dismantled and replaced.
- New cooling coils were installed in generator bearing as the old were weak and leaked at different points.
- 1000 liters fresh turbine oil added in generator bearing.
- Fresh turbine oil added in generator bearing.

- The discharge ends of runner blades were badly worn out and welded with new runner blades pieces. Spiral case and draft tube inspection windows closed. Priming of the unit was carried after lifting of draft tubes gates. Unit was successfully brought on bar.

Unit No.6

PTW No: 29/18 dated 13.02.2018 obtained for carrying out annual maintenance.

- Draft tube gates were lowered and unit was dewatered successfully and spiral case and draft tube inspection windows were dismantled, cleaned and assembled
- Discharge end blades of the runner cut.
- Weld and grind repair was also in progress on stray vanes and runner blades.
- Draft tube gates were lowered, unit dewatered successfully and spiral case/draft tube inspection windows were opened.
- Turbines guide bearing and shaft sealing system dismantled, cleaned and re-assembled.
- Wicked gate adjustment carried out.
- Governor adjustment and dry test also carried out.
- Generator air surface coolers were cleaned with caustic soda.
- General cleaning of all mechanical equipment's was carried out.
- Weld and grind repair on stray vanes and runner blades carried out.
- After completion of maintenance/repair work unit brought back in service for commercial operation.

2018-19

Unit No.1

PTW No 243/18 dated 09/10/2018 availed for Annual Maintenance of the unit with following activities:

- Weld repair/grinding work on the runner blades, stay vanes and bottom ring carried out.
- New seat, face and throttle bush of shaft seal installed.
- Cleaning of shaft seal line carried out with HCL.
- 4 inch butterfly valve (02 Nos.) replaced in surface cooler line.
- 1 ½" gate valve (04 Nos.) replaced in surface cooler and shaft seal cooling lines.
- 120 liters fresh oil added in turbine guide bearing.
- Cleaning of all surface coolers carried out with caustic soda.
- Dry test of wicket gates and governor adjustment carried out.
- General cleaning of all mechanical equipment's carried out.
- Paint work of turbine bearing top cover and also turbine pit completed.
- After finishing maintenance/repair work of the unit it was brought back in service for commercial operation on 31.10.2018.

Unit No.2

PTW No 272/18 dated 01.11.2018 availed to carry out the scheduled Major Overhaul of the unit with the following activities.

- Rehabilitated bottom ring, Head Cover, Runner, 1 set wicket gates (20 Nos.)and other equipment like turbine shaft, bearing housing operating ring, coupling bolts (32 nos.) and servomotors stud (32 Nos.) has been shift to Power house from Wapda workshop Warsak after completion of necessary repair work.
- Bottom ring and head cover was installed at its position. Turbine shaft coupling with runner was installed.
- Cleaning of links and levers, bearing housing, operating ring was completed and installed.
- Refurbished gate levers 02 nos. also installed.
- Servomotor also installed and bolted.
- Weld/grind repair on stay vanes to achieve the required hydraulic profile was completed and also installed.
- Bearing bracket also installed and bolted.
- Re-assembling of the unit completed.

LAHORE

- Spiral case and draft tube windows closed and priming of the unit carried out and no leakage found.
- Unit was successfully brought on heat run on 01.05.2019.

Unit No.3

PTW No 218/18 dated 10.09.2018 was availed for Annual Maintenance of the unit.

- Unit was successfully dewatered, draft tube and scroll casing windows opened.
- Draft tube stage fitted for welding works on runner.
- Surface coolers tubes cleaning in progress.
- Turbine bearing cover dismantled and oil sump lifted.
- Shaft seal dismantling started. Drive clamp and carry dismantled. Cleaning of base plate carried out.
- Throttle bush and adapter ring installed after cleaning. New seat and face installed and shaft seal works completed.
- Discharge end of runner blades cutting carried out.
- Weld repair on runner blades carried out.
- Wicket gate clearance readings taken and adjustment is in progress.
- Grease applied to the greasing points.
- Weld repair on stay vanes carried out.
- Discharge end of the runner eroded blade pieces replaced with new pieces.
- New seat and face of shaft seal installed.
- Cleaning of shaft seal line carries out with HCL.
- 4" butterfly valve (02 No.) replaced in surface cooler line.
- 2" gate valve (01 No.) replaced in generator bearing line.1 ½" valve (01 No.) replaced in shaft seal line.
- 1 ½" gate valve (03 Nos.) replaced in surface coolers line.
- 16" by pass valve worn gear repaired. 8" hydraulic valve seal replaced.
- 210 litters fresh oil added in turbine guide bearing.
- Cleaning of all surface coolers carried out with caustic soda.
- Dry test of wicket gates and governor adjustment carried out.
- General cleaning of all mechanical equipment's carried out.
- Greasing of all points carried out.
- After completion of maintenance/repair work unit brought back in service for commercial operation.

Unit No.4

PTW No 310/18 dated 23.12.2018 availed to carry out Annual Maintenance of the Unit with the following activities :

- Unit was completely dismantled in order to take out the new runner of M/s Andritz hydro for its modification work.
- Runner was transported for its modification work to Lahore by utilizing the services of a private workshop with their own dedicated devices for enlarging the relief holes (08 Nos.), for enlarging the runner cone as proposed in their technical report to solve the raw water leakage problem from tail race area through shaft seal.
- After the modification work runner transported back to Warsak Power Station on 17.02.2019 then the assembling work of unit started.
- New shaft sealing system i.e. seat, face, throttle bush, adaptor ring, strips and O-ring installed.
- Weld repair work in spiral case with 7018 electrodes carried out.
- Generator surface coolers cleaning carried out with caustic soda.
- Maintenance activities in turbine guide bearing generator guide and thrust bearing assembly carried out.
- 04 Nos. gate vale size 1 ½" replaced in generator cooling line. Also 04 Nos. gate and ball replaced in brake pads assembly line.
- Mild steel sheet and angle iron of different sizes used for generator bracket walk way.
- Teflon Gland packing (16kg) used in head cover bushes for sealing purpose.

- 1260 liters fresh oil added in turbine guide bearing, generator and governor oil sump tank.
- Other maintenance activities carried out in unit and various size bolts, nuts, reamer/cutters, emery paper, silicon tubes , O-ring different sizes, kerosene oil etc. used.
- Unit was plumbed and its centering also carried out.
- Before start, PRE COMMISIONING tests performed step wise as proposed by M/s Andritz Hydro expert in their email. All readings, parameters at various conditions noted as per their proposed PRE- COMMISIONING test procedure.
- Unit started on mechanical run through lapping and gradually increased to its rated RPM.
- All mechanical parameters checked and found normal.
- After completion of maintenance/repair work unit brought back in service for commercial operation.

Unit No.5

Annual maintenance of the unit carried out with following activities :

- Welding, grinding works on the runner blades, inter blade sections, bottom ring carried out.
- Polished seat and repaired face also installed.shaft seal header and branch line cleaned.
- 1 ½" gate valves (06 No) installed in shaft seal header and branch line cleaned.
- 4" four way valve (02 No) in generator cooling line also exchanged.
- Brake seal (04 No) exchanged in brake assembly.
- Surface coolers cleaning carried out with caustic soda.
- Wicket gate adjustment carried out.
- Governor dry test carried out.
- Greasing and general cleaning of all the mechanical equipment s carried out.
- Priming of the units was done and unit was successfully brought on bar 23.12.2018 at 1010 hrs.

Unit No.6

PTW No 275/18 dated 01.22.2018 availed to carry out Annual Maintenance of the unit.

- Draft tube gates lowered in the tailrace area.
- Weld/grind repair on the runner blades and bottom ring carried out.
- Maintenance works on shaft sealing system also done.
- 1 1/2" (02No) and 1" (02No) gate valves in shaft seal line installed.
- 2" gate valve (02 No) in generator bearing cooling line installed.
- 4" (02 No) four way valve in surface cooler line also exchanged.
- Wicket gates and governor adjustment also carried out.
- Draft tube and scroll case windows closed and priming of the unit also carried out and unit successfully synchronize on 27.11.2018.

ON-GOING / NEW

2019-20

Annual Maintenance & Major Overhaul of all units will be carried out as per approved maintenance schedule for FY 2019-20

2020-21

Annual Maintenance & Major Overhaul of all units will be carried out as per approved maintenance schedule for FY 2020-21

LAHORE

2.3 CIVIL WORKS

Generation / Dam & Reservoir

Completed

2016-17

Additional Civil works of New Hoisting System for spillway gates of Warsak Power Station

2017-18

Nil

2018-19

Repair of Spillway Bay No. 02 of Warsak Power Station

ON-GOING / NEW

2019-20

- Repair of Spillway Bay No. 01 of Warsak Power Station.
- Procurement of Monitoring Instrument of Warsak Power Station.
- Fourth periodic inspection of Warsak Dam.

2020-21

- Repair of Spillway Bay No. 08 of Warsak Power Station.
- Procurement of monitoring instrument (remaining)
- Inside repair work at Dam Generation structure.

OTHER BUILDING / PHYSICAL PROPERTIES

COMPLETED

2016-17

- Rehabilitation of Sewerage system some portion inside Wapda colony Warsak.
- Replacement of damaged water supply line inside Wapda colony Warsak
- Rehabilitation of Admn block office (Phase-II) inside Wapda colony Warsak
- Special repair of security picket No. 11 at dam site Warsak.
- Rehabilitation of 02 No's bathrooms of VIP rooms and providing false ceiling to 02 No's rooms, dining hall and TV lounge at Wapda Rest House Wapda Warsak.
- Construction of 05 No's category V F-Type quarters Phase-II at Wapda Christian Colony Warsak.
- Rehabilitation of Admn Block C.E Office Phase-III
- Rehabilitation of Children Park inside Wapda Colony Warsak.
- Repair & Raising of boundary wall and providing it with razor wire of Wapda Colony & Christian Colony Warsak.
- Procurement of False Ceiling & Fan for newly establish canteen at Warsak Power Station.
- AM&R of Residential building of Bungalow No. A-32 Wapda Colony Warsak.
- Providing Pipe railing and concrete around the TRCM installed instrument at intake at Dam Site Warsak.
- Flood Lights for Wapda Colony Warsak
- Installation of 24 No's electric water geyser of 10 gallons at Wapda Bachelor Hostel Wapda Colony Warsak

2017-18

- Re-Surfacing of road (remaining portion) inside Wapda colony Warsak.
- Construction of boundary around 06 No's bungalow at Area-C Wapda Colony Warsak.
- AM&R of Residential building at Wapda Colony Warsak.
- AM&R of Non-Residential building at Wapda Colony Warsak.
- R&M of Civil & Security office.

2018-19

- Renovation of JMME office & Bathrooms of Bungalow No. A-19
- Providing & fixing of PVC panels / dado in Wapda Rest House Warsak.
- Construction of 04 No's Cat-V F Type quarter inside Wapda colony Warsak.
- Construction of 06 No's Cat-V F type quarter Phase-III inside Wapda Christian Colony Warsak
- Construction of 01 No Category –III Type bungalow at Wapda Colony Warsak.
- Construction of 07 No's Security Picket at Warsak Power station.

(ON GOING WORKS / NEW WORKS)
2019-20

- Construction of 06 No's Cat-V F type quarter Phase-III inside Wapda Christian Colony Warsak.
- R&M of Main Market at Wapda Colony Warsak.
- R&M of account section dam site Wapda Warsak.
- AM&R of residential building at Wapda Colony Warsak.
- Special repair of non- residential building at Wapda Warsak.
- Repair of residential building at Wapda Colony Warsak.
- Repair of sewerage system of A-Type bungalow Wapda Colony Warsak.
- Cleaning of slide rock from dam side.
- Providing Sui Gas connection at Wapda Colony Warsak
- Misc. Consumable items Civil works
- Extension of workshop building at Wapda Warsak.

2020-21

- Construction of 01 No Category –III Type bungalow at Wapda Colony Warsak.
- Construction of 10 No's Cat-V Type quarter at Wapda Colony Warsak.
- AM&R of residential building at Wapda Colony Warsak / Dam Site.
- AM&R of non-residential building at Wapda Colony Warsak / Dam Site.
- Misc. Consumable items Civil works at Wapda Colony Warsak & Dam Site
- Special repair of non-residential building at Dam site Wapda Warsak.
- Special repair of non- residential building at Wapda Colony Warsak.
- Special repair of residential building at Wapda Colony Warsak.
- Special repair of residential building at Dam site Wapda Warsak.
- Construction of 04 No's Security Pickets
- Construction of Store Building at Wapda Warsak.
- Re-Surfacing of Road to Dam Site Warsak.
- Painting & Repair of baily bridge Dam Site Wapda Warsak.

3. MANPOWER DATA

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn.	Security	Transport	Education & Allied staff / Dispensary	G.Total
		Technical	Non Technical					
RE/CE Warsak	211	08	184	73	259	38	19	792
Total	211	08	184	73	259	38	19	792

LAHORE.

	CATEGORIES						
	Operational & Technical	Civil	Accounts & Admn.	Security	Transport	Education & Allied staff / Dispensary	G.Total
Project Engineer Warsak HEPS 2nd Rehabilitation Project	5	02	10	Nil	Nil	Nil	17
Total	5	02	10	Nil	Nil	Nil	17

DUBAIR KHWAR HYDEL POWER STATION

INTRODUCTION

Duber Khwar Hydel Power Station is located 7 km away from KKH in Pattan, District Kohistan Lower, and 310 KM from Islamabad. It's high head power plant having 02 units with 65MW capacity each. The turbines are peloton wheel.

The installed capacity, make and years of commissioning of generating units are as under;-

Unit No.	Installed capacity (MW)	Make			Commissioning Year
		Turbine	Generator	Transformer	
1-2	2x65	Andritz Hydro	Andritz Hydro	Liaoning Efacec Electrical Equipment Co. (LEEEC) China	2014
Total	130				

1. ENERGY STATISTICS

Description	2016-17	2017-18	2018-19	2019-20 (Forecast)	2020-21 (Planned)
Net Electrical Output (GWh)	585.935	510.926	591.935	595	595
Plant Factor (%)	51.8	45.2	52.2	52.2	52.2
Plant Availability Factor (%)	92.4	87.9	95.8	95	95

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE HOURS

Unit No.	1	2	Total
2016-17	DLP	DLP	DLP
2017-18	324.33	370.5	694.83
2018-19	340.34	341.58	681.92
2019-20	In progress	In progress	In progress
2020-21	350 (Estimated)	350 (Estimated)	700 (Estimated)

2.2 MAJOR R&M OF POWER GENERATION ASSETS COMPLETED

2016-17

- Replacement of MIV working seal of Unit No .2
- Rectification of fault on Bottom outlet gate No.1 and replacement of seal of the upper pressure inspection window and other pending works

2017-18

- Procurement of MIV working seal of Units No 1 & 2.
- The damaged Grid Station Transformer (was damaged due to lighting stroke) dismantled and sent to HEC, Hattar for repair.

2018-19

- After repair Grid Station Transformer was installed and energized and brought back to service.

ON-GOING/NEW

2019-20

- Replacement of Nozzles of Unit No 2.
- Replacement of Nozzles of Unit No 1.
- Flushing of reservoir.

2020-21

- Flushing of reservoir and inspection of tunnel.

2.3 CIVIL WORKS

GENERATION/DAM/RESERVIOR STRUCTURES

COMPLETED

2016-17

- Construction of Pallas road boundary wall around the Power House and Switchyard.
- Installation and commissioning of CCTV system in Power House, Switchyard and Duber weir site.

2017-18

- Construction of watch-towers.
- Construction of boundary wall along river Indus.
- Dismantling, shifting and fabrication of 9 Nos pre-fabricated rooms.

2018-19

- Distemper and Paint work of power house.

2019-20

- N/A

ON-GOING/NEW

2019-20

- N/A

2020-21

- N/A

OTHER BUILDING/PHYSICAL PROPERTIES

COMPLETED

2016-17

- N/A

2017-18

- N/A

2018-19

- N/A

2019-20

- Construction of 20 rooms staff hostel.

ON-GOING/NEW

2019-20

- Construction of 20 rooms officer hostel

2020-21

- N/A

3. MANPOWER

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non Technical					
RE HPS Duber Khwar	76	3	30	10	5	7		131
Total	76	3	30	10	5	7		131

ALLAI KHWAR HYDEL POWER STATION

INTRODUCTION

Allai Khwar Hydel Power Station is located in District Battgram, KPK. It has 02 Units, having Pelton turbine with a total capacity of 121 MW.

The unit wise installed capacity, make and years of commissioning are as under;-

Unit No.	Installed capacity (MW)	Make			Commissioning Year
		Turbine	Generator	Transformer	
1-2	2x 60.5	Andritz Hydro	Andritz Hydro	Liaoning Efacec Electrical Equipment Co.	2013
Total	121				

1. ENERGY STATISTICS

Description	2016-17	2017-18	2018-19	2019-20 (Forecast)	2020-21 (Planned)
Net Electrical Output (GWh)	395	275	461	450	463
Plant Factor (%)	37.42	26.03	43.58.	42.45	43.68
Plant Availability Factor (%)	91.5	80.1	90.62	91.1	91.1

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE HOURS

- Annual Maintenance of 02 units. It involves shut down of unit for 30-45 days
- The unit wise Annual Maintenance Schedule for 2016-17, 2017-18, 2018-19, 2019-20, 2020-21 is as under:

Unit No.	1	2
2016-17	725	695
2017-18	1744	1764
2018-19	822	822
2019-20	744 (Planned)	744 (Planned)
2020-21	744 (Planned)	744 (Planned)

2.2 MAJOR WORKS

2016-17

- Inspection of water way system, pressure tunnel and rectification of defects.

2017-18

- Procurement/Replacement of needle tips and seat rings of pelton wheel turbines of both generating units.

2018-19

- Turbine Nozzels No. 05&06 of Unit 2 and all the 06 Nos Nozzels of Unit 1 were dismantled, upon physical inspection found eroded, which were made smooth through emery paper. .

2019-20 (Planned)

- Procurement/Replacement of needle tips and seat rings of pelton wheel turbines of both generating units.

2020-21 (Planned)

- Schedule Annual Maintenance of both generating units.

2.3 CIVIL WORKS

2016-17

- Boundary wall around the Switchyard, and Allai camp. Installation & commissioning of CCTV system in Power house, switchyard and Allai weir site.
- Installation of gates & barriers has been carried out.

2017-18

- Construction of 16 Room Officers/Staff Hostel.

2018-19

- Construction of 16 Room Officer/Staff Hostel is in progress.
- Construction of Watch towers at Power house, Switchyard and Weir Site is in progress.

2019-20

- Construction of 16 Room Officer/Staff Hostel.
- Construction of Watch towers at Power house, Weir Site and Switchyard has been completed.

2020-21

- Construction of 16 Room Officer/Staff Hostel.
- Fencing around the acquired land at Powerhouse & Allai Weir site (Dam Site)
- Construction of Mosque at residential camp site.
- Rectification of leakage at joint between Forbay and tunnel area
- Construction of parking area and main store at powerhouse site and boundary wall around the powerhouse.

3. MANPOWER

	CATEGORIES							
		Civil Infrastructure Maintenance						
RE HPS Allai Khwar Total	Operational & Technical	Technical	Non-Technical	Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
RE HPS Allai Khwar	95	4	21	8	4	7	6	145
Total	95	4	21	8	4	7	6	145

Project status of FY 2020-21 with justification for change.

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non-Technical					
RE HPS Allai Khwar	95	4	21	8	4	7	6	145
Total	95	4	21	8	4	7	6	145

KHAN KHWAR POWER STATION

INTRODUCTION

Khan Khwar Hydel power station is located at KKH near Besham, District Shangla, 264 KM from Islamabad. It has three (03) units, two Francis (2x34) and one Turgo (1x4) having total capacity of 72 MW. The details of the Power Station showing installed capacity make and dates of commissioning are given as under.
The installed capacity, make and years of commissioning of generating units are as under;-

Unit No.	Installed capacity (MW)	Make			Commissioning Years
		Turbine	Generator	Transformer	
1-2	2x34=68	DEC China	DEC China	TBEA China	2010
3	1x4=4	DEC China	DEC China	N/A	2012
Total	72				

1. ENERGY STATISTICS

Description	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20 (Forecast)	2020-21 (Estimated)
Net Electrical Output (GWh)	248.60	36.57	195.40	167.45	233.22	269	299
Plant Factor (%)	39.3	5.97	31.56	27.10	37.69	42.65	48.52
Plant Availability Factor (%)	78.8	8.7	87.20	85.99	76.87	85.97	92.07

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE

- Annual Maintenance of 03 Units. It involves shutdown of units for 30-45 days.
- The Unit wise Annual Maintenance schedule for 2015-16, 2016-17, 2017-18, 2018-19, 2019-20 & 2020-21 is as under:

Unit No.	1	2	3
2015-16	840	-	750
2016-17	-	840	-
2017-18	840	840	750
2018-19	-	840	-
2019-20	840	840	750
2020-21	840	840	750

ANNUAL MAINTENANCE HOURS (Including Biennial, Monthly & Scheduled Maintenance)

Unit No.	1	2	3	TOTAL
2014-15	845.84	1046.50	121.59	2013.92
2015-16	6427.40	6043.40	11.55	12482.28
2016-17	184.03	2924.8	277.7	3386.53
2017-18	1290.3	671.73	1689.2	3651.29
2018-19	2021.96	3779.71	254.93	6056.6
2019-20(Forecast)	734.6	2320.67	672.93	3728.2
2020-21(Estimated)	663	663	463	1789

2.2 MAJOR R&M OF POWER GENERATION ASSETS. COMPLETED.

2016-17

- Repair of runner, wicket gates, bottom ring, and Lower labyrinth seals of Unit No.02.
- Annual Maintenance of Unit No.02 & Unit No.03.
- Major over haul of Unit No.1, replacement of runner, wicket gate bottom ring Lower labyrinth seal bearing pads and cooler.

2017-18.

- Annual Maintenance of Unit No. 01, 2, &.3.
- Repair of Excitation Transformer of Unit No. 03.
- Repair of Neutral Grounding Transformer of Unit No. 01.
- Dismantling and replacement of 02 No. rotor poles of Unit No. 01.

2018-19

- Annual Maintenance of Unit No. 02.
- Repair of Main Power Transformer No. 02.
- Repair of runner blades of Unit No.2 at Trailing edges side carried out.
- Replacement of MIV high pressure gear A/C pumps of Unit No. 1& 2.

2019-20
ON GOING / NEW

- Annual Maintenance of unit No. 01, 2, 3 and Annual Maintenance of Unit No. 1, 2, 3 and tunnel dewatering and flushing of reservoir.
- Repair of Bypass valve, MIV operation seal Quadrate ring sealing of Unit No.2.
- Inspection of Turbine under water parts draft tube gate, tail race gates, and spiral case. Of Unit No. 1 & 2.

2020-21

- Major over haul of Unit No.2, replacement of runner, wicket gate bottom ring Lower labyrinth seal bearing pads and cooler.
- Design Modification, separation, of main Inlet valve, replacement of MIV operation/ maintenance seal along with Quadratic Ring for sealing, of Unit No.1 & 2.
- Procurement of Power Transformers, rack arrangements in Switchyard for Spare Transformer.
- Refurbishment of Governor System.

LAHORE

2.3 CIVIL WORKS

GENERATION / GENERAL PLANT ASSETS.

COMPLETED.

2016-17

- Extension of boundary wall along with Karakorum Highway.

2017-18

- Construction of Fencing along with left side of reservoir.
- Construction of boundary wall along with Right side of reservoir.
- Construction of Boundary wall along with PTDC Hotel and anchoring arrangement at portals of Access tunnels.
- R&M of Surge tank road, and Draining of Nullah on RHS of Khan Khwar Reservoir.

2018-19

- Construction of water tank at Besham town.
- Construction of water tank and Pump House at KKHP, WAPDA Besham.
- Construction of Watch Tower and Security Cabin at KKHPS, WAPDA Besham.

ON GOING / NEW

2019-20

Nil

2020-21

- Construction of Gym at KKHPS WAPDA Colony.
- Uplifting of Powerhouse and Colony area including Soil Area.
- Mechanical Dredging of Reservoir.

2.4 MANPOWER (2019-20)

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non Technical					
CE Besham	9	3	19	9	4	2	0	46
HPS Khan Khwar	54	0	6	3	1	11	0	75
Total	63	3	25	12	5	13	0	121

Projected Status (2020-21) with Justification

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non Technical					
CE Besham	18	9	25	14	5	2	0	73
HPS Khan Khwar	79	0	10	6	1	11	0	107
Total	97	9	35	20	6	13	0	180

*Actual Manpower is less than the sanctioned Manpower (Shortage of Manpower).

JABBAN HYDEL POWER STATION

INTRODUCTION

Jabban Hydroelectric Power Station is located in Dargai District Malakand, at a distance of 210 Km from Islamabad which is a provincially administered tribal area of Khyber Pakhtunkhwa. It consists of four units of 5.5 MW each. The total installed capacity is 22.0 MW.

The unit wise installed capacity, make and years of commissioning are as under;-

Unit No.	Installed capacity (MW)	Make			Commissioning Year
		Turbine	Generator	Transformer	
1-4	4x5.5	Zhejiang Jinlun Electro Mechanic, China	Chaozhou Huineng Electrical Machinery, China	Sanbian Sci-Tech, China	2013
Total	22.0				

1. ENERGY STATISTICS

Description	2016-17	2017-18	2018-19	2019-20	2020-21
Net Electrical Output (GWh)	122.95	104.21	134.67	135.00	135.00
Plant Factor (%)	64.14	54.68	70.56	72.0	72.00
Plant Availability Factor (%)	88.13	86.86	90.70	96.0	96.0

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE

- Annual Maintenance of 04 units. It involves shut down of unit for 30-45 days
- The unit wise Annual Maintenance Schedule for 2015-16, 2016-17 & 2017-18 is as under:

Unit No.	1	2	3	4
2016-17	600	600	600	600
2017-18	600	600	600	600
2018-19	600	600	600	600
2019-20	600	600	600	600
2020-21	600	600	600	600

2.2 MAJOR WORKS

Completed:

2016-17: Annual Maintenance of All 04 Units carried out as per schedule.
2017-18: Annual Maintenance of All 04 Units carried out as per schedule.
2018-19: Annual Maintenance of All 04 Units carried out as per schedule.

On Going/New

2019-20: Annual maintenance of all 04 Units in progress as per above schedule.
2020-21:

2.3 CIVIL WORKS

2016-17:

- Construction of boundary wall around china camp at Jabban Power Station, during 2016-17.
- Special Repair of RE office Jabban Power Station during 2016-17.
- AM & R of Residential and Non Residential buildings Jabban during 2016-17.
- Construction of store building at Hydel Power Station Jabban during 2016-17.
- Construction of Room at forebay Power Station Jabban during 2016-17.

2017-18:

- Rehabilitation of Mosque at Jabban Power Station carried out during 2017-18.
- AM&R of Residential Buildings Jabban carried out during 2017-18.
- Construction of boundary wall at area (C) Jabban Power Station carried out during 2017-18.
- Remodeling of Sewerage System at Jabban Power Station carried out during 2017-18.
- Special repair of 04 Nos Cat-IV type quarters at Jabban Power Station carried out during 2017-18.

2018-19:

On Going/New

2019-20:

- Construction of Divisional office at Jabban Power Station is proposed to be carried out in during 2019-20.
- Replacement & extension of 440Volts distribution line from Power House to China Camp Colony is proposed to be carried out during 2019-20.
- Construction of Guard Room for security guards of Jabban Power Station is proposed to be carried out in during 2019-20.
- Fencing around Jabban Power Station is proposed to be carried out during 2019-20.

2020-21

3. MANPOWER

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non-Technical					
RE Jabban	47	0	34	3	13	2	2	101
Total	47	0	34	3	13	2	2	101

Project status of FY 2020-21 with justification for change.

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non-Technical					
RE HPS Allai Khwar	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Pakistan Water & Power Dev. Authority LAHORE

DARGAI HYDEL POWER STATION

INTRODUCTION

Dargai Hydel power station is located on Upper Swat Canal in Malakand agency near Dargai. It has four generating units of 5MW each with total capacity of 20 MW.

The unit wise installed capacity, make and years of commissioning are as under;-

Unit No.	Installed capacity (MW)	Make			Commissioning Year
		Turbine	Generator	Transformer	
1-4	4x5.0	S.M Smith USA	Westing House	English Electric England	1951
Total	20.0				

1. ENERGY STATISTICS

Description	2016-17	2017-18	2018-19	2019-20	2020-21
Net Electrical Output (GWh)	104.51	95.44	108.25	89	89
Plant Factor (%)	89.0	89.0	89.0	89	89
Plant Availability Factor (%)	89.84	89.79	92.03	88	90

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE HOURS

Unit No.	1	2	3	4	Total
2016-17	744	495.30	553.55	705.35	2499.00
2017-18	426.20	771.20	433.25	1391.00	3022.05
2018-19	433.25	992.25	514.20	412.20	2353.00
2019-20	935	1074	1345	805	4161
2020-21	1113	561	561	561	3000

2.2 MAJOR R&M OF POWER GENERATION ASSETS

Completed

- Annual Maintenance of 04 units. It involves shut down of unit for 30-45 days
- The unit wise Annual Maintenance Schedule for 2015-16, 2016-17 & 2017-18 is as under:

Unit No.	1	2	3	4
2015-16	Mar16	Dec 15	Feb 16	Jan 16
2016-17	Dec16 (M.O.H)	Feb 17	Mar 17	Jan 17
2017-18	Dec 17	Mar 18	Feb 18	Jan 18 (M.O.H)

On Going / New

2019-20 Annual Maintenance of Unit 1-2 carried out and Major overhaul of Unit-3 is in progress.

2020-21 Unit No.1 will be due for major overhaul and Annual maintenance of Unit 2-4 will be carried out.

2.3 CIVIL WORKS.

GENERATION / DAM/RESERVOIR STRUCTURES

Completed

2017-18

- Repair & Maintenance of Colony, Rest House, Mosque & Workshop Building.
- Construction of slope protection wall near Power House Building

2018-19

On Going / New

2019-20 1) AM&R of desilting of power channel.

2020-21

OTHER BUILDING/PHYSICAL PROPERTIES.

Completed

2016-17
1) Construction of 03 No.Cat-III Type Bungalow.
2) Special repair of 4 Nos: Pickets.
3) Special repair of 4 No. S-3 type quarters
4) Construction of toilet at Workshop

2017-18
1) Special Repair of Mosque
2) Emergency Repair/construction of courtyard wall of store building.
3) AM&R of residential & Non Residential building.
4) Special repair of workshop.

2018-19
1) Construction of parking shed.
2) AM&R of service road.
3) AM&R of residential & Non Residential building.
4) Providing & fixing tuff tile at store & R.E. Residency.
5) Construction of new bath room at Divisional office staff.

On Going / New

2019-20
1) Construction of 2 Nos: Cat-V type quarter
2) Providing motorized gate for Power House.
3) Construction of safety wall around tale race channel at dangerous location
4) Providing & fixing tuff tile of store lawn.
5) AM&R of residential & Non Residential building.
6) Special repair of R.E. office
7) Barbid wire / protection a/w tale race channel
8) Special repair of 17 No. S-3 type quarter
9) Special repair of bungalow No.C-6.
10) AM&R of service road.

2020-21

Water & Power Development Authority LAHORE.

MANPOWER

Status of the date of previous tariff determination FY 2017-18. Rs.1.2/KWH

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G Total
		Technical	Non Technical					
RE Dargai	55	12	38	15	14	5		139
Total	55	12	38	15	14	5		139

Projected Status for FY 2020-21 with justification for change

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G Total
		Technical	Non Technical					
RE Dargai	55	12	38	15	14	5		139
Total	55	12	38	15	14	5		139

-----sd-----
Asstt:Resident Engineer
Power Station Sub-Divn:
Wapda Dargai.

KURRAM GARHI HYDEL POWER STATION

INTRODUCTION

Kurram Garhi Hydel power station is located on river Kurram about 10 KM North West of Bannu city having four units of 1.0 MW each, total capacity being 4.0 MW.

The unit wise installed capacity, make and years of commissioning are as under;-

Unit No.	Installed capacity (MW)	Make			Commissioning Year
		Turbine	Generator	Transformer	
1-4	4x1.0	Siemens	Siemens	Siemens	1957~1958
Total	4.0				

1. ENERGY STATISTICS

Description	2016-17	2017-18	2018-19	2019-20	2020-21
Net Electrical Output (GWh)	18	17	14	17	17
Plant Factor (%)	52.63	49.21	40.62	49.21	46.63
Plant Availability Factor (%)	79.75	74.18	77.68	74.10	73.15

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE HOURS

Unit No.	1	2	3	4
2016-17	540	540	540	540
2017-18	540	540	540	540
2018-19	540	540	540	540
2019-20	540	540	540	540
2020-21	540	540	540	540

2.2 MAJOR R&M OF POWER GENERATION ASSETS.

COMPLETED

2016-17

- Major overhaul of Unit No.4.
- Installation of CCTV Systems
- Replacement of 66 KV Circuit Breaker

2017-18.

- Major Overhaul of Unit No.3.

2018-19.

- Generator rotor shaft was broken on11.6.2018 which was repaired in H.M.C Taxila and resynchronized with the system on22.09.2018.

ON GOING/NEW

2019-20.

- Major Overhaul of Unit No.2.

2020-21.

- Major Overhaul of Unit No.1.

3.3 CIVIL WORKS

2016-17

- Construction of 04 Nos Toilet for E type Quarters.

2017-18

- Construction of 02 Nos Toilet for Badragga Pickets.

2018-19

- Construction of 02 Nos Toilet for Badragga Pickets.

ON GOING/NEW

2019-20

Construction of Boundary wall on Wapda Land.

2020-21

Construction of remaining Boundary wall on Wapda Land.

OTHER BUILDING /PHYSICAL PROPERITIES.

COMPLETED

2016-17	NIL
2017-18	NIL
2018-19	NIL

ON GOING/NEW

2019-20	Upgradation of Power House will be expected.
2020-21.	-do-

Punjab Water & Power Development Authority LAHORE.

3. **MANPOWER**

Status as of the date of previous tariff Determination FY 2017-18.

CATEGORIES							
Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
	Technical	Non-Technical					
31	0	50	2	0	1	3	87
31	0	50	2	0	1	3	87

PRJEECTED STATUS FOR FY 2020-21 WITH JUSTIFICATION OF CHANGE

No information regarding project has been received to this office up till now

CHITRAL HYDEL POWER STATION

INTRODUCTION

Chitral Hydel power station is located on Ludko River Garam Chashma road, 7 KM East of Chitral town. It consists of two (02) units of 0.3 and two (02) units of 0.2 MW each. Total installed capacity is 1.0 MW.

The unit wise installed capacity, make and years of commissioning are as under;-

Unit No.	Installed capacity (MW)	Make			Commissioning Year
		Turbine	Generator	Transformer	
1-2	2x0.2	Ossberger (W.G)	A.E.G (W.G)	GEC	1975
3-4	20.3	Ossberger (W.G)	A.E.G (W.G)	GEC	1982
Total	1.0				

1. ENERGY STATISTICS

Description	2015-16	2016-17	2017-18	2018-19	2019-20 Estimated
Net Electrical Output (GWh)	3.60	4.19	3.69	3.50	3.55
Plant Factor (%)	40.8	47.89	39.31	39.98	40.00
Plant Availability Factor (%)	89.5	98.83	95.37	94.86	95.00

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE

- Annual Maintenance of 02 units. It involves shut.down of unit for 30-45 days
- The unit wise Annual Maintenance Schedule for 2015-16, 2016-17 & 2017-18 is as under:

Unit No.	1	2	3	4
2016-17	Nil	Nil	540	540
2017-18	Nil	Nil	Nil	Nil
2018-19	Nil	Nil	Nil	Nil
2019-20	Nil	Nil	Nil	540
2020-21	540	540	540	540

2.2 REHABILITATION/CAPACITY ENHNACEMENT

- PC-I for Rehabilitation / Capacity enhancement (1 MW to 5 MW) of the Power House has been approved by Ministry of Water & Power & AFD has granted loan for the Project.

2.3 MAJOR WORKS

2016-17

- Major Overhaul of Unit No. 3 carried out.

2017-18

- Main Shaft of Unit No. 3 replaced by new one.

2018-19

- Major Overhaul of Unit No. 4 carried out.

2019-20

- Major Overhaul of Unit No.1 will be carried out.

2020-21

- Major Overhaul of Unit No.2 & 3 will be carried out.

2.4 CIVIL WORKS

2016-17

- Repair & Maintenance of F-type Residential/ Non Residential Buildings.

2017-18

- Construction of Temporary Wall at Intake.
- Repair & Maintenance of E&F type quarters.
- Repair of E&F Type Quarters

2018-19

- White Wash of E type quarters
- Repair & Maintenance of Quarter No.F-4.
- Construction of Temporary Wall at Intake

2019-20

- Construction of Temporary Wall at Intake
- Flood protection Wall be constructed.
- Clean Water Supply to Colonies.

2020-21

- Construction of Temporary Wall at Intake
- Construction of Bath Room at Forbay & Intak will be carried out.

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non Technical					
ARE Chitral	26	1	15	3	17	1	0	63
Total	26	1	15	3	17	1	0	63

Project status of FY 2020-21 with justification for change.

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non Technical					
ARE Chitral	26	1	15	3	17	1	0	63
Total	26	1	15	3	17	1	0	63

_____sd_____
Resident Engineer
Power Station Chitral

TARBELA 4TH EXTENSION

INTRODUCTION

Tarbela 4th Extension Project is constructed on Tunnel No 4 of Tarbela Power Station which is located on right bank of river Indus at Tarbela in Distt. Swabi about 100 KM North West of Islamabad.

The installed capacity, make and years of commissioning of generating units are as under; -

Unit No.	Installed capacity (MW)	Make			Commissioning Year
		Turbine	Generator	Transformer	
15-17	3x470	Voith	Voith	Alstom	2018
Total	1410				

1. ENERGY STATISTICS

Description	2016-17	2017-18	2018-19	2019-20 Estimated	2020-21 Estimated
Net Electrical Output (GWh)	-	Under Commissioning	2311.657	5234	3825
Plant Factor (%)	-		18.76	30.97	30.97
Plant Availability Factor (%)	-		68.29	85	90

The accounts of ongoing works will be capitalized during Defect Liability Period (DLP).

2. ANNUAL MAINTENANCE HOURS

Unit No.	15	16	17
2019-20	600	800	840
2020-21	720	720	720

*

-* During 2019-20 Units need to be shutdown from time to time to rectify of DLP faults, addressing Punch List issues and annual maintenance. Efforts will be made to carry out these remaining activities during lean water period.

3. MANPOWER

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non Technical					
T4,HPS		279	42	31	-	-	-	384

Pakistan Water & Power Development Authority LAHORE

11

PAKISTAN
WATER AND POWER DEVELOPMENT AUTHORITY

PHONE: 0945-477 fJ4
MQ
Fax.
Email: regghpschitral@gmeil.com

OFFICE OF THE RESIDHN T ENGINEER (O 8
GOLEN GOL HYDEL POWER STATION
WAPDA KOGHUZI CHITRAL

No. RE/GGHPS/ / . \/ / " *- DaFe:/@/H/zon

Chief Engineer (Hydel) Operation
Wapda House Lahore

SUBJECT: Provision ogoperational and Technical Data of Golen Gol Hydel Power Station Chitral

Ref: GNH0/CEHO/G- 85/40932- 41 Dated: I1-1i-20i9

Enclosed please find herewith requisite Operational and Technical Data of GolenGol power station, Chitral Is sent for onward submission to quarter concerned pleas£2.

Residen t Engineer '(
Golen Gal Hydel Pot Station
Chitral

C.c to:-
- Chief Engineer (Hydel) North Warsak Peshawar

LAHORE

GOLEN GOL HYDEL POWER STATION CHITRAL

InPoduction:

Golen Gol Hydel Power Station is located about 2 Km upstream of Koqhuzi Village at the left bank of Golen Gal River in the Chitral District of Pakistan ,25 km from Town of Chitral, having three generating Units 36 MW each with total installed capacity of 10B MW.

The installed capaci\:y, make and dates of commissioning of the Power Station are g1ven as under:

Unit No.	Installed Capacity	flake			Commissioning Oates
		Turbine	Generator	Transformer	
1 3	3*36 NW	Andrio Hydra, Austria	AndriD Hydro, Austria	Shandong Dachl China	2018 2019
Total	t08 t•tW				

1- Enerav Statics "

Description	2016-17	2D17-18	2018-19	2019-20	2020-21
Net Electrical Output(GWh)		19.1485	93,586737	185	444 .
Plant Factor (%)		6.16	30.1		
Plant Availability Factor (0/a)		40.94	96.07		

2- Repair & laintenance

2.1 Annual Malntzznance Hours

unit No.	1	2	3	Total
Z016-17				
2017-18	Under DLP	Under Commissioning	Under Commissioning	
2D18-19				
2019-20				
2020-21				

z.Z f 4d]Or R&P I of Power Generation Assets

Completed

2016-17

2017-18 Plant WaS Mnder DLP

2D18-19 Plant Was Under DLP

On-Going/New.

2019-20 NIL

2020-21

2.3 Civil Works.

Generation/Dam/Reservoir Structures

*• plsted

2016-17

On-Gom9lN•

2019-20 due to heavy flood weir site affected and will be rehabilñted until that water was

DiVen ed to tunnel for restoration of plant

2020-21

2.4 Others Building/Physical Properties

Complied

2016--17

0718

201819

On-Going(Aevv

2019-20

2020-21

3. Manpower

Status as of the date of previous tariff determination FY19-20

	Categories							
	Operational and Technical	Civil Infrastructure Maintenance		Accounts and ddmin	Security	Transport	Education & allied staff	G.Total
		Technical	Non Technical					
HPS Golen Gol	**33**		20	0B	12	03		76

Projected Status for FY 2OZ0-21 with justification for change

	Categories							
	Operational and Technical	Civil Infrastructure Maintenance		Accounts and admin	Security	Transport	Education & allied staff	G.Total
		Technical	Non Technical					
HPS Go|en Gol	0	0	0	0	0	0	0	0

Senior Engineer(Operation)

GGHPS Chltral

GHAZI-BAROTHA HYDRO POWER COMPLEX

INTRODUCTION:

Ghazi-Barotha Power Complex is "RUN OF THE RIVER PROJECT" having two (02) storage ponds and a Forebay with total storage capacity of 25.5 MCM. The Power Channel designed flow is 1600 CMS and totally dependent on releases from Tarbela Dam through Ghazi Barrage. This 1450 MW Power Plant is designed for Peak load sharing.

The installed capacity, make and years of commissioning of generating units are as under;

Unit No.	Total nstalled Capacity (MW)	Make			Years of Commissioning
		Turbine	Generator	Transformer	
1~5	290 x 5	Voith Hydro (Germany)	Toshiba (Japan)	• ABB (Germany) • TBEA (Chine)	2003-2004
Total	1450				

1. ENERGY STATISTICS:

Description	2016-17	2017-18	2018-19	2019-20	2020-21
Net Electrical Output (GWh)	6807.548	6363.539	6476.319	6600	6600
Plant factor %	54.21	50.46	51.58	51.96	51.96
Plant Availability Factor %	90.63	91.59	89.55	91.0	90.0

2. REAIR AND MAINTENANCE:

2.1 ANNUAL MAINTENANCE:

- Daily/weekly maintenance of all generating units and allied equipment's.
- Monthly Maintenance of all generating units and allied equipment's. It also involves shutdown of the unit for approximately 4 hours.
- Annual and Biennial maintenance of the Units No. 1~ 5 carried out on alternate basis. It involves shutdown of the units for 25 & 40 days respectively.

ANNUAL AND BIENNIAL MAINTENANCE HOURS:

Unit Nos.	1	2	3	4	5
2016-17	1196.58	505.92	559.75	900.67	701.33
2017-18	870.80	532.33	915.45	557.58	558.00
2018-19	514.42	916.42	589.17	895.50	936.83
2019-20 (Forecast)	960.0	600.0	960.0	600.0	600.0
2020-21 (Estimated)	600.0	960.0	600.0	960.0	960.0

LAHORE

2.2 MAJOR R&M OF POWER GENERATION ASSETS

COMPLETED

2016-17.

- Annual and Biennial Maintenance carried out.

2017-18.

- Replacement of two (2) Nos Single Phase Generator Step-up Transformers of Unit No. 1.
- Replacement of Unit-1 Shaft Seal both sliding & wearing rings.
- Replacement of 500KV Circuit Breaker B1Q2 (Yellow Phase) Main Interrupting Unit.
- Replacement of Upper Earth Insulator unit along with SF6 gas density meter and Bottom Earth Insulator Unit.

2018-19.

- Replacement of Unit-2, 3, 4 & 5 Shaft Seal both sliding & wearing rings.
- Up-gradation of Vibro system Server.
- Overhauling/servicing of Generator Circuit Breaker operating mechanism of Unit-3.
- Replacement of Stator Earth Fault damage bar of Unit-1.
- Replacement of 16 Nos. of Splits/Floor Standing Air Conditioners at different buildings of Power House.
- Replacement of 06 Nos. Top Cover Drainage Pumps.

ON GOING / NEW

2019-20.

- Replacement of Wicket Gates end seals of Units # 1 ~ 5.
- Replacement of Drainage pumps.
- Fabrication of ODI's (Opening Display Instrument) for Power Intake Gates of Units No.1 ~ 5.
- Up gradation of Direct Digital Control (DDC) for HVAC system at Power House.
- Up-gradation of Winter Kennedy Flow measurement of generating unit No. 01 ~ 05 and Tail Race Level measurement System
- Up gradating of Field Circuit Breaker of Excitation System Unit No. 1 ~ 5.
- Up grading of Generator Protection System (Relay) of Unit No. 1 & 2.
- Overhauling/servicing of Generator Circuit Breaker of Unit No.3.
- Overhauling/servicing of Generator Circuit Breaker Operating mechanism of Unit No. 2.
- Overhauling/servicing of Generator Transformers On Load Tap Changers of Unit No.2 & 3.

2020-21:

- Up-gradation of Operator Stations of Distributed Control System (DCS) of Ghazi Barotha Power Complex.
- Up-gradation of Gantry Cranes installed at Intake, Tail Regulator and Draft tube.
- Replacement of 220 VDC chargers along with battery sets at Power House.
- Replacement of 220 VDC chargers along with battery sets at 500/220KV Switchyard.
- Overhauling/servicing of On Load Tap Changer for Generator Transformers of Unit # 4 & 5.

2.3 **CIVIL WORKS:**
GENERATION / DAM / RESERVOIRSTRUCTURES

(COMPLETED)

2016-17

- Construction of First floor of 20 Beds Officer Hostel at Power Complex Colony, Barotha (Phase-II)
- Construction of boundary wall along south head pond embankment of Power Complex Colony, Barotha

2017-18

- Up-raising of selected portions of boundary wall of Power Complex Colony Barotha (Phase-II)
- Repair & Maintenance of residential , non-residential buildings & roads of Colony
- Development & Installation of tube well in Power Complex Colony, Barotha

2018-19

- Construction of WAPDA Fortified Dispensary in Power Complex Colony, Barotha
- Repair & Maintenance of residential , non-residential buildings & roads of Colony
- Development & Installation of tube well in Power Complex Colony, Barotha.
- Expansion of CCTV system by installing new CCTV cameras at Main Store and Dong Fong Store.

LAHORE

- **ON GOING / NEW**

2019-20

- Construction of wash rooms in D-type qtrs. in Power Complex Colony, Barotha (Phase-I)
- Repair & Maintenance of residential, non-residential buildings & roads of Colony.

2020-21

- Construction of wash rooms in D-type qtrs. in Power Complex Colony, Barotha (Phase-II)
- Construction of E-type quarters at Power Complex Colony Barotha (Phase-I)
- Construction of WAPDA Officers Club at Power Complex Colony, Barotha
- Construction of Parking Shed along with 02 No. Rooms at Power Complex Colony Barotha
- Construction of College Building/ additional rooms of WAPDA School Barotha
- Repair & Maintenance of residential , non-residential buildings & roads of Colony

3. **MAN POWER**

CATEGORIES								
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn.	Security	Transport	Education & Allied Staff	G. Total
		Technical	Non-Technical					
HPS GBHP	386	28	70	45	14	54	70	667

Project status of FY 2020-21 with justification for change.

	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non Technical					
HPS GBHP	-	-	-	-	-	-	-	-
GB Civil	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

Water & Power Development Authority LAHORE

INTRODUCTION:

ChashnSa Hydel Power Station is located on right abutment of Chashma Barrage, District Mianwali. It is low head plant having 08 Turbines of 23 MW each and total capacity is 184 MW.

The installed capacity make and dates of commissioning are given as under.

Units No. 1-8	Installed Capacity (MW)	Make			Commissioning Dates
		Turbine	Generator	Transformer	
Total	8X23= 184	Fuji Japan	Fuji Japan	GEC Alsthom France	2000 ~ 2001

1. ENERGY STATISTICS:

Description	2016-17	2017-18	2018-19	2079-20	2020-21
Net Electrical Output (GWh)	884.594	760.841	761.869	762.00	800.00
Plant Factor (%)	82.23	68.80	69.05	70.00	70.00
Plant Availability Factor (7o)	69.38	63.87	70.40	70.00	70.00

2. REPAIR & MAINTENANCE:

2J. Annual Mofnlenonce Hours:

Unit No.		2	3	4	5	6	7	8	Total
2016-17	1384/17	1681/44	595/46	.	.	579/52	577/43	.	
201708	.	.	.	.	£95/1C	1249/24	.	.	
2018-19	631/51		.	776/23	.	488/33	724/39	.	
2019-20	480/00	.	480/00	480/00	480/00	480/00	480/00	.	
2020-21	·480/00	.	480/00	480/00	460/00	480/00	480/00	.	

Z2 MAJOR *R I M O F* POWER GENERATION ASSCTS:

S.#	ON-GOING 2019-20	ON-GOING 2020-21	NEW
1.	Overhauling Of Generator & Turbine of Unit No. 8	Overhauling Of Generator & Turbine of Unit No. 8	
2.	Overhauling Of Generator & Turbine of Unit No. 2	Overhauling Of Generator & Turbine of Unit No. 2	
3.	Supply of Discharge Ring	Supply of Discharge Ring	
4.	Up-Gradation of Governor Control System of Unit No.]~8 of Chashma Hydel Power Station	Up-Gradation of Governor Control System of Unit No. 1 ~8 of Chashma Hydel Power Station	
5.			Supply, Installation, Testing Commissioning of Condition Monitoring System for Units 1 -8 of Chashma Hydel Power Station
6.			Supply of Runner Blade ^with Oil Seals

2J CIVILWORKS GENERATION/DAM/RESERVOIR STRUCTURIS

Completed

20U-17	Renovation of Rest House in CHP WAPDA Colony Chashma
	Construction of Waoda Bov Hiah School
	Construction of Pump House and layinq of Pipe Line in CHP Colony Campus - II
	Renovation of ladies Park in CHP WAPDA Colony Campus
	Earth fiHinq of piayaround in CHP WAPOA Colony Campus
2017-18	Renovation of CHP Mosque in WAPDA CHP Colony Campus-I
	Whitewashing of Chief Engineer (Hydel and XEN (Civil) offices WAPDA CHP Colony Campus - 1.
	Providing and fixinq of five Dtv fibre Shed ceilinq in WAPDA CHP Colony Mosque.
	PmviHinn ornri fixinn Of wire nnme Hoors cotegofie;-I!! residential Building CHP Colony Campus - 1.
2018-19	Construction of tuff tiles and Kerb Blocks in front of Cat and II residential buildings, Rest House and sub rest house and renovation of Market / Shopping Centre in CHP Colonv Campus - 1.
	Construction of comoound wall of School in CHP Colony Camous 3 .
	Refillina of expansion joints Deck Slab CPS Power House Chashma
	Cons1njc1ion of 9 Numbers Watch Towers, Security Room and boundary wall for ! foreigner Experts accommodation M / s Voith Hydro Germany
	Laying of Sui Gas Pipe Line internal Fitting and fixture of Residential and non - residential Buildina in CHP Colonv Camous - II,

On Going/New

2019-20	Repairing of Almira and white washing of Cafegory-V Houses in CHP Colony Campus —i.
	Repair of Main road in front of Cat-UI.III and IV in WAPDA CHP Colony Campus -1 and construction of Tuff Tile kerb Blocks in front of Cat - III Houses in CHP Colony Campus-I,
On Going/ New	Con?tnjction of Ti|inn wori^c in KAosq»je ob*L'1ion cjreo , Chief Engineer (Hydel), XENS (Civil) Office in Wapda CHP Colonv Campus -1.
	Consinjction of Security Room , Security Check Posts and boundary Wall at officer Club for Foreign experts M / s Andritz Hydro Switzerland .

OTHER BUILDING/ PHYSICAL PROPERTIES:

Year	Amount
20H-17	23.846
2017-ie	24.695
2018-19	01.577
2019-20	56.778
2020-21	68.140

3. MANPOWER:

Categories

Operational & Technical		Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G. Total
		Technical	Non-Technicai					
HPS Chashma	168	10	25	34	86	28	22	373
CJ Link								
Total								

LAHORE

INTRODUCTION

Jinnah Hydel Power Station is located on the right bank of Jinnah Barrage, to utilize the water head and surplus river water after irrigation for power generation. Power house is located on Indus River, 5km away from upstream township of Kalabagh, Distt. Mianwali. It is low head plant having eight pit type Kaplan (horizontal) turbines of 12 MW each and total capacity is 96 MW.

the installed capacity, make and years of commissioning of generating units are as under:

Unit No.	Installed Capacity (MW)	Make			Commissioning Years
		Turbine	Generator	Transformer	
1	8x12=96	DEC (Dong Fang Electrical Machinery Co. Ltd.)	DEC (Dong Fang Electrical Machinery Co. Ltd.)	Shaanxi Hanhzhong Transformer Co.	2012-13
2					
3					
4 & 5					
6					
7					
8					

1. ENERGY STATISTICS

Description	2016-17	2017-18	2018-19	2019-20	2020-21 (Estimated)
Net Electrical Output (GWh)	286.4830	224.4290	219.3730	172	298.00
Plant Utilization Factor Avg. Max Cap.(%)	83.72	54.46	69.00	34.54	35.30
Plant Availability Factor (%)	48.75	50.02	59.17	45.38	65.80

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE HOURS

Unit No.	1	2	3	4	5	6	7	8	Total
2016-17	0.00	689.83	16.03	0.00	683.87	713.17	674.95	7.60	2785.45
2017-18	0.00	12.85	62.67	0.00	123.42	575.97	430.98	191.02	1396.90
2018-19	0.00	58.13	1688.17	61.63	1465.60	2494.18	55.07	108.55	5931.33
2019-20 upto oct-19	0.00	406.08	13.77	0.00	0.00	16.00	15.35	2.55	453.75
2020-21 (Estimated)	680	680	680	680	-	680	680	680	4760.00

2.2 MAJOR R&M OF POWER GENERATION ASSETS

COMPLETED

2016-17	-
2017-18	Modification of Warsak trash racks for Unit No. 2, 4 & 8. Dismentling of Speed Increaser of Unit No. 01.
2018-19	Installation of new Speed Increaser of Unit No. 01.

ON-GOING /NEW

2019-20	-
2020-21	-

2.3 CIVIL WORKS

GENERATION / DAM / RESERVOIR STRUCTURES

COMPLETED

2016-17	Extension of 20 Meter Rail Track of Upstream TRCM, JHPS.
2017-18	Tilling front face of Power House & Mosaic flooring of machine hall JHPS.
2018-19	-

ON-GOING /NEW

2019-20	Construction fo consolidated boundary wall & 03 Nos. Watch towers.
2020-21	-

OTHER BUILDING / PHYSICAL PROPERTIES

COMPLETED

2016-17	-
2017-18	-
2018-19	-

ON-GOING /NEW

2019-20	-
2020-21	-

3 MANPOWER

Status as of the date of previous Tariff Determination FY 2017-18

	CATEGORIES							
	Operational & Technical	Civil Infrastructure		Accounts & Admn	Security	Transport	Education & Allied Staff	G. Total
		Technical	Non Technical					
JHPS Kalabagh	86	-	32	27	127	14	-	286
Total	92	-	39	36	128	15	19	329

Projected Status for FY 2020-21 with justification for change.

	CATEGORIES							
	Operational & Technical	Civil Infrastructure		Accounts & Admn	Security	Transport	Education & Allied Staff	G. Total
		Technical	Non Technical					
JHPS Kalabagh	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

RASUL HYDEL POWER STATION

INTRODUCTION

Rasul Hydel power station is located on Rasul power channel in between Upper Jhelum Canal and Lower Jhelum Canal. It is 10KM East of Mandi Bahahuddin & 74 KM downstream of Mangla dam. It consists of two units of 11.0 MW each. The total installed capacity is 22.0 MW.

The unit wise installed capacity, make and years of commissioning are as under;-

Unit No.	Installed capacity (MW)	Make			Commissioning Year
		Turbine	Generator	Transformer	
1 & 2	2x 11.0	Boving & Co England	British Thomson & Hoston, England	British Thomson & Hoston, England	1952
Total	22.0				

1. ENERGY STATISTICS

Description	2016-17	2017-18	2018-19	2019-20	2020-21
Net Electrical Output (GWh)	83.424152	62.846038	69.029490	61.00	61.00
Plant Factor (%)	68.18	68.18	65.91	65.00	66.00
Plant Availability Factor (%)	84.68	81.97	73.73	73.00	75.00

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE HOURS

- The unit wise Annual Maintenance Schedule for 2016-17, 2017-18 , 2018-19 , 2019-20 & 2020-21 is as under:

Unit No.	1	2	Total
2016-17	825.00	825.00	825.00
2017-18	831.00	830.17	830.58
2018-19	820.00	820.00	820.00
2019-20	820.00	820.00	820.00
2020-21	820.00	820.00	820.00

2.2 MAJOR WORKS

2016-17

- L.T Cable a/w Control Cables.
- 01 No 132 KV OCB a/w CTS.
- Motorization of Hoisting Mechanisms for Draft Tube Gates.

2017-18.

- Rectification of Fault on Unit No.1
- Booster Pump 2 Nos.
- Turbine Guide Bearing.
- Welding Plant.
- Submersible Pump for dewatering.
- Floor standing AC 2 Nos (Cabinet type)
- Installation/Replacement of Air Compressor of Unit No 1.

2018-19.

- Air Compressor

2019-20.

- Deepwell Turbine Pump
- Supply and installation of CCTV Camera phase-II is completed
- Repair and maintenance of 1No 15 MVA Power Transformer is carried out

2020-21.

- Tractor with accessories
- Replacement of Toyota Hilux 1 No.
- Repair and maintenance of 1No 15 MVA Power Transformer

2.3 CIVIL WORKS

2016-17

- Repair and Maintenance of Residential Building.
- Fencing around Spillway.
-

2017-18

- De-silting of RPC
- Construction of Cat-II 1 No).
- . Repair and Maintenance of Residential Building, Main Store and Replacement of RCC Slab and RE Office Floor.
- Construction of Watch Tower.
- Fabrication/ Installation of 3 Nos Gate.

2018-19.

R&M of Floor Head

2019-20.

- Construction of Deepwell Pump House
- Construction of approach road for new bungalow
- Development of Park
- Parking shed
- R&M of Power House Roof
- R&M of old RE bungalow
- R&M and replacement of sewerage system
- De-silting of RPC

R&M of existing roads

Cleaning of power House a/w allied areas with contingent staff

2020-21

- R&M of residential and nonresidential buildings
- De-silting of RPC
- Cleaning of power House a/w allied areas with contingent staff

3. MANPOWER

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non Technical					
RE Rasul	49	0	53	6	20	4	0	132
Total	49	0	53	6	20	4	0	132

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non-Technical					
RE HPS Allai Khwar	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

NANDIPUR HYDEL POWER STATION

INTRODUCTION

Nandipur Hydel power station is located on Upper Chenab Canal about 10 KM from Gujranwala on Gujranwala--Sialkot road. It has three (03) units of 4.6 MW each with total capacity of 13.8 MW.

The unit wise installed capacity, make and years of commissioning are as under;-

Unit No.	Installed capacity (MW)	Make			Commissioning Year
		Turbine	Generator	Transformer	
1-3	3x4.6	Litostroj Yugoslavia	RadeKoncar Yugoslavia	RadeKoncar Yugoslavia	1963
Total	13.8				

1. ENERGY STATISTICS

Description	2016-17	2017-18	2018-19	2019-20 (Forecast)	2020-21 (Planned)
Net Electrical Output (GWh)	41.2	40.4	35.1	42	42
Plant Factor (%)	35.6	35.7	30.5	35.8	35.8
Plant Availability Factor (%)	90.2	90.2	90.1	93	93

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE

- Annual Maintenance of 03 units. It involves shut down of unit for 18 days
- The unit wise Annual Maintenance Schedule for 2017-18, 2018-19, 2019-20 is as under:

Unit No.	1	2	3
2016-17	820	820	820
2017-18	820	820	820
2018-19	820	820	820
2019-20	820	820	820
2020-21	820	820	820

2.2 MAJOR WORKS

2016-17

- Procurement of 11 KV XLPE cables

2017-18

- Procurement of 3.3 KV XLPE cables
- Procurement and installation of CCTV cameras in power house and colony area.

2018-19

- Replacement of 04 No. Existing 66 KV Air Blast Circuit Breakers with new SF-6 Circuit Breakers.
- Procurement of digital 3 phase welding plant

Pakistan Water & Power Development Authority LAHORE

2019-20.

- Replacement& installation of 06 No. 11KV circuit breakers
- Replacement & installation of 66KV SF6 breakers

2020-21

- Procurement of8 no. generator surface air coolers
- Refurbishment of existing generator surface air coolers
- Purchase of generator stator coils

2.3 CIVIL WORKS

2016-17

- R&M. Of residential buildings
- R&M. Of rest house
- R&M. Of mosque
- R&M. Of other physical properties

2017-18

- Construction of 03 No. Cat-IV Quarters.
- Special R & M of Residential Buildings.

2018-19

- Construction of 2 No's cat-IV.
- Improvement of Children Park.
- Construction of Boundary wall around R.E office.
- R & M of walking track.
- Providing & fixing of tuff tiles.
- R & M Non Residential Buildings.

2019-20

- Const. of overhead water tank in colony area.
- Const. of 02 No Residential quarters Cat-III.
- Tube wellpump, pump house for water supply to Res colony.
- R&M of Rest House.
- R&M of Non Residential building.
- R&M of Mosque.
- External & internal paint of P/House Building.

2020-21

- R&M of tube well pumps
- R&M of Rest House.
- R&M of Residential buildings.
- R&M of Mosque.
- R&M of non-residential buildings

66 MANPOWER

Project status of FY 2020-21 with justification for change.

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts &Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non-Technical					
RE HPS Allai Khwar	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts &Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non Technical					
RE Nandipur	57	2	36	11	22	4	2	134
Total	57	2	36	11	22	4	2	134

SHADIWAL HYDEL POWER STATION

18

INTRODUCTION

Shadiwal Power Station is located on Upper Jhelum Canal about 10 KM from Gujrat city and 133 KM downstream of Mangla Dam. It has two (02) Units of 6.75 MW each, total installed capacity being 13.5 MW.

The unit wise installed capacity, make and years of commissioning are as under;-

Unit No.	Installed Capacity (MW)	Make			Commissioning Year
		Turbine	Generator	Transformer	
1~2	2 x 6.75	Dominion Engg: Ltd, Canada	GEC Canada	Pioneer Electric Ltd Canada	1961
Total	13.5				

1. ENERGY STATISTICS

Description	2017-18	2018-19	2019-20 (Forecast)	2020-21 (Planned)
Net Electrical Output (GWh)	25	28	28	31
Plant Factor (%)	22	25	25	26
Plant Availability Factor (%)	95	94	94	94

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE

- Annual Maintenance of 02 units. It involves shut down of Unit for 17-20 days
- The Unit wise Annual Maintenance Schedule for 2019-20, 2020-21 & 2021-22 is as under:

Financial Year	Unit No. 01	Unit No. 02
2016-17	820	820
2017-18	820	820
2019-20	820	820
2020-21	820	820
2021-22	820	820

2.2 MAJOR WORKS

2016-17

- Purchase of 01 No. Computer with Printer
- Installation of CCTV Camera
- Purchase of Transformer Trolley
- Purchase of new Photocopier Machine

2017-18

- Purchase of 01 No. New Pick up Double Cabin
- Purchase of DC Battery cells 233 AH
- Purchase of Exciter Cable 95 mm^2
- Purchase of 11 KV XLPE Cable for Generating Units
- Purchase of 3-Phase welding Plant
- Purchase of 150 GPM Submersible Pump
- Installation of Walk Through Gate
- Installation of AC for Control room and Rest House Building
- Purchase of furniture and fixtures for conference room
- Purchase of Complete wooden Plate farm for Draft Tube

2018-19

- Drilling/ Boring of 01 No. Tube well of 1.5 Cusecs capacity.
- Installation of 100 KVA DG Set.
- Replacement of seals of 02 Nos Power Transformers.
- Purchase of 440 volt 4-Core LT cable
- Purchase of 2Ton Capacity Pallet Jack
- Purchase of 01 No. digital Camera

Pakistan Water & Power Development Authority LAHORE

2019-20

- Purchase of 1.5 Cusec Pump with Assembly
- Purchase of Delivery Line for Tube Well Pump
- Repair of 20-Ton Capacity Mobile Trash Crane
- Repair/Replacement of Oil seals of Power Transformer
- Testing of meters, relays and Transformers
- Purchase of 06 Nos Tyres of Mobile Trash Crane
- Purchase of Submersible Pump 500 GPM
- Installation of CCTV Cameras

2.3 CIVIL WORKS

2016-17

- Construction of 5 No. Cat-V Quarters

2017-18

- Construction of boundary wall on east side of Power House
- Repair of roads of in Wapda Colony

2018-19

- Construction of 2No. Security Watch Tower
- R&M of old Quarters
- Construction of Pump House Building

2019-20

- Construction of 2No. Cat-III Bungalow
- Construction of Vehicle Parking Shed
- Construction of 5 No. Cat-V Quarters
- Installation of Air Conditioners in Wapda Mosque
- Laying of sewerage line for newly constructed Cat-III bungalow
- R&M of Residential/ Non-Residential buildings
- R&M of road inside Wapda Colony HPS Shadiwal
- Development of Recreational Park inside Wapda Colony HPS Shadiwal
- De-siltation of Head Race Channel

3. MANPOWER

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G. Total
		Technical	Non-Technical					
RE Shadiwal	58	4	12	12	18	4	3	111
Total	58	4	12	12	18	4	3	111

CHICHOKI HYDEL POWER STATION

INTRODUCTION

Hydel Power Station Chichoki has been installed & commissioned since 1959 near the village Joyanwala at about 20 KM far from Sheikhupura city having installed capacity of 13.2 MW.

The installed capacity, make and years of commissioning of generating units are as under:-

Unit No.	Installed capacity (MW)	Make			Commissioning Years
1-3	3*4.4	Turbine	Generator	Transformer	
Total	13.2	Titovi Litostroj Yugosalavia	RadeKoncar Yugosalavia	Rade Koncar Yugosalavia	1959

1. ENERGY STATISTICS

Description	2016-17	2017-18	2018-19	2019-20	2020-21
Net Electrical Output (GWh)	32.76	30.61	28.18	30.61	31.25
Plant Factor (%)	29.61	27.18	25.13	26.01	27.08
Plant Availability Factor (%)	60	73.87	89	85	87

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE HOURS

Unit No.	1	2	3	Total
2016-17	7716.50	865	2023.50	10605
2017-18	5086.75	929.67	848.25	6864.67
2018-19	443.75	446.75	532.75	1423.25

2.2 Major R&M OF POWER GENERATION ASSETS

COMPLETED

2016-17

- Repair of Shaft sleeve.

2017-18

- Repair of lower guide bearing
- Replacement of old damaged control wiring of units.
- Supply of 440V Cu power cable 4 core.
- Repair of Oil coolers/ heat exchangers
- Repair of Trash platform
- R&M of Water treatment and Cooling system.

2018-19

- Repair of lower guide bearing
- Repair of governor air compressor
- Supply and Installation of trash crane control system.
- Repair of Trash Crane Wheels, Rings and Bearings.
- Repair of Oil coolers/ generator coolers.
- Repair of 3 Nos. Shaft sleeve.

ON GOING/NEW

2019-20

- Replacement of existing water supply pipeline of water cooling system of generating unit
- Repair of Upper Guide Bearing.
- Rehabilitation of Trash Crane.
- Repair of 10 Nos. Generator Coils.
- Repair of 3 Nos. Shaft Sleeves.
- Repair of 3 Nos. Lower Guide Bearing

2020-21

- Purchase of Generator Coils
- Purchase of Rubber Seals
- Repair and Maintenance of Intake Gate

- Repair and Maintenance of Overhead Gantry Crane
- Replacement of 66KV isolators
- Purchase of Tractor
- Replacement of 02 Nos. Auxiliary Lt. Breaker for Auxiliary Transformer
- Repair and Maintenance of 11KV Breaker

2.3 CIVIL WORKS

GENERATION/DAM/ RESERVOIR STRUCTURES

N/A

OTHER BUILDING /PHYSICAL PROPERTIES

COMPLETED

2016-17

- Nil

2017-18

- Construction of Pump house building.

2018-19

- Construction of Overhead water tank capacity 5000 Gallons.
- Construction of Boundary wall.
- Boring and Installation of Tube well pump.

ON GOING/NEW

2019-20

- Construction of 2 Nos Cat-V Quarters.
- Construction of 2 Nos Cat-IV Quarters.
- Construction of 1 Nos Cat-V Quarters.
- Construction of Boundary Wall around 15 Acres WAPDA Land
- Construction of Pump house.
- Construction of 3 Nos. Sub Store (Civil/ Electrical/ Mechanical)
- Drilling & Boring of Tube Well Pump.

2020-21

- Construction of 03 Nos. Cat-IV quarters
- Construction of 03 Nos. Cat-V quarters
- Repair and maintenance of 01 No. Banglow B-4
- Repair and maintenance of Children Park

3. MANPOWER

	CATEGORY							
	Operation & Technician	Civil Infrastructure Maintenance		Accounts & Admn.	Security	Transport	Education & Allied Staff	G.Tota
		Technical	Non Technical					
HPS CHICHOKI	57	1	25	9	20	4	3	119

4. PROJECT STATUS OF F.Y 2020-21 WITH JUSTIFICATION FOR CHANGE

Same as above.

Pakistan Water & Power Development Authority LAHORE.

RENELA HYDEL POWER STATION

The existing Renala Hydropower Station is located at RD (160+686) near Renala town on Lower Bari Doab Canal (LBDC) off taking from Head Balloki.This Hydel power station was commissioned in 1925 by Sir Ganga Ram for lift irrigation purpose Capacity of this power house is 1.1MW.

The installed capacity, make & years of commissioning of generating Units are under:-

Unit No	Installed Capacity (MW)	Make			Commissioning Year
		Turbine	Transformer	Generator	
1-5	0.220×5	Vickers England	Allgemeine Elektrictats Germany	English Electric Company England	1925
Total	1.1				

1. Energy Statistics

Description	2016-17	2017-18	2018-19	2019-20	2020-21
Net Electrical output (Gwh)	2.159070	2.261310	2.139510	2.0	2.5
Plant Factor (1%)	22.80	23.91	22.65	22.60	24.55
Plant Available Factor (%)	88.28	94.42	79.81	78.21	93.10

2. Repair Manintenance

2.1 Annual maintenance Housrs

Units No	1	2	3	4	5
2016-17	456/00	456/00	456/00	456/00	456/00
2017-18	456/00	456/00	456/00	456/00	456/00
2018-19	456/00	456/00	456/00	456/00	456/00
2019-20	456/00	456/00	456/00	456/00	456/00
2020-21	456/00	456/00	456/00	456/00	456/00

Major R & M of power generation

2.2 Assets

Completed

2016-17 Nil
2017-18 Nil

On Going /New

2019-20 R&M of unit No. 05 Stage 02 Replacement of turbine Shaft
2020-21 R&M of unit No. 01 stage 01 Replacement of Turbine Shaft

2.3 Civil Works

Generation /Dam/ Reservoir Structures

Completed.

2016-17 Nil
2017-18 Nil
2018-19 Nil

ON Going /New

2019-20 Nil
2020-21 Nil

Other Building /Physical Properties

Completed

2016-17	Special Repair of ARE Residence &offices.
2017-18	R&M of 08 No Quarters Category IV&V.
2018-19	R&M of 08 No Quarters Category IV&V.
	Resurfacing of Colony & Power House Road.

On Going/New

2019-20	R&M of 08 No E-type quarters WAPDA Colony
2020-21	R&M of Main Store Building & Workshop

3. MANPOWER

Status as of the date of previous Tariff Determination FY 2017-18

Categories								
	Operation &Technical	Civil Infrastructure Manitenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G. Total
		Technical	Nontechnical					
HPS Renala	21		3	2	7	1	1	35
Total	21		3	2	7	1	1	35

Project status for Fy 2020-21 with justification for Change.

Categories								
	Operation &Technical	Civil Infrastructure Manitenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G. Total
		technical	Non technical					
HPS Renala								
Total								

Water & Power Development Authority LAHORE.

MANGLA POWER STATION

INTRODUCTION

Mangla Power Station is located on river Jhelum at Mangla about 10 km away from Mirpur and 30 km from Jhelum city having 10 Units of 100 MW each with total capacity of 1000 MW*. The power station was completed in different phases from 1967 to 1993. Mangla Dam Raising Project was started in 2004 and completed in 2009 resulting into enhanced storage capacity from 5.88 MAF to 7.475 MAF. Mangla Refurbishment Project (MRP) for Refurbishment /Up-gradation of E&M equipment of Generating Units of Power Station Mangla is in progress with effect from 12.11.2017.

The installed capacity, make and years of commissioning of generating units are as under;-

Unit No.	Installed capacity (MW)	Make			Commissioning Years
		Turbine	Generator	Transformer	
1-4	4x100=400	Mitsubishi Japan	Hitachi Japan	Unit 1,2 & 4 Savigliano Italy, Unit 3 Skoda Czech.	1967-69
5-6	Under shutdown for their refurbishment / up-gradation with effect from 12.11.2017				
7-8	2x100=200	ACEC Belgium	Hitachi Japan	Italtrafo Unit-7 Skoda Unit-8	1981
9-10	2x100=200	Skoda Czech	Skoda Czech	Skoda Czech.	1993-94
Total	800				

* : Installed capacity is 1000 MW which is presently reduced to 800 MW as Unit No. 5 & 6 are under shutdown since 12.11.2017 for their Refurbishment / Up-Gradation.

1. ENERGY STATISTICS

Description	2016-17	2017-18	2018-19	2019-20 (Forecast)	2020-21 (Estimated)
Net Electrical Output (GWh)	5257	4073	3803	3995	4744
Plant Factor (%)	61.05	59.10	55.09	52 %	55.00
Plant Availability Factor (%)	92.52	92.19	93.86	90 %	93.50

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE HOURS (Including Biennial, Monthly & Scheduled Maintenance)

Unit No.	1	2	3	4	5	6	7	8	9	10	TOTAL
2016-17	868	457	877	887	363	1308	231	613	50	81	5735
2017-18	231	633	103	289	446	453	365	41	756	758	4075
2018-19	448	358	469	468	Under Refurbishment by MRP		156	501	72	90	2562
2019-20 (Forecast)	992	1001	137	39			595	452	1489	1555	6260
2020-21 (Estimated)	548	116	will be shut down under MRP		-	-	48	548	48	48	1356

2.2 MAJOR R&M OF POWER GENERATION ASSETS.

COMPLETED.

2016-17

- Biennial Maintenance of Unit No. 01, 03, 04 & 08.
- Replacement of existing 132 KV low rating Air Blast Circuit Breaker E0Q3 with new high rupturing capacity SF-6 Circuit Breaker.

2017-18.

- Biennial Maintenance of Unit No. 02, 07 & 09.
- Replacement of existing 132 KV low rating Air Blast Circuit Breakers E0Q2 & E0Q1 with new high rupturing capacity SF6 Circuit Breakers.

2018-19

- Biennial Maintenance of Unit No. 1,3,4 & 8.
- Up-Gradation / Refurbishment of EOT & Gantry Cranes of Power House under Mangla Refurbishment Project (MRP)
- Replacement of 132 KV Low rating Air Blast Circuit Breaker (ABCB) E4Q3 & E4Q2 with new high rupturing capacity SF-6 Circuit Breaker in Switchyard.
- Replacement of 220 KV low rating Air Blast Circuit Breaker (ABCB) D10Q1, D10Q3, with new high rupturing capacity SF-6 Circuit breaker in Switchyard.

2019-20

COMPLETED

- Biennial Maintenance of unit No. 02, 09 & 10.
- Removal of Stones, Boulders, Wooden Logs and Filling of Cracks in Tunnel No. 01 & 05 in the wake of high intensity earthquake of 24-09-2019 in the vicinity of Mangla.
- Up-Gradation / Refurbishment of unit No. 05 & 06 of Power Station under MRP.
- Replacement of 220KV Air Blast Circuit Breaker D11Q1, D11Q3, D11Q2 and D10Q2 with new high rupturing capacity SF6 Circuit Breaker.

2019-20
ON GOING / NEW

- Biennial Maintenance of unit No. 07.
- Up-Gradation / Refurbishment of unit No. 05 & 06 of Power Station under MRP.

2020-21

- Biennial Maintenance of unit No. 01 & 10.
- Up-Gradation / Refurbishment of Unit No. 03 & 04 of Power Station under MRP.

2.3 CIVIL WORKS

GENERATION / GENERAL PLANT ASSETS.

COMPLETED.

2016-17

- Treatment of Eastern Loading Bay Roof.
- Filling of Expansion joints at Gantry Crane Area and under the Rail of 200/30 Ton EOT Crane.
- Rehabilitation of slided slope in front of Control Block Building.
- Pacca Work of Ware House.
- Renovation of Main Control Room Building.

LAHORE

- Replacement of Vinyl Tiles at P&I Room and Renovation of Washrooms.
- Installation / Fixing of Razor Wire on splash wall in front of Power House.
- Carpeting of road in front of transformer deck of Mangla Power House and Switchyard.
- Construction of storm water drain, slope and culvert at Switchyard Power Station Mangla.
- Strengthening of slope north side at Switchyard Power Station Mangla.
- Construction of 132 KV Circuit Breaker foundation.
- Road carpeting of Mirpur - Dnal road & internal roads of switchyard area.

2017-18

- Construction / Protection of Slope and Drain at Tailrace Area in front of Power House.
- Premix carpet of M&D Road and internal roads of switchyard Power Station Mangla.

2018-19

- Repair of Concrete portion at right bank of Tailrace Area.
- Boundary Wall of Ware House.

ON GOING / NEW

2019-20

- Addition of 08 No. Washrooms in Officers Hostel Baral.
- Construction of Compound Walls of remaining Banglows of Baral Colony. Construction of 02 No. 220 KV Circuit Breaker foundation..
- Fencing at Left side of Tailrace.
- Construction / Protection of slope opposite of transformer bay.

MANPOWER (2019-20)

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non Technical					
HPS Mangla	354	01	29	50	03	33	113	583

Projected Status (2020-21)

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G.Total
		Technical	Non Technical					
HPS Mangla	354	01	29	50	03	33	113	583

OPERATION ENGINEER
POWER STATION MANGLA

Pakistan Water & Power Development Authority LAHORE

GOMAL ZAM HYDROPOWER PROJECT

INTRODUCTION

Gomal Zam Dam is located at Khajuri Kach on Gomal River in South Waziristan Agency (merged area of KPK), which is situated west of districts of Tank of Khyber Pakhtunkhwa Province. Project site is accessible from Indus Highway via DI Khan-Tank road. From Tank, the Dam site is about 60 KM to the West and connected through a metalled road.

- Type of Dam RCC Curved Gravity Dam
- Gross Storage 1.140 MAF
- Live Storage 0.676 MAF

The unit wise installed capacity, make and years of commissioning are as under;-

Unit No.	Installed capacity (MW)	Make			Commissioning Year
		Turbine	Generator	Transformer	
1-2	2x8.5	China	China	Harbin Electric Corporation China	2013
Total	17.0				

1. ENERGY STATISTICS

Description	2016-17	2017-18	2018-19	2019-20 (Forecast)	2020-21 (Planned)
Net Electrical Output (GWh)	5.86	0.353	31.17	49.5	49.5
Plant Factor (%)	4.13	0.24	21.64	40	80.4
Plant Availability Factor (%)	5.0	0.15	30	45	90.4

2. REPAIR & MAINTENANCE

2.1 ANNUAL MAINTENANCE HOURS

Unit No	1	2	Total
2016-17	-	-	-
2017-18	-	-	-
2018-19	-	-	-
2019-20	-	552	**552**
2020-21	552	552	**1104**

2.2 MAJOR R&M OF POWER GENERATION ASSETS COMPLETED

2016-17: Restoration of Unit # 2
2017-18: Nil
2018-19 Fault Rectification of GIS & Synchronization of Unit # 2

ON-GOING / NEW

2019-20 Nil
2020-21 Fault rectification of Unit # 1

2.3 CIVIL WORKS

GENERATION / DAM / RESERVOIR STRUCTURES

COMPLETED

2016-17: NIL

2017-18: NIL

2018-19: Renovation of Wapda Bachelor Hostel

ON-GOING / NEW

2019-20: Renovation of Roof, Painting of Steel Stairs of Dam & Renovation of Bungalow

2020-21: R&M of Sewerage system

OTHER BUILDING / PHYSICAL PROPERTIES

COMPLETED

2016-17: Nil

2017-18: Nil

2018-19: Nil

ON-GOING / NEW

2019-20: Nil

2020-21: Nil

3. MANPOWER

Status as of the date of previous Tariff Determination FY 2017-18

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G. Total
		Technical	Non-Technical					
RE GZD	52	4	25	19	24	5	0	129
Total	52	4	25	19	24	5	0	129

Projected status for FY 2020-21 with justification for change: -

	CATEGORIES							
	Operational & Technical	Civil Infrastructure Maintenance		Accounts & Admn	Security	Transport	Education & Allied Staff	G. Total
		Technical	Non-Technical					
RE GZD	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0

Annex-13

Working of Return on Assets

FY 2016-17

	Generation Block																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total
	Tarbela	Warsak	Dubair	Allai	Khan	Jabban	Dargai	Kur. Garhi	Chitral	FT-4	Golen Gol	G. Barotha	Chashma	Jinnah	Rasul	Nandipur	Shadiwal	Chichoki	Renala	Mangla	Gomal Zam	P.stations
	Mln.Rs																					
Average Net Fixed Asse	7,527	1,068	20,167	14,108	8,583	3,719	68	8	33	-	-	67,258	11,847	15,870	179	58	37	21	18	21,531	4,920	177,021
F. Assets financed by:																						
Debt	5,269	748	14,117	9,875	6,008	2,603	47	5	23	-	-	47,081	8,293	11,109	126	41	26	15	12	15,072	3,444	123,915
Equity	2,258	320	6,050	4,232	2,575	1,116	20	2	10	-	-	20,177	3,554	4,761	54	17	11	6	5	6,459	1,476	53,106
Total	7,527	1,068	20,167	14,108	8,583	3,719	68	8	33	-	-	67,258	11,847	15,870	179	58	37	21	18	21,531	4,920	177,021
Debt/ Equity financing ratio																						
Debt	70%	70%	70%	70%	70%	70%	70%	70%	70%	0%	0%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Equity	30%	30%	30%	30%	30%	30%	30%	30%	30%	0%	0%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
WACC																						
Cost of loan	18.2%	13.0%	17.7%	17.7%	17.7%	17.3%	13.0%	13.0%	13.0%	0.0%	0.0%	13.0%	12.3%	5.9%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.7%
ROE	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%
WACC	17.8%	14.2%	17.5%	17.5%	17.5%	17.2%	14.2%	14.2%	14.2%	0.0%	0.0%	14.2%	13.7%	9.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.7%
Return on Assets (Mln	1,343	152	3,521	2,463	1,498	640	10	1	5	-	-	9,532	1,621	1,468	25	8	5	3	3	3,057	699	26,054

Working of Return on Assets

FY 2017-18

	Generation Block														Generation Block							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total
	Tarbela	Warsak	Dubair	Allai	Khan	Jabban	Dargai	Kur. Garhi	Chitral	D.I.K	Golen Gol	G. Barotha	Chashma	Jinnah	Rasul	Nandipur	Shadiwal	Chichoki	Renala	Mangla	Qaiwal Fall	P.stations
	Min.Rs																					
Average Net Fixed Assets (for retur	7,660	1,434	20,025	13,682	8,359	3,659	72	19	31	-	-	65,851	11,454	15,489	183	55	32	26	18	21,049	4,816	173,915
F. Assets financed by:																						
Debt	5,362	1,004	14,017	9,578	5,851	2,561	50	13	22	-	-	46,086	8,018	10,842	128	39	22	18	13	14,734	3,371	121,741
Equity	2,298	430	6,007	4,105	2,508	1,098	22	6	9	-	-	19,755	3,436	4,647	55	17	10	8	5	6,316	1,445	52,175
Total	7,660	1,434	20,025	13,682	8,359	3,659	72	19	31	-	-	65,851	11,454	15,489	183	55	32	26	18	21,049	4,816	173,915
Debt/ Equity financing ratio																						
Debt	70%	70%	70%	70%	70%	70%	70%	70%	70%	0%	0%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Equity	30%	30%	30%	30%	30%	30%	30%	30%	30%	0%	0%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
WACC																						
Cost of loan	18.4%	13.0%	17.8%	17.8%	17.8%	16.5%	13.0%	13.0%	13.0%	0.0%	0.0%	12.7%	11.5%	5.9%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.6%
ROE	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%
WACC	18.0%	14.2%	17.5%	17.5%	17.5%	16.7%	14.2%	14.2%	14.2%	0.0%	0.0%	14.0%	13.2%	9.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.6%
Return on Assets (Min.Rs)	1,378	204	3,513	2,400	1,466	610	10	3	4	-	-	9,226	1,507	1,430	26	8	5	4	3	2,989	684	25,468

Pakistan Water & Power Authority LAHORE

13/3

Working of Return on Assets
FY 2018-19

	Generation Block														Generation Block							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total
	Tarbela	Warsak	Dubair	Allai	Khan	Jabban	Dargai	Kur. Garhi	Chitral	T-4	Golen Gol	G. Barotha	Cheshma	Jinnah	Rasul	Nandipur	Shadiwal	Chichoki	Renala	Mangla	Gomal Zam	P.stations
	Min.Rs																					
Average Net Fixed Assets (for return)	7,334	1,811	20,156	13,227	8,295	3,638	74	27	29	32,338	11,372	61,805	10,804	15,237	196	55	41	48	18	20,553	4,831	211,889
F. Assets financed by:																						
Debt	5,134	1,267	14,109	9,259	5,807	2,547	52	19	20	22,636	7,960	43,263	7,563	10,666	137	39	29	34	13	14,387	3,382	148,322
Equity	2,200	543	6,047	3,968	2,489	1,091	22	8	9	9,701	3,411	18,541	3,241	4,571	59	17	12	14	5	6,166	1,449	63,567
Total	7,334	1,811	20,156	13,227	8,295	3,638	74	27	29	32,338	11,372	61,805	10,804	15,237	196	55	41	48	18	20,553	4,831	211,889
Debt/ Equity financing ratio																						
Debt	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Equity	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
WACC																						
Cost of loan	18.7%	13.0%	17.9%	17.9%	17.9%	16.7%	13.0%	13.0%	13.0%	15.0%	16.6%	12.4%	11.6%	6.3%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	14.0%
ROE	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%
WACC	18.2%	14.2%	17.7%	17.7%	17.7%	15.8%	14.2%	14.2%	14.2%	15.6%	16.7%	13.8%	13.2%	9.5%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.9%
Return on Assets (Mln.Rs)	1,334	257	3,560	2,336	1,465	611	11	4	4	5,043	1,905	8,526	1,430	1,445	28	8	6	7	3	2,918	686	31,585

Working of Return on Assets
FY 2019-20

	Generation Block																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total
	Tarbela	Warsak	Dubair	Allai	Khan	Jabban	Dargai	Kur. Garhi	Chitral	T-4	Gulen Got	C. Bisrotha	Chashma	Jinnah	Rasul	Nandipur	Shadiwal	Chichoki	Renala	Manjra	Goithal Zam	P.stations
	Min.Rs																					
Average Net Fixed Assets (for return)	7,074	1,769	20,309	12,768	8,204	3,569	71	26	27	63,823	23,006	57,710	10,618	15,124	211	77	54	100	20	20,145	4,533	249,239
F. Assets financed by:																						
Debt	4,952	1,238	14,217	8,938	5,743	2,498	49	18	19	44,676	16,104	40,397	7,433	10,587	147	54	38	70	14	14,101	3,173	174,467
Equity	2,122	531	6,093	3,830	2,461	1,071	21	8	8	19,147	6,902	17,313	3,185	4,537	63	23	16	30	6	6,043	1,360	74,772
Total	7,074	1,769	20,309	12,768	8,204	3,569	71	26	27	63,823	23,006	57,710	10,618	15,124	211	77	54	100	20	20,145	4,533	249,239
Debt/ Equity financing ratio																						
Debt	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Equity	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
WACC																						
Cost of loan	19.2%	13.0%	18.2%	18.2%	18.2%	16.9%	13.0%	13.0%	13.0%	14.7%	15.1%	12.0%	11.5%	8.3%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	14.1%
ROE	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%
WACC	18.5%	14.2%	17.9%	17.9%	17.8%	16.9%	14.2%	14.2%	14.2%	15.4%	15.6%	13.5%	13.2%	10.9%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	15.0%
Return on Assets (Min.Rs)	2,910	251	3,625	2,279	1,464	604	10	4	4	9,814	3,606	7,787	1,396	1,649	30	11	8	14	3	2,861	644	37,367

Pakistan Water & Power Development Authority
LAHORE

13/5

Working of Return on Assets
FY 2020-21

	Generation Block																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total
	Tarbela	Warsak	Dubair	Allai	Khan	Jabban	Dargai	Kur. Garhi	Chitral	T-4	Golen Gol	G. Barothal	Cheshma	Jinnah	Rasul	Nandipur	Shadiwal	Chichoki	Renala	Mangla	Gomal Zam	P.stations
	Min.Rs																					
Average Net Fixed Assets (for return)	7,137	1,706	20,315	12,179	7,932	3,465	71	28	25	62,116	23,532	56,396	11,193	14,986	224	120	74	173	24	20,008	3,793	245,497
F. Assets financed by:																						
Debt	4,996	1,194	14,220	8,526	5,552	2,425	49	19	18	43,481	16,473	39,478	7,835	10,491	157	84	52	121	17	14,006	2,655	171,848
Equity	2,141	512	6,094	3,654	2,380	1,039	21	8	8	18,635	7,060	16,919	3,358	4,496	67	36	22	52	7	6,002	1,138	73,649
Total	7,137	1,706	20,315	12,179	7,932	3,465	71	28	25	62,116	23,532	56,396	11,193	14,986	224	120	74	173	24	20,008	3,793	245,497
Debt/ Equity financing ratio																						
Debt	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Equity	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
WACC																						
Cost of loan	20.0%	13.0%	18.7%	18.7%	18.7%	17.1%	13.0%	13.0%	13.0%	15.2%	16.6%	11.2%	11.6%	8.3%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	14.3%
ROE	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%
WACC	19.1%	14.2%	18.2%	18.2%	18.2%	17.1%	14.2%	14.2%	14.2%	15.8%	16.7%	12.9%	13.2%	10.9%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	15.1%
Return on Assets (Min.Rs)	1,361	242	3,695	2,215	1,443	592	10	4	4	9,791	3,932	7,292	1,481	1,634	32	17	11	25	3	2,841	539	37,183

Pakistan Water & Power Development Authority LAHORE

Annex-17/1

Working of Return
FY 2016-17

	Development Block								
	1	2	3	4	5	6	7	8	Total
	DBD	T-4	Golen Gol	Dasu	Keyal	Mangla Ref	Warsak Rehab	Others	P.Projects
	Mln.Rs								
Average Net Fixed Asse	67,474	43,795	16,609	21,919	2,788	541	481	6,716	160,324
F. Assets financed by:									
Debt	53,979	35,036	13,287	17,535	2,231	433	385	5,373	128,259
Equity	13,495	8,759	3,322	4,384	558	108	96	1,343	32,065
Total	**67,474**	**43,795**	**16,609**	**21,919**	**2,788**	**541**	**481**	**6,716**	**160,324**
Debt/ Equity financing									
Debt	80%	80%	80%	80%	80%	80%	80%	80%	80%
Equity	20%	20%	20%	20%	20%	20%	20%	20%	20%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
WACC									
Cost of loan	10.0%	14.7%	16.8%	8.5%	14.8%	8.0%	14.5%	13.0%	12.0%
ROE	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%
WACC	**11.4%**	**15.2%**	**16.8%**	**10.2%**	**15.3%**	**9.8%**	**15.0%**	**13.8%**	**13.0%**
Return on Assets (Mln	**7,670**	**6,656**	**2,794**	**2,236**	**425**	**53**	**72**	**927**	**20,834**

Punjab Irrigation Water & Power Development Authority LAHORE

Working of Return on Asset
FY 2017-18

	Development Block								
	1	2	3	4	5	6	7	8	Total
	DBD	T-4	Golen Gol	Dasu	Keyal	Mangla Ref	Warsak Rehab	Others	P.Projects
	Mln.Rs								
Average Net Fixed Assets (for retur	75,250	60,783	22,001	36,730	2,893	1,264	992	6,104	206,016
F. Assets financed by:									
Debt	60,200	48,626	17,601	29,384	2,314	1,011	794	4,883	164,813
Equity	15,050	12,157	4,400	7,346	579	253	198	1,221	41,203
Total	**75,250**	**60,783**	**22,001**	**36,730**	**2,893**	**1,264**	**992**	**6,104**	**206,016**
Debt/ Equity financing ratio									
Debt	80%	80%	80%	80%	80%	80%	80%	80%	80%
Equity	20%	20%	20%	20%	20%	20%	20%	20%	20%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
WACC									
Cost of loan	10.2%	15.5%	17.0%	7.8%	14.2%	5.1%	14.7%	13.0%	12.2%
ROE	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%
WACC	**11.6%**	**15.8%**	**17.0%**	**9.7%**	**14.8%**	**7.5%**	**15.2%**	**13.8%**	**13.2%**
Return on Assets (Mln.Rs)	**8,718**	**9,593**	**3,733**	**3,550**	**427**	**95**	**151**	**842**	**27,109**

Working of Return on Assets
FY 2018-19

	Development Block								
	1	2	3	4	5	6	7	8	Total
	DBD	T-4	Golen Gol	Dasu	Keyal	Mangla Ref	Warsak Rehab	Others	P.Projects
	Mln.Rs								
Average Net Fixed Assets (for return)	79,427	34,967	12,474	43,129	3,000	2,811	1,028	5,446	182,282
F. Assets financed by:									
Debt	63,542	27,974	9,979	34,504	2,400	2,249	822	4,357	145,826
Equity	15,885	6,993	2,495	8,626	600	562	206	1,089	36,456
Total	79,427	34,967	12,474	43,129	3,000	2,811	1,028	5,446	182,282
Debt/ Equity financing ratio									
Debt	80%	80%	80%	80%	80%	80%	80%	80%	80%
Equity	20%	20%	20%	20%	20%	20%	20%	20%	20%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
WACC									
Cost of loan	10.2%	15.0%	16.6%	7.5%	15.1%	8.0%	9.9%	13.0%	11.1%
ROE	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%
WACC	11.6%	15.4%	16.7%	9.4%	15.5%	9.8%	11.3%	13.8%	12.2%
Return on Assets (Mln.Rs)	9,202	5,382	2,085	4,037	464	275	116	752	22,314

Water & Power Development Authority Pakistan LAHORE

Working of Return on Assets
FY 2019-20

	Development Block								
	1	2	3	4	5	6	7	8	Total
	DBD	T-4	Golen Gol	Dasu	Keyal	Mangla Ref	Warsak Rehab	Others	P.Projects
	Mln.Rs								
Average Net Fixed Assets (for return)	81,653	7,517	3,313	72,501	3,546	9,297	3,207	5,214	186,248
F. Assets financed by:									
Debt	65,322	6,013	2,650	58,001	2,837	7,438	2,566	4,171	148,998
Equity	16,331	1,503	663	14,500	709	1,859	641	1,043	37,250
Total	81,653	7,517	3,313	72,501	3,546	9,297	3,207	5,214	186,248
Debt/ Equity financing ratio									
Debt	80%	80%	80%	80%	80%	80%	80%	80%	80%
Equity	20%	20%	20%	20%	20%	20%	20%	20%	20%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
WACC									
Cost of loan	10.3%	15.0%	16.6%	9.1%	14.7%	8.4%	10.9%	13.0%	10.2%
ROE	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%
WACC	11.6%	15.4%	16.7%	10.7%	15.2%	10.1%	12.1%	13.8%	11.5%
Return on Assets (Mln.Rs)	9,473	1,157	554	7,730	539	938	390	720	21,500

Working of Return on Assets
FY 2020-21

	Development Block								
	1	2	3	4	5	6	7	8	Total
	DBD	T-4	Golen Gol	Dasu	Keyal	Mangla Ref	Warsak Rehab	Others	P.Projects
	Mln.Rs								
Average Net Fixed Assets (for return)	81,653	13,338	6,564	137,626	4,573	17,609	6,980	5,214	273,557
F. Assets financed by:									
Debt	65,322	10,671	5,251	110,101	3,658	14,087	5,584	4,171	218,846
Equity	16,331	2,668	1,313	27,525	915	3,522	1,396	1,043	54,711
Total	81,653	13,338	6,564	137,626	4,573	17,609	6,980	5,214	273,557
Debt/ Equity financing ratio									
Debt	80%	80%	80%	80%	80%	80%	80%	80%	80%
Equity	20%	20%	20%	20%	20%	20%	20%	20%	20%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
WACC									
Cost of loan	10.3%	15.0%	16.6%	9.7%	9.8%	10.7%	8.5%	13.0%	10.4%
ROE	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%
WACC	11.6%	15.4%	16.7%	11.2%	11.2%	12.0%	10.2%	13.8%	11.7%
Return on Assets (Mln.Rs)	9,477	2,053	1,097	15,406	513	2,105	714	720	32,085

Annex-15

PAKISTAN WATER AND POWER DEVELOPMENT AUTHORITY

Telephone # : 99202522
99202211/ 2713
Fax :99202005

General Manager Finance (P)
WAPDA, 713 – Wapda House
Lahore

No.GMF/CPCC/4525/241

Dated: 28 /11/2019

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

Subject: **TARIFF MODIFICATION PETITION FOR REVISION OF NHP/WATER USAGE CHARGES (WUC) RATE PAYABLE TO GOVT. OF AJ&K ON GENERATION FROM MANGLA POWER STATION**

Please find attached three sets of Tariff Modification Petition in term of section 3(1) of the NEPRA Tariff Standards and Procedures Rules, for modification in "Hydel Levies Tariff" block of Tariff determination of WAPDA Hydroelectric with revision in WUC rate payable to GoAJ&K on generation from Mangla Power Station in line with Economic Coronation Committee (ECC) decision held in Case No. ECC 76/11/2019 dated 20-03-2019. In this regard a cheque # 00002167 dated 28-11-2019 amounting Rs.1,663,580 after deduction of withholding tax (Rs.1,808,240 - Rs.144,660) is also attached as NEPRA fee.

(Naveed Asghar Ch.)
General Manager Finance (P)

DA. As above

Copy for information to:

1. Section Officer (HP) Ministry of Water Resources, Islamabad
2. S.O to Chairman, WAPDA, Wapda House, Lahore.

Pakistan Water & Power Development Authority LAHORE

NAME OF LICENSEE: PAKISTAN

WATER AND POWER DEVELOPMENT AUTHORITY

LICENSE NO. GL (HYDEL) /05 / 2004

TARIFF PETITION: TARIFF MODIFICATION PETITION FOR REVISION OF WATER USAGE CHARGES (WUC) RATE TO BE PAID TO GOVT. OF AJK ON GENERATION FROM MANGLA POWER STATION

LAHORE.

AUTHORIZATION & REPRESENTATION

In pursuance of Economic Coronation Committee (ECC) decision held in Case No. ECC 76/11/2019 dated 20-03-2019 notified vide MoWR letter dated 28-03-2019 **(Annex-I)** and NEPRA directions conveyed vide letter No. NEPRA/R/TRF-383/14114 dated 02.08.2019 & No. NEPRA/R/TRF-383/2395 dated 14.10.2019 **(Annex-II & III)**, WAPDA Authority has decided **(Annex-IV)** to file Tariff Modification Petition in NEPRA for enhancement of rate of Water Usage Charges (WUC) payable to GoAJ&K on the generation of Mangla Power Station at par with the provinces; and to authorize the following officers to submit and sign, individually or jointly, the documents necessary in support of this tariff modification petition and to appear before NEPRA and represent WAPDA-Hydroelectric during the hearing /proceedings of this petition:

a. General Manager Finance (Power)
b. General Manager (Hydel Operation)
c. GM (C&M) Water
d. DG (Law)

GROUNDS / BASIS OF PETITION FOR TARIFF MODIFICATION

As per NEPRA determination dated 22.11.2017, NHP is being paid to the provinces (i.e. Govt. of KP and Govt. of Punjab) @ Rs.1.155/kWh. Whereas Water Usage Charges (WUC) of Mangla Power Station are being paid to the Govt. of AJ&K at the NEPRA determined rate of Rs.0.15/kWh under clause 5.6 the Mangla Dam Raising Agreement of 2003.

Ministry of Water Resources, Government of Pakistan vide letter No.6 (17)/2004-HP dated 28.03.2019 **(Annex-I)** has circulated the decision of Economic Coordination Committee (ECC) of the Cabinet held in Case No. ECC 76/11/2019 dated 20-03-2019 (regarding enhancement of rate of WUC payable to GoAJ&K on the generation of Mangla power station) and bring it at par with the provinces. The relevant clauses of above ECC decision are reproduced as under:

(i) Water Use Charges (WUC) @ Rs. 1.10/kwh should be allowed on Mangla Hydropower Project prospectively as well as Neelum Jhelum Hydro Power Project and any other future public sector hydro power project to AJK at par with Net Hydel Profit (NHP) paid to the provinces. Any future revision in rate of NHP for provinces shall also apply WUC for AJK.

(iii) Ministry of Water Resources to issue necessary guidelines to NEPRA. WAPDA shall accordingly file tariff application to the Regulator. ECC to be briefed on the progress after 30 days.

(vii) 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.

(viii) WAPDA shall not seek any Federal Government support regarding payment of WUC to AJK.

(x) The new pricing system for Water Use Charges (WUC) and consumer tariff as DISCO for AJK to be completed by 30th June, 2019.

LAHORE.

It is pertinent to mention here that the enhancement of WUC rate on the generation from Mangla Power Station was proposed by WAPDA in its tariff petition for FY 2017-18, but the same was disallowed vide Para-134 Page-36 of the NEPRA tariff determination dated 22.11.2017 for want of decision of the competent forum. Therefore on receipt of above ECC decision dated 20.03.2019, a Supplementary Tariff Petition was filed by WAPDA on 08-05-2019 on the analogy of the supplementary tariff petition dated 20.04.2016 earlier filed for recovery of NHP arrears payable to the GoKP which was duly admitted and determined by the NEPRA on 25.05.2016.

In this case however, NEPRA Authority observed vide letter dated 19-06-2019 **(Annex-V)** that "There is no provision to file supplementary tariff petition under NEPRA Tariff (Standard & Procedure) Rules, 1998. WAPDA may file a tariff modification petition, if so desire". The subsequent request made vide WAPDA's letter dated 28.06.2019 **(Annex-VI)** and MoWR's letter dated 01-10-2019 **(Annex-VII)** for favorable review of above stance was also not acceded to and the NERPA Authority upheld / maintained its earlier decision vide their letter dated 02-08-2019 & 14-10-2019 **(Annex-II &III)** and advised WAPDA to file Tariff Modification Petition.

Accordingly, the instant Tariff Modification Petition has been filed to seek determination of revised / enhanced rate of Water Usage Charges (payable to Govt. of AJ&K on the generation from Mangla Power Station) in accordance with the decision of ECC of the Cabinet, notified vide MoWR's letter No.6 (17)/2004-HP dated 28.03.2019.

DETERMINATION SOUGHT

NEPRA is requested to make partial modification at Sr. No.1 **"Hydel Levies Tariff"** portion of tariff relating to Mangla Power Station by allowing Regular Water Usage Charges (WUC) @ Rs. 1.155/kWh as against the earlier determined rate of Rs. 0.15/kWh for payment of WUC to AJ&K and decision of NEPRA may please be passed on to Ministry of Water Resources for notification in the Official Gazette of Pakistan.

WUC/NHP Existing and Proposed Tariff

Name of Power Station	Province/ Territory	Capacity (MW)	WUC/NHP Existing Tariff (Rs./kWh)	WUC/NHP Proposed Tariff (Rs./kWh)
Mangla Hydel Power Station	AJK	1,000	0.15	1.155

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

Annex-I

Government of Pakistan
Ministry of Water Resources
*****

No. 6(17)/2004-HP

Islamabad, March 28, 2019.

Chairman WAPDA,
WAPDA House,
Lahore.

Subject:- DECISIONS OF THE MEETING OF ECONOMIC COORDINATION COMMITTEE (ECC) OF THE CABINET

I am directed to refer to Cabinet Division's letter No.F.1/11/2019-Com dated 25.03.2019 on the subject cited above which is self explanatory. The decision on Case No. ECC-76/11/2019 dated 20.03.2019 is reproduced as under as a ready reference:

(i) *Water Use Charges (WUC) @ Rs. 1.10/kwh should be allowed on Mangla Hydropower Project prospectively as well as Neelum Jhelum Hydro Power Project, and any other future public sector hydro power project, to AJK at par with Net Hydel Profit (NHP) paid to the provinces. Any future revision in rate of NHP for provinces shall also apply WUC for AJK.*

(ii) *Bulk power supply to AJK should be made from CPPA-G as is being done in case K-Electric as per tariff determination by NEPRA*

(iii) *Ministry of Water Resources to issue necessary guidelines to NEPRA. WAPDA shall accordingly file tariff application to the Regulator. ECC to be briefed on the progress after 30 days.*

(iv) *Power Division to facilitate AJK Government to establish a regular DISCO to streamline electricity distribution in the region after seeding license from NEPRA. Till such time Electricity Department of AJK may assume the functions of distribution company (DISCO) and adopt the average tariff of three DISCO i.e Gujranwala Electricity Power Co. (GEPCO), Islamabad Electric Supply Co. (IESCO) and Peshawar Electric Supply Co. (PESCO) for all categories. ECC to be brief on progress after 30 days.*

(v) *Federal Government's support on power cost differential of Rs. 2.59/kwh against GoP notified rate shall be eliminated and deficit grant to the Government of AJK shall be adjusted against the revenue from this source.*

(vi) *Federal Government (Finance Division) shall continue to provide TDS subsidy support to the electricity consumers of AJK as per Government of Pakistan (GoP) policy after due verification of claims y the Power Division.*

(vii) *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.*

(viii) *WAPDA shall not seek any Federal Government support regarding payment of WUC to AJK.*

(ix) *An agreement incorporating the above recommendation may be signed between the Government of AJK and other stakeholders of Government of Pakistan, amending the Mangla Raising Agreement of 2003 to extent of WUC and terms of power supply to AJK.*

General Manager Finance (Power) WAPDA House LAHORE.

Pakistan Water & Power Development Authority LAHORE

(x) *The new pricing system for Water Use Charges (WUC) and consumer tariff to DISCO for AJK to be completed by 30th June 2019.*

2. WAPDA is therefore, requested to take immediate steps and necessary actions to comply with the decisions relating to WAPDA and furnish the compliance status to this Ministry within a week. Besides, in order to implement the decision of ECC noted at items (ix) and (iii) read with decision at item (i), above, necessary drafts may be prepared and shared with this Ministry.

3. The provision of above requested information may please be taken up as on **TOP PRIORITY** enabling this Ministry to take further necessary action.

(Muhammad Zeeshan Ishaq)
Section Officer (HP)
051-9244923

Copy to:

i. Secretary Cabinet Division, Islamabad
ii. PS to Minister for Water Resources
iii. PS to Secretary Ministry of Water Resources.
iv. APS to Joint Secretary (Water), Ministry of Water Resources.

LAHORE
LAHORE

TO BE PUBLISHED IN THE NEXT ISSUE
OF THE GAZETTE OF PAKISTAN PART-II

GOVERNMENT OF PAKISTAN
MINISTRY OF WATER AND POWER
****

Islamabad, the 25 August, 2011

NOTIFICATION

S.R.O (I)/2011- In exercise of the powers conferred by section 21 of the Indus River System Authority Act, 1992(XXII of 1992), the Federal Government, while implementing the decision of Council of Common Interest (CCI) in case No. CCI.6/3/2011, dated the 1st June, 2011, is pleased to make the following rules, namely:-

1. Short title and commencement:- (1) These rules may be called the Financial Autonomy of Indus River System Authority Rules,2011.

(2). They shall come into force at once

2. Definitions:- (1) In these Rules, unless there is any thing repugnant in the subject or context,-

(a) "Act" means the Indus River System Authority Act, 1992 (XXII of 1992)

(b) "Advisory Committee" means the Advisory Committee of the Authority under section 9 of the Act;

(c) "Authority" means the Indus River System, Authority established under section 3 of the Act;

(d) "Fund" means the Fund of the Authority under section 16 of the Act;

(e) "PAEC" means the Pakistan Atomic Energy Commission and includes any other company, agency, department or authority dealing with atomic energy generation requiring use of water;

(f) "Power Projects" means all existing as well as upcoming hydropower projects of WAPDA, PAEC or any other agency, department, organization, authority, private entity or project seeking permission to utilize water for hydro power generation;

(g) "Provinces" means the Irrigation Departments of Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan; and

(h) "WAPDA" means Water and Power Development Authority and includes any company, department, organization or authority dealing with hydro power generation;

(2) All other words and expressions used, but not defined herein, shall have the same meanings as are assigned to them under the Act.

3. **Levies by Authority:-** (1) The Authority shall collect levies from WAPDA and PAEC and Provinces in pursuance of the decision of the Council of Common Interest and with immediate effect as per the following rates, namely:-

(i) thirty paisas per acre foot of water released for irrigation and hydro power generation from Provinces and WAPDA; and

(ii) half paisa per Kwh for managing water for hydro power generation and cooling water needs of nuclear power generation to be paid by WAPDA and PAEC.

(2) The levies so collected shall be deposited into the Fund and shall be utilized to meet all expenses and charges of the Authority including the payment of salaries and other remunerations of members, officers and staff of the Authority. The Authority may also acquire and hold property, both moveable and immoveable, out of the Fund for use by the Authority in the manner as it may deem fit. The Fund shall be non-lapsable.

4. **Enforcement of levies on Provinces:-** (1) At the end of each cropping season, that is to say, *Kharif* (1st April to 30th September) and *Rabi* (1st October to 31st March), based on the actual utilization of water at Canal Head, the Authority shall submit a bill to the Secretaries of Provinces according to the rates specified in sub-rule (1) of rule 3.

(2) The Provinces shall be bound to release the amount of bill within thirty working days, to be deposited into the Fund.

(3) The first levy on Provinces shall be applicable with effect from the 1st April, 2011.

5. **Enforcement of levies on WAPDA and PAEC:-** (1) At the end of each quarter of a financial year, The Authority shall submit a bill to WAPDA and PAEC, based on the actual units generated, according to the rates specified in sub-rule (1) of rule 3.

(2) The WAPDA and PAEC shall be bound to release the amount of bill within thirty working days at the closing of each quarter, to be deposited into the Fund.

(3) The first levy on WAPDA and PAEC shall be applicable with effect from the 1st July, 2011.

(4) Sub-rule (1), (2) and (3) shall be applicable on all hydro power generating units of WAPDA, existing as well as upcoming projects and shall also be applicable on all units of PAEC requiring use of water, existing (i.e. CHINSUPP C1, C2, C3 and C4) as well as upcoming projects in public or private sector and through public-private partnership.

(5) The Authority may levy No Objection Certificate fee on all new hydropower projects of Government, public or private sector and through public-private partnership.

6. **Arbitration:-** Any dispute regarding levies under these rules shall be referred to the Advisory Committee for arbitration thereon and any decision thereon taken by the Advisory Committee shall be final.

(NAUSHEEN MOHYUDDIN)
Section Officer (A-II)

The Manager
Printing Corporation of Pakistan Press
Karachi.

Copy to:-

1. The Chief of Staff to the President's Secretariat (Public), Islamabad.
2. The Principal Secretary to the Prime Minister, Prime Minister's Secretariat, Islamabad.
3. The Secretary, Cabinet Division, Islamabad.
4. The Secretary, Establishment Division, Islamabad.
5. The Chairman WAPDA, WAPDA House, Lahore.
6. The Chairman, PAEC, Islamabad.
7. The Chairman, Indus River System Authority, Islamabad.
8. The Chief Secretaries, Government of the Punjab, Lahore/ Sindh, Karachi/ Khyber Pakhtunkhwa, Peshawar/Balochistan, Quetta.
9. The Secretaries, I&P Deptt: Government of the Punjab, Lahore/ Sindh, Karachi/Khyber Pakhtunkhwa, Peshawar/ Balochistan, Quetta.
10. Section Officer (Admn-I), M/O Water and Power, Islamabad with the request to send the enclosed original Notification to the Printing Corporation of Pakistan Press, Karachi for publication in the Gazette of Pakistan.
11. P.S to Secretary/Additional Secretary (Water and Power).

(NAUSHEEN MOHYUDDIN)
Section Officer (A-II)

Annex-18

TO BE PUBLISHED IN THE GAZETTE OF PAKISTAN EXTRAORDINARY

Government of Pakistan
Ministry of Water and Power
*****

Islamabad February 10, 2017

NOTIFICATION

SRO.No. (I)/2017. In exercise of powers conferred by section 21 of the Indus River System Authority Act, 1992 (XXII of 1992), the Federal Government is pleased to make the following rules namely:-

1. **Short title and commencement:-**

(1) These rules may be called the Financial Autonomy of Indus River System Authority Rules, 2017.

(2) They shall come into force at once.

2. **Definitions:-**

1) In these Rules, unless there is anything repugnant in the subject or context,-

(a) "Act" means the Indus River System Authority Act, 1992 (XXII of 1992)

(b) "Advisory Committee" means the Advisory Committee of the Authority under section 9 of the Act;

(c) "Authority" means the Indus River System Authority established under section 3 of the Act;

(d) "Fund" means the Fund of the Authority under section 16 of the Act;

(e) "PAEC" means the Pakistan Atomic Energy Commission;

(f) "Power Projects" means existing as well as upcoming hydropower projects of WAPDA and nuclear power projects of PAEC;

(g) "Provinces" means the Irrigation Department of Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan; and

(h) "WAPDA" means Water and Power Development Authority.

2) All other words and expressions used, but not defined herein, shall have the same meanings as are assigned to them under the Act.

3. **Levies by Authority:-**

1) The Authority shall collect levies from WAPDA, PAEC and Provinces in pursuance of the decision of the Council of Common Interest as per the following rates, namely:-

(a) Paisa 30 per acre foot of water released for irrigation, from provinces; and

(b) Paisa 0.5 per Kwh for managing water for hydro power generation and cooling water needs of nuclear power generation to be paid by WAPDA and PEAC.

Water & Power Development Authority LAHORE Registered

2) The levies so collected shall be deposited into the Fund and shall be utilized to meet expenses on account of salaries and other remunerations of Members, officers and staff of the Authority. Surplus funds available with IRSA so far and savings at the end of each Financial Year shall be utilized for capacity building of IRSA in consultation and according to guidelines of Ministry of Water and Power.

4. **Enforcement of levies on Provinces:-**

1) At the end of each cropping season, that is to say, *Kharif* (1st April to 30th September) and *Rabi* (1st October to 31st March), based on the actual utilization of water at Canal Head, the Authority shall submit a bill to the Secretaries of Provinces according to the rates specified in sub-rule (1) of rule 3.

2) The Provinces shall be bound to release the amount of bill, within thirty working days, to be deposited into the Fund.

3) The first levy on Provinces shall be applicable with effect from the commencement of these rules.

5. **Enforcement of levies on WAPDA and PAEC:-**

1) At the end of each quarter of a financial year, the Authority shall submit a bill to WAPDA and PAEC for managing water, based on the actual units generated, according to the rates specified in sub-rule (1) of rule 3.

2) The WAPDA and PAEC shall be bound to release the amount of bill within thirty working days at the closing of each quarter, to be deposited into the Fund.

(3) The first levy on WAPDA and PAEC shall be applicable with effect from the commencement of these rules.

(4). Sub-Rule (1), (2) and (3) shall be applicable on hydro power generating units of WAPDA, existing as well as upcoming projects and shall also be applicable on all generating units of PAEC, requiring use of water.

6. **Arbitration:-**

Any dispute regarding levies under these rules shall be referred to the Advisory Committee for arbitration thereon. In case of any un-resolved dispute, the matter will be referred to CCI whose decision shall be final

7. **Repeal:-**

The Financial Autonomy of Indus River System Authority Rules, 2011 are hereby repealed.

No.F.5(19)/2016-Water

(Zafar Mahmood)
Deputy Secretary (Water)
Tele No: 9244874

The Manager,
Printing Corporation of Pakistan Press,
Islamabad

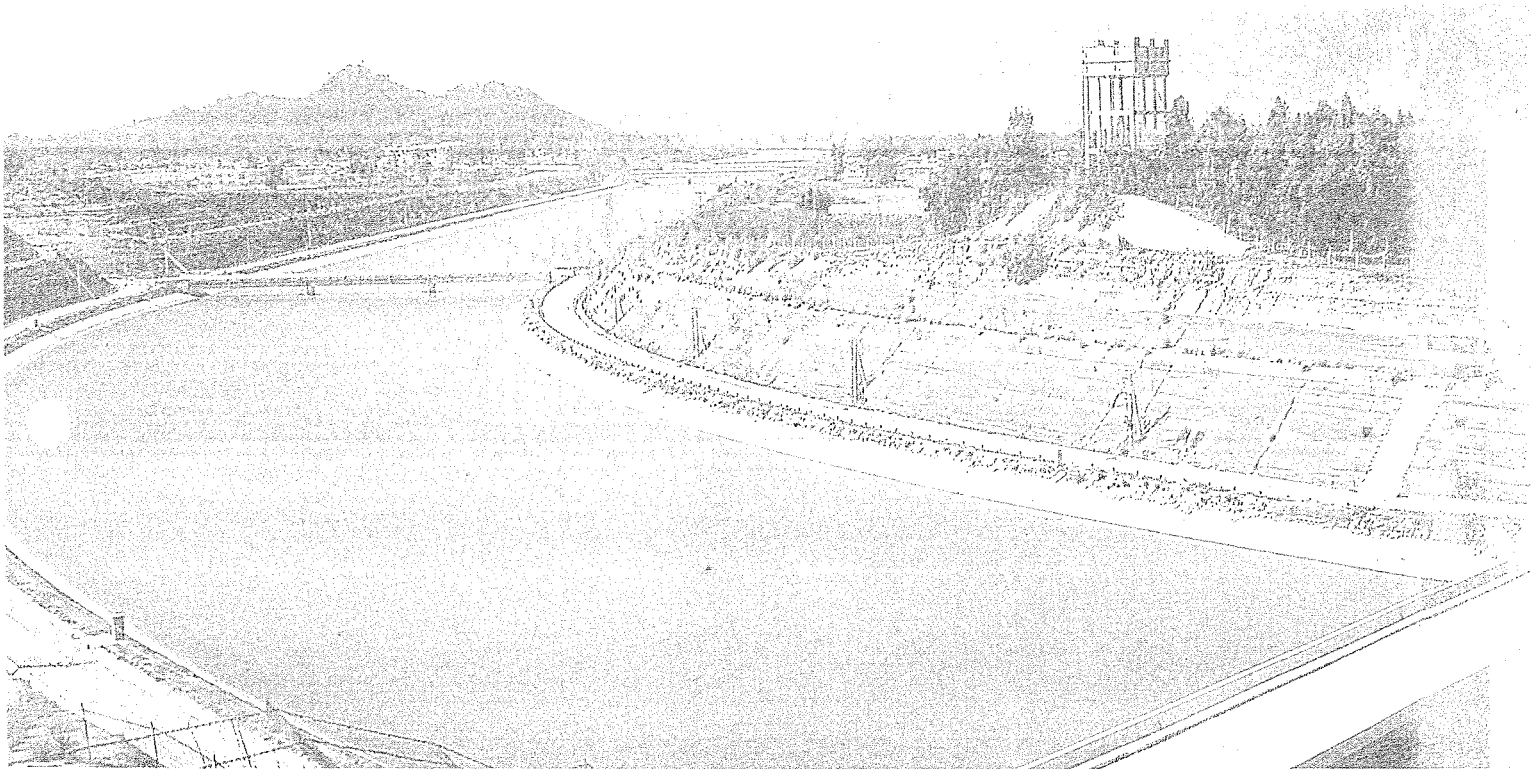
ANNUAL ACCOUNTS 2016-17

PAKISTAN WAPDA HYDROELECTRIC

Pakistan Water and Power Development Authority

www.wapda.gov.pk

CONTENTS



MANAGEMENT REPORT

FY 2016 - 17

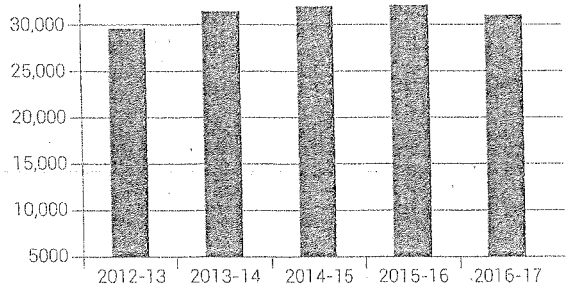
WAPDA Power Wing (Hydroelectric) is operating under generation license granted by the Power Regulator 'NEPRA', for operation, maintenance and development of hydel power resources in Pakistan.

Operational Performance

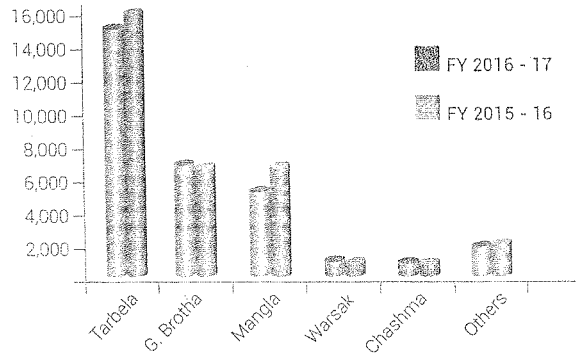
WAPDA-Hydroelectric owns and operates 19 hydel power stations with aggregated installed generation capacity of 6,902 MW. Major hydel power stations include Tarbela (3,478 MW), Ghazi Barotha (1,450 MW), Mangla (1,000 MW) Warsak (243 MW).

The utilization of capacity for Hydel generation is largely dependent on net head of respective power station and quantum of water indents allowed by IRSA. During FY 2016-17 the Net Electrical Output (NEO) for the year stood at **30,797 GWh** as compared to last year 33,151 GWh with decrease in Generation 2,354 GWh due to less generation from Tarbela and Mangla Power Station.

Generation Trend (Gwh)



Power Station-wise Generation (Gwh)



Profitability Position

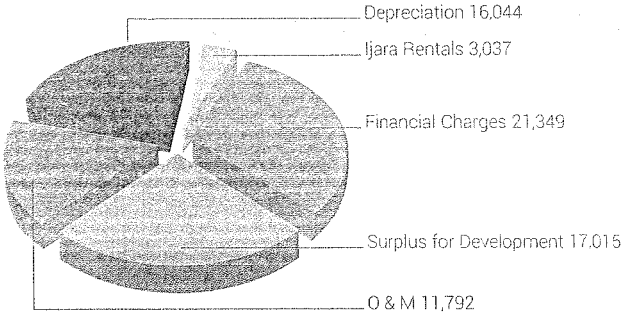
Power sales revenue(excluding Hydel Levies and GST) during FY 2016-17 stood at **Rs. 65,235 million** (2016: Rs 54,776 million), This increase is mainly due to application of higher tariff till 6th March, 2017 for recovery of revenue gap. The cost of electricity stood at **Rs. 30,872 million** (2016: 30,687 million) bringing the net revenue surplus of **Rs. 17,015 million** (2016: 7,654 million). The value of property, plant &equipment and Capital Work in Progress (CWIP) has increased to the level of **Rs. 1,144,637 million** (2016:Rs.1,091,228 million).

The return on Average Capital Employed (at net carrying cost)worked out as 14% for the yearas compared to 13% of last year.

Profit & Loss Comparison

PARTICULARS	FY 2016 - 17	FY 2015 - 16
Sales (Exclusive GST)	65,235	54,776
Other Income	4,001	2,232
Total Revenue	69,236	57,008
Cost of Sales		
O&M	11,792	11,127
Depreciation / Ijara Rental	19,080	19,560
Total Cost of Sales	30,872	30,687
Surplus / (Deficit)	38,364	26,321
Less: Financial Charges	21,349	18,667
Surplus /(Deficit)	17,015	7,654
Add: Incremental depreciation due to revaluation	10,382	10,350
Surplus for Development	27,394	18,005

Cost & Profitability



Liquidity Position

During FY 2016-17 **Rs.125,040 million** (FY 2015-16: Rs. 67,285 million) has been billed to CPPA on account of cost of sale, Hydel Levies & GST. CPPA has made payment of **Rs. 91,045 million** (FY 2015-16: Rs. 55,269 million)during the year against above invoices. Trade Receivable from CPPA (inclusive of Hydel Levies) has increased to the level of Rs. 53,472 million on 30th June, 2017 as against Rs. 19,477 million on 30th June, 2016.

During the year Rs.3,592 million have been paid on account of Salaries, Wages and Benefits, Rs.2,593 million on account of Post-Retirement Benefits to the pensioners of WAPDA and Rs. 804 million for Repair and Maintenance expenses.

Repair & Maintenance

WAPDA Hydroelectric has managed plant availability factor well above the Power Purchase Agreement (PPA) requirements through timely preventive maintenance of its Hydel Power Stations during FY 2016-17. Apart from routine maintenance following major repair works were also completed during period under report:

(i). Replacement of Old Rotary/Dynamic Excitation Systems of Units 1~4 with the Latest Digital Static Excitation Systems & up-gradation of Excitation Systems of Units 7 & 8 of Tarbela Power Station

(ii). Replacement of Power Swing Air Compressors of Units 1~10 and Installation of Circuit Breakers, Switchyard Units 11~14 of Tarbela Power Station

(iii). Replacement of Air Blast Circuit Breaker with SF-6 Circuit Breaker in Mangla Power Station.

(iv) Major Overhauling of 2 Units of Warsak Power Station.

Rehabilitation & Up-gradation

- PC-I for Refurbishment and Up-gradation of generating units of Mangla Power Station was approved by ECNEC. Rehabilitation works are in progress.

- PC-I of the Rehabilitation & Up-gradation of Warsak Power Station was approved by ECNEC. Consultancy Services for engineering support and Construction Supervision has been awarded on 10.04.2017.

- PC-I for Capacity Enhancement of Chitral Hydel Power Station has been approved by Ministry of Planning, Development and Reforms.Hiring of Consultancy Services for Construction Supervision is under process.

- PC-I for Rehabilitation of Dargai and Kurram Garhi Power Station were sent to MoW&P who has cleared the same and forwarded it to Planning Commission for scrutiny and clearance. Hiring of Consultancy Services for Construction Supervision is under process.

- PC-I for Establishment of Hydro Power Training Institute(HPTI) was approved by CDWP. Construction of main building of HPTI Mangla is under progress.

Power Expansion

Under development hydel projects of WAPDA would add 8,298 MW to the installed capacity up to the year 2024. In this regard, 106 MW Golen Gol is at advance stage, followed by 1,410 MW Tarbela 4th Extension and 122 MW Keyal Khwar hydel power projects. Preliminary works of priority Mega hydel projects DASU-I (2,160 MW)and Diamer Bhasha Dam (4,500 MW) are also underway.

During FY 2016-17 Rs.82,502 million have been spent on hydroelectric development projects.Project wise capital expenditure and its financing is as follows:

Capital Work in Progress (CWIP) Balance (Mln Rs)

	2015-16	Incr/(Decr)	2016-17
Basha Dam Project	78,369	19,344	97,713
Tarbela 4th Ext.	39,843	26,598	66,441
Golen Gol	16,266	7,562	23,828
Dasu HPP	11,017	26,964	37,981
Keyal Khwar	2,953	559	3,512
Mangla Rehabilitation	678	1,111	1,789
Others	7,271	364	7,635
	156,398	82,502	238,900

Financing of CWIP

	2015-16	Incr/(Decr)	2016-17
Foreign Relent Loans	45,064	28,123	73,187
Cash Development Loans	69,337	13,977	83,314
Foreign Direct Loans	-	20,996	20,996
Self Source	41,997	19,406	61,403
	156,398	82,502	238,900

Debt Service Liability

WAPDA has paid Rs. 22,499 million (2016:Rs.21,283million) for debt servicing of FRL, SUKUK and China EXIM Supplier Credit for Jinnah Hydel Power Station as per debt retirement schedule.

Hydel Levies

During the period Rs. 21,715 have been paid to GoKPK on account of Net Hydel Profit (NHP), Rs. 721 million as Water Usage Charges (WUC) to GoAJ&K and Rs. 158 million as IRSA Charges .

Payables against Hydel Levies stood at Rs. 17,407 million as on 30-06-2017.

Acknowledgement

On behalf of WAPDA Authority we applaud the valuable contribution of the WAPDA Hydro-electric employees towards achieving the targets set for the period under report and we hope that the employees will continue performing with the same zeal and dedication during the next year.

Muhammad Ikram Khan
Member (Finance)

Muhammad Arshad Ch.
Member (Power)

PERFORMANCE INDICATORS

AUDIT REPORT

As at end of June, 2017

Building a better working world

EY Ford Rhodes
Chartered Accountants
96-B-I, 4th Floor, Pace Mall Building
M. M. Alam Road, Gulberg-II
P.O. Box 104, Lahore-54660

Tel: +9242 3577 8402-11
Fax: +9242 3577 8412-13
ey.lhr@pk.ey.com
ey.com/pk

INDEPENDENT AUDITOR'S REPORT TO CHAIRMAN OF
PAKISTAN WATER AND POWER DEVELOPMENT AUTHORITY

Opinion

We have audited the accompanying financial statements of the Pakistan Water and Power Development Authority - Hydroelectric (NEPRA - Regulated Business)(hereinafter referred as "the Hydroelectric"), which comprise the statement of financial position as at 30 June 2017 and the related income statement, statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies and other explanatory notes.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Hydroelectric as at 30 June 2017, and its financial performance and its cash flows for the year then ended in accordance with approved accounting standards as applicable in Pakistan.

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs) as applicable in Pakistan. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Hydroelectric in accordance with the International Ethics Standards Board for *Accountants' Code of Ethics for Professional Accountants (IESBA Code)*as adopted by the Institute of Chartered Accountants of Pakistan, together with the ethical requirements that are relevant to our audit of the financial statements in Pakistan and we have fulfilled our other ethical responsibilities under these requirements and IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Information

Management is responsible for the other information. The other information comprises the information included in the Hydroelectric's annual accounts and Pakistan Water and Power Development Authority's annual report, but does not include the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with International Financial Reporting Standards as applicable in Pakistan, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Hydroelectric's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Hydroelectric or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Hydroelectric's financial reporting process.

Contd...P/2

AUDIT REPORT

As at end of June, 2017

Building a better working world

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when itexists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Hydroelectric's internal control.

Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Hydroelectric's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Hydroelectric to cease to continue as a going concern.

Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

EY Ford Rhodes

Chartered Accountants

Engagement Partner: Naseem Akbar

Lahore: 05January 2018

Statement of Financial Position

As at 30 June 2017

	Note	2017	2016 Restated	2015 Restated
		PKR '000'		
ASSETS				
Non current assets				
Operating fixed assets	5	949,901,719	963,914,291	978,282,734
Capital work in progress	6	194,735,483	127,314,170	74,410,522
Long term advances	7	492,051	453,190	405,749
Long term security deposits		1,489	1,483	1,514
		1,145,130,742	1,091,683,134	1,053,100,519
Current assets				
Current portion of long term advances	7	55,020	50,962	45,444
Stores, spares and loose tools	8	4,694,212	5,582,791	3,992,816
Trade debts	9	53,472,267	19,477,252	34,879,092
Unbilled net hydel profit arrears	10	1,447	24,513,916	-
Short term investments	11	2,000,000	-	19,200
Loan and advances	12	4,720,790	808,263	761,571
Prepayments	13	3,424,480	1,900,061	782,839
Accrued interest		-	23,387	37,420
Other receivables		267,642	308,060	503,365
Tax refunds due from Government		3,053	65,506	20,935
Cash and bank balances	14	58,085,650	46,939,579	55,776,709
		126,724,561	99,669,777	96,819,391
TOTAL ASSETS		1,271,855,303	1,191,352,911	1,149,919,910
RESERVES AND LIABILITIES				
Equity interest				
Reserves for development works	15	131,375,721	103,981,284	104,990,278
Government of Pakistan's investment	16	63,000,716	63,000,716	63,000,716
		194,376,437	166,982,000	167,990,994
Revaluation surplus	17	774,135,121	784,514,717	794,865,198
		968,511,558	951,496,717	962,856,192
Non current liabilities				
Long term financing	18	25,000,000	-	-
Loans and borrowings - Interest bearing	19	198,484,660	140,290,077	119,744,674
Loans for payment of NHP arrears	20	-	25,000,000	-
Deferred grants	21	3,852,092	4,948,367	3,915,409
Deferred liabilities	22	32,792,195	31,558,976	28,207,909
Retention money payable	23	1,458,312	1,355,696	780,598
		261,587,259	203,153,116	152,648,590
Current liabilities				
Trade and other payable	24	14,400,212	8,933,638	9,579,675
Payable to Government of Pakistan	26	580,439	14,437,756	11,388,181
Payable against hydel levies	25	17,406,523	5,248,254	3,709,168
Current portion of loans and borrowings	19	5,679,949	5,476,693	6,205,807
Accrued interest	27	2,106,930	1,698,755	2,672,935
Other liabilities	28	1,582,433	907,982	859,362
		41,756,486	36,703,078	34,415,128
CONTINGENCIES AND COMMITMENTS	29	-	-	-
TOTAL EQUITY AND LIABILITIES		1,271,855,303	1,191,352,911	1,149,919,910

The annexed notes from 1 to 40 form an integral part of these financial statements.

MEMBER (FINANCE)

MEMBER (POWER)

Statement of Profit or Loss

For the year ended 30 June 2017

	Note	2017	2016 Restated
		PKR '000'	
Revenue	30	65,235,065	54,776,085
Cost of electricity	31	28,984,789	29,377,154
Gross profit		36,250,276	25,398,931
Operating expenses	32	1,887,695	1,309,862
Other income	33	4,001,093	2,232,218
Operating profit		38,363,674	26,321,287
Finance costs	34	21,348,833	18,666,837
Profit for the year		17,014,841	7,654,450

The annexed notes from 1 to 40 form an integral part of these financial statements.

MEMBER (FINANCE)

MEMBER (POWER)

Statement of Other Comprehensive Income

For the year ended 30 June 2017

	2017	2016 Restated
	PKR '000'	
Profit for the year	17,014,841	7,654,450
Other comprehensive income:		
Items to be reclassified to profit or loss in subsequent periods:	-	-
Items not to be reclassified to profit or loss in subsequent periods:		
- Actuarial loss on defined benefit plans	-	(1,400,683)
Total comprehensive income for the year	17,014,841	6,253,767

The annexed notes from 1 to 40 form an integral part of these financial statements.

MEMBER (FINANCE)

MEMBER (POWER)

Statement of Changes in Equity

For the year ended 30 June 2017

	Note	Revaluation Surplus (Note 17)	Reserves: Reserve for development works (Note 15)	Reserves: GoP's investment (Note 16)	Reserves: Unappropriated profit	Total
		PKR '000'				
Balance as at 01 July 2015 - as previously reported		794,865,198	111,699,916	72,522,716	-	979,087,830
Effect of restatement of IDC	(4.4.1)	-	(16,231,638)	(9,522,000)	-	(25,753,638)
Effect of restatement of GoP's investement	(40.2.3)	-	9,522,000	-	-	9,522,000
Balance as at 01 July 2015 - restated		794,865,198	104,990,278	63,000,716	-	962,856,192
Profit for the year - restated		-	-	-	7,654,450	7,654,450
Other comprehensive income		-	-	-	(1,400,683)	(1,400,683)
Total comprehensive income for the year - restated		-	-	-	6,253,767	6,253,767
Payment against non-core business		-	(17,613,242)	-	-	(17,613,242)
Incremental depreciation due to revaluation	(5.3.3)	(10,350,481)	10,350,481	-	-	-
Transfer to reserve for development works		-	6,253,767	-	(6,253,767)	-
Balance as at 01 July 2016 - restated		784,514,717	103,981,284	63,000,716	-	951,496,717
Profit for the year		-	-	-	17,014,841	17,014,841
Other comprehensive income		-	-	-	-	-
Total comprehensive income for the year		-	-	-	17,014,841	17,014,841
Payment against non-core business		-	-	-	-	-
Incremental depreciation due to revaluation	(5.3.3)	(10,379,596)	10,379,596	-	-	-
Transfer to reserve for development works		-	17,014,841	-	(17,014,841)	-
Balance as at 30 June 2017		774,135,121	131,375,721	63,000,716	-	968,511,558

The annexed notes from 1 to 40 form an integral part of these financial statements.

MEMBER (FINANCE)

MEMBER (POWER)

Statement of Cash Flows

For the year ended 30 June 2017

	Note	2017	2016 Restated
		PKR '000'	
CASH FLOWS FROM OPERATING ACTIVITIES			
Profit for the year		17,014,841	7,654,450
Adjustments to reconcile profit to net cash flows:			
Depreciation of property, plant and equipment	(5)	16,043,541	15,949,051
Finance costs	(34)	21,348,833	18,666,837
Ijarah rental	(31)	3,036,615	3,611,130
Employee benefits	(31.3)	4,132,131	4,038,834
Amortization of grants	(33.2)	(1,125,969)	(112,106)
		43,435,151	42,153,746
		60,449,992	49,808,196
Working capital changes:			
(Increase) / decrease in current assets:			
Stores, spare parts and loose tools		888,579	(1,589,975)
Trade debts		(33,995,015)	15,401,840
Unbilled net hydel profit arrears		24,512,469	486,084
Loan and advances		(2,626,056)	(46,692)
Prepayments		(1,524,419)	(1,117,222)
Accrued interest		23,387	14,033
Other receivables		40,418	195,305
Tax refunds due from Government		62,453	(44,571)
Increase / (decrease) in current liabilities:			
Short term liabilities		674,451	48,620
Trade and other payables		5,466,574	(646,037)
Payable against hydel levies		12,158,269	1,539,086
		5,681,110	14,240,471
Cash generated from operations		66,131,102	64,048,667
Finance costs paid		(20,940,558)	(19,641,017)
Ijarah rental paid		(3,342,600)	(3,681,324)
Employee benefits paid	(22.2)	(2,592,927)	(2,018,256)
		(26,876,185)	(25,340,597)
Net cash flows from operating activities		39,254,917	38,708,070
CASH FLOWS FROM INVESTING ACTIVITIES			
Capital expenditure incurred on property, plant and equipment		(2,030,969)	(1,580,608)
Capital expenditure incurred on capital work in progress		(67,421,313)	(52,903,648)
Short term investments		(2,000,000)	19,200
Long term advances and receivables		(42,919)	(52,959)
Retention money payable		102,616	575,098
Long term security deposit		(6)	31
Net cash flows used in investing activities		(71,392,591)	(53,942,886)
CASH FLOWS FROM FINANCING ACTIVITIES			
Proceeds from long term loans		46,098,563	24,507,666
Proceeds from long term financing		25,000,000	-
Repayment of loan received for net hydel profit		(25,000,000)	-
Proceeds from loan for payment NHP		-	25,000,000
Payment of net hydel profit to Khyber Pakhtunkhwa		-	(25,000,000)
Bridge financing extended to Neelum Jhelum		-	(22,000,000)
Receipt of bridge financing from Neelum Jhelum		-	22,000,000
Bridge financing extended to water wing	(12)	(1,286,471)	-
Repayment of long term loans		(1,558,041)	(1,641,802)
Payment against non-core business		-	(17,613,242)
Grants received	(21)	29,694	1,145,064
Net cash flows from financing activities		43,283,745	6,397,686
Net increase in cash and cash equivalents during the year		11,146,071	(8,837,130)
Cash and cash equivalents at the beginning of the year		46,939,579	55,776,709
Cash and cash equivalents at the end of the year	(14)	58,085,650	46,939,579

The annexed notes from 1 to 40 form an integral part of these financial statements.

MEMBER (FINANCE)

MEMBER (POWER)

Notes to the Financial Statements

For the year ended 30 June 2017

1. LEGAL STATUS AND OPERATIONS

1.1 Pakistan Water And Power Development Authority (WAPDA) is a body, fully owned by the Government of Pakistan (GoP) through Ministry of Water and Power, created by virtue of the Pakistan Water And Power Development Authority Act, 1958 (West Pakistan Act No. XXXI of 1958), commonly known as WAPDA ACT, as amended from time to time. The statutory mandate of WAPDA is to develop and utilize the water and power resources of Pakistan on a unified and multipurpose basis. WAPDA remained empowered among others, to frame schemes for the generation, transmission and distribution of power and the construction, maintenance and operation of power houses and grids. The registered office of the WAPDA is situated at WAPDA House, Shahrah-e-Quaid-e-Azam, Lahore.

In line with the Strategic Plan 1992 approved by the Cabinet Committee, the WAPDA Power Wing has been restructured comprising of the generations, distribution and transmission activities. Assets and liabilities relating to generation activities (other than hydel generation activities) were transferred to the 4 Generation Companies (GENCOs) on 1st March 1999 and distribution activities were transferred to the 8 Distribution Companies (DISCOs) on 1st July 1998 while transmission activities were transferred to National Transmission and Despatch Company (NTDC) on 1st March 1999.

1.2 WAPDA Hydroelectric

The WAPDA decided to segregate the operation & development of hydel activities (WAPDA Hydroelectric- NEPRA regulated business) from its non core activities (non-regulated business) under NEPRA Rules, 2009. The regulated business comprises activities purely related to the hydel generation & development.

These financial statement only represents the financial information of WAPDA Hydroelectric - NEPRA regulated business.

National Electric Power Regulatory Authority (NEPRA) has issued Generation License# GL(Hydel) /05 /2004 to WAPDA on 03 November 2004 valid for Thirty (30) years upto 2034 under section 30 of NEPRA Act 1997 for its Hydel power stations. As modification-IV vide letter date 09 January 2015 issued by NEPRA, currently WAPDA is generating power from following hydel power stations:

Operational Power Plant

1	Tarbela	11	Dargai
2	Mangla	12	Chitral
3	Warsak	13	Kurram Garhi
4	Ghazi Brotha	14	Gomal Zam
5	Chashma	15	Jinnah Hydel
6	Renala	16	Allai Khawar
7	Chichoki	17	Dubair Khawar
8	Nandipur	18	Khan Khawar
9	Shadiwal	19	Jabban
10	Rasul		

Development Projects

1	Tarbela, 4th Extension	4	Diamer Basha Dam
2	Keyal Khwar	5	Dasu
3	Golen Gol		

1.3 Extracts From "WAPDA ACT 1958"

As laid down in Section 22 of WAPDA Act 1958, the WAPDA Hydroelectric funds shall consist of:

a) Grants made by the Governments,
b) Loans obtained from the Governments,
c) Grants made by the local bodies as required by the Governments,
d) Sale proceeds of bonds, debentures, commercial paper or other securities issued by the WAPDA Hydroelectric and dividends,
e) Loans obtained by the WAPDA Hydroelectric with special or general sanction of the Government,
f) Foreign aid and loans obtained from the International Bank for Reconstruction and Development or otherwise, with the sanction and, under guarantee of (and such terms and conditions as may be approved by the Government) and,
g) All other sums received by the WAPDA Hydroelectric.

As provided in Section 24 of WAPDA Act, 1958 the liability of the GoP to the creditors of the WAPDA Hydroelectric shall be limited to the extent of the grant made by the Government and loans passed by the WAPDA Hydroelectric with sanction of the Government.

Regarding fixing rate for sale of power, Section 25 of the WAPDA Act, 1958 provides that the Hydroelectric shall ordinarily sell power at bulk. The rate at which the Hydroelectric shall sell power be so fixed as to provide for meeting the operating cost, interest charges and depreciation of assets, the redemption at due time of loans other than those covered by depreciation, the payment of any taxes and a reasonable return on investment.

As provided in Section 26 of WAPDA Act, 1958 the Hydroelectric shall maintain complete and accurate books of accounts in such form as may be prescribed by it, provided that separate accounts shall be maintained for all schemes and transactions relating to power.

1.4 Reference From "Constitution of Islamic Republic of Pakistan 1973"

The Article 161 (2) of the Constitution of Islamic Republic of Pakistan provides that the net profits earned by the Federal Government, or any undertaking established or administered by the Federal Government i.e. WAPDA as determined by the Presidential Order # 3 of June 1991, from the bulk generation of power at a hydro-electric station shall be paid to the Province on which the hydro-electric station is situated.

For the purpose of this clause "Net Profits" shall be computed by deducting from the revenues accruing from the bulk supply of power from the bus-bar of a hydro-electric station at a rate to be determined by the Council of Common Interest. Operating expenses of the station which shall include any sums payable as taxes, duties, interest or return on investment, and depreciations and element of obsolescence, and over-heads and provision for reserves.

2. STATEMENT OF COMPLIANCE

These financial statements have been prepared in accordance with approved accounting standards as applicable in Pakistan. Approved accounting standards comprise of such International Financial Reporting Standards (IFRSs) issued by the International Accounting Standards Board and adopted by the Institute of Chartered Accountants of Pakistan (ICAP) and directives issued by NEPRA and WAPDA Hydroelectric.

3. BASIS OF MEASUREMENT

3.1 Basis of preparation

These financial statements have been prepared under the historical cost convention except for recognition of certain employee retirement benefits at present value and recognition of land, building & civil works, power generation plant assets and dams & reservoir that have been measured at revalued amount.

3.2 Use of estimates and judgments

The preparation of financial statements in conformity with IFRSs requires management to make judgments, estimates and assumptions that affect the application of policies and reported amounts of assets and liabilities, income and expenses.

The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making judgment about carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which estimates are revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Judgments made by the management in the application of IFRSs that have significant effect on the financial statements and estimates with a significant risk of material adjustment in the next year are discussed in the ensuing paragraphs.

3.2.1 Useful life, residual values, impairment and method of depreciation of property, plant and equipment

The WAPDA Hydroelectric reviews the useful lives of property, plant and equipment on regular basis. Any change in the estimates in future years might affect the carrying amounts of the respective items of property, plant and equipment with a corresponding effect on the depreciation charge and impairment.

The carrying amounts of the WAPDA Hydroelectric assets are reviewed at each year to determine whether there is any indication of impairment. If such indication exists, the recoverable amount of such asset is estimated.

3.2.2 Employees' retirement benefits

The cost of employees defined benefit plan is determined using actuarial valuations. An actuarial valuation involves making various assumptions that may differ from actual developments in the future. These includes the determination of the discount rate, future salary increases, mortality rates, future pension increases, future increase in medical costs and future increase in electricity costs. Due to the complexities involved in the valuation and its long term nature, a defined benefit obligation is highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date. WAPDA Hydroelectric uses the valuation performed by an independent actuary as the present value of its retirement benefit obligations. The valuation is based on assumptions as mentioned in note 22.2.1 to these financial statements.

3.2.3 Allowance of financial assets

The WAPDA Hydroelectric regularly reviews its financial assets for impairment, if any. The allowances in this regard is made, based on management's best estimate, where the prospects of recovery are doubtful.

3.2.4 Allowance of stores and spares

The WAPDA Hydroelectric regularly reviews the its stores and spares for impairment. Allowance for obsolesce and damaged items are incorporated (if any).

4 SIGNIFICANT ACCOUNTING POLICIES

The significant accounting policies which have been adopted in the preparation of financial statements of WAPDA Hydroelectric are consistent with previous year except as discussed in Note 4.1 to these financial statements and are as follows:

4.1 NEW AND AMENDED STANDARDS AND INTERPRETATIONS BECOME EFFECTIVE

The WAPDA hydroelectric has adopted the following accounting standard and the amendments and interpretation of IFRSs which became effective for the current year.

Standard or Interpretation

IFRS 10 Consolidated Financial Statements, IFRS 12 Disclosure of Interests in Other Entities and IAS 27 Separate Financial Statements – Investment Entities: Applying the Consolidation Exception (Amendment)

IFRS 11 Joint Arrangements - Accounting for Acquisition of Interest in Joint Operation (Amendment)

Standard or Interpretation

IAS 1 – Presentation of Financial Statements - Disclosure Initiative (Amendment)

IAS 16 Property, Plant and Equipment and IAS 38 intangible assets - Clarification of Acceptable Method of Depreciation and Amortization (Amendment)

IAS 16 Property, Plant and Equipment IAS 41 Agriculture - Agriculture: Bearer Plants (Amendment)

IAS 27 – Separate Financial Statements – Equity Method in Separate Financial Statements (Amendment)

Improvements to Accounting Standards Issued by the IASB in September 2014

IFRS 5 Non-current Assets Held for Sale and Discontinued Operations - Changes in methods of disposal

IFRS 7 Financial Instruments: Disclosures - Servicing contracts

IFRS 7 Financial Instruments: Disclosures - Applicability of the offsetting disclosures to condensed interim financial statements

IAS 19 Employee Benefits - Discount rate: regional market issue

IAS 34 Interim Financial Reporting - Disclosure of information 'elsewhere in the interim financial report

The adoption of the above standards, amendments, interpretations and improvements did not have any material effect on the financial statements.

4.1.1 Standards, Interpretations and Amendments to Published Approved Accounting Standards that are not yet effective

The following revised standards, amendments and interpretations with respect to the approved accounting standards as applicable in Pakistan would be effective from the dates mentioned below against the respective standard or interpretation:

Standard or Interpretation	Effective date (Annual periods beginning on or after)
IFRS 2 Share-based Payments – Classification and Measurement of Share-based Payments Transactions (Amendments)	01 January 2018
IFRS 10 Consolidated Financial Statements and IAS 28 Investment in Associates and Joint Ventures - Sale or Contribution of Assets between an Investor and its Associate or Joint Venture (Amendment)	Not yet finalized
IAS 7 Financial Instruments – Disclosures - Disclosure Initiative - (Amendment)	01 January 2017
IAS 12 Income Taxes – Recognition of Deferred Tax Assets for Unrealized losses (Amendments)	01 January 2017
IFRS 4 Insurance Contracts – Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts – (Amendments)	01 January 2018
IAS 40 Investment Property – Transfers of Investment Property (Amendments)	01 January 2018
IFRIC 22 Foreign Currency Transactions and Advance Consideration	01 January 2018
IFRIC 23 Uncertainty over Income Tax Treatments	01 January 2019
IFRS 9 – Financial instruments: classification and measurement	01 January 2018
IFRS 15 – Revenue from Contracts with Customers	01 January 2018

The above standards and amendments are not expected to have any material impact on the WAPDA Hydroelectric's financial statements in the period of initial adoption except for IFRS-15 and IFRS-9, for which management is currently accessing its impact for the next reporting period.

In addition to the above, the following new standards have been issued by IASB which are yet to be notified by the SECP for the purpose of applicability in Pakistan.

Standard or Interpretation	Effective date (Annual periods beginning on or after)
IFRS 14 – Regulatory Deferral Accounts	01 January 2016
IFRS 16 – Leases	01 January 2019
IFRS 17 – Insurance Contracts	01 January 2021

4.2 Property, plant and equipment

4.2.1 Cost

Property, plant and equipment are stated at cost or revalued amount less accumulated depreciation and any identified impairment loss.

All the asset of WAPDA Hydroelectric are measured at cost except for land, building and civil works, dam and reservoir and power generation plant assets. Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the WAPDA Hydroelectric and the cost of the item can be measured reliably. All other repair and maintenance costs are charged to income statement during the period in which they are incurred.

Land, building & civil works, dam & reservoir and power generation plants & assets are subsequently measured at revalued amount. Surplus arising on revaluation of land, building & civil works, dam & reservoir and power generation plant assets is credited to surplus on revaluation of fixed assets account. Deficit arising on subsequent revaluation of fixed assets is adjusted against the balance in the above mentioned surplus account. The surplus on revaluation of fixed assets to the extent of incremental depreciation charged on the related assets, is transferred

4.2.2 Impairment loss

An impairment loss is recognized wherever the carrying amount of the separately identified cash operating unit exceeds its recoverable amount. Impairment losses are recognized in income statement. A previously recognized impairment loss is reversed only if there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognized. If that is the case, the carrying amount of the asset is increased to its recoverable amount. That increased amount cannot exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. Such reversal is recognized in income statement.

4.2.3 Derecognition

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and carrying amount of the asset) is included in the income statement in the year the asset is derecognized.

4.2.4 Depreciation

Depreciation is charged to income statement on straight-line method so as to write off the cost of property, plant and equipment over their estimated remaining useful lives at the rates specified below. However, depreciation charged on assets that directly relates to construction and acquisition of other assets is included in the cost of such assets. Depreciation on addition to property, plant and equipment is charged from the month in which the asset is available for use and continued till the month of disposal. The revalued assets are depreciated over the remaining useful lives of the assets from the date of revaluation.

Depreciation for the year is based on economic useful life of individual assets. No depreciation is to be charged when an asset is fully depreciated.

Following depreciation and residual value rates are applied:

Sr. #		Description of Assets	Depreciation Rate	Residual Value
1		Civil Works/buildings	2%	2%
		Dams & Reservoirs	2%	2%
2		Generation Plant & Equipment		
	a.	Turbines	2.285%	5-20%
	b.	Generators (Class - F insulation)	2.820%	1.000%
	c.	Generators (Class - B insulation)	3.30%	1.00%
	d.	GIS Switch Gear	1.99%	0.50%
	e.	Switchyard equipment	3.96%	1.00%
	f.	MV/LV Switch gear Control & Protection Equipment	3.96%	1.00%
	g.	Telecommunication and SCADA Equipment	4.987%	0.250%
	h.	Cranes	3.30%	1.00%
	i.	Trash Rack and Cleaning Machines	3.30%	1.00%
	j.	Truck Trailer	4.95%	1.00%
	k.	HV Circuit Breaker Air Blast Type	3.96%	1.00%
	l.	HV Circuit Breaker SF-6 Type	3.30%	1.00%
	m.	Transmission line equipment	3.96%	1.00%
	n.	Rehabilitation assets	7.00%	-
3		Mobile Plant & Equipment's	20%	1%
4		Other Equipment's (All others except computer accessories)	10%	1%
5		Computer Accessories	25%	1%
6		Vehicles	20%	5%

4.3 **Capital work in progress**

Capital work in progress is stated at cost less accumulated impairment losses, if any. Projects of capital work in progress are transferred to operational formations of the WAPDA Hydroelectric when 100% progress is certified by the consultants and verified by the WAPDA Hydroelectric's own engineers. Capital work in progress mainly includes direct cost incurred on the development projects and mobilization advances given to designated contractors & consultants.

4.4 **Borrowing cost**

Interest during construction directly attributable to the construction of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalization.

4.4.1 Upto the last year ended 30 June, 2016, the interest cost incurred on financing of projects under development were considered as a borrowing cost and was being capitalized as part of the cost of capital work in progress. Concurrently, the same finance cost was also allowed by NEPRA as part of tariff which was billed and recognized as revenue. During the year, the management has reviewed the aforesaid practice and has considered that the finance costs which are also allowed under tariff as revenue don't meet the criteria of borrowing cost to be capitalized as part of the CWIP. Accordingly, the aforesaid finance cost has been charged to profit or loss account during the year. The impact of prior year has also been corrected by restating the corresponding figures in the financial statements. The effect of this restatement is as follows:

	2016	2015
Impact on statement of financial position	PKR '000'	
Decrease in operating fixed assets	5,542,045	5,628,176
Decrease in capital work in progress	22,964,551	10,603,462
Decrease in reserve for development works	28,506,596	16,231,638

Impact on income statement	2016
	PKR '000'
Increase in finance cost	12,361,089
Decrease in depreciation	86,131
Decrease in profit for the year	12,274,958
Decrease in total comprehensive income	12,274,958

4.5 **Stores, spare parts and loose tools**

Stores are valued at moving average cost method, except items in transit which are stated at cost comprising invoice value plus incidental charges thereon.

4.6 **Trade debts**

Trade debts and other receivables are carried at original invoice amount less an estimate for doubtful trade debts and other receivable based on review of outstanding amounts at the year end. Balances considered bad and irrecoverable are written off when identified.

4.7 **Cash and cash equivalents**

For the purpose of cash flow statement, cash and cash equivalents comprise of cash in hand, cash at bank and short term highly liquid investments / borrowing facilities, that are readily convertible to known amount of cash and which are subject to an insignificant risk of change in value.

4.8 **Financial assets**

4.8.1 **Initial recognition**

Financial assets are recognized initially at original invoice amount / fair value plus directly attributable transaction costs. The WAPDA Hydroelectric financial assets include cash & banks balances, trade debts, receivable against third party payments, held-to-maturity investments, loans, advances and other receivables.

4.8.2 **Subsequent measurement**

The subsequent measurement of financial assets depends on their classification as follows:

4.8.2.1 **Loan and receivables**

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Such financial assets are carried at amortized cost using the effective interest rate method. Gains and losses are recognized in the income statement when the loans and receivables are derecognized or impaired, as well as through the amortization process.

4.8.2.2 **Held-to-maturity investments**

Non-derivative financial assets with fixed or determinable payments and fixed maturities are classified as held-to-maturity when the Hydroelectric has the positive intention and ability to hold it to maturity. After initial measurement held to-maturity investments are measured at amortized cost using the effective interest method. This method uses an effective interest rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to the net carrying amount of the financial asset. Gains and losses are recognized in the income statement when the investments are derecognized or impaired, as well as through the amortization process.

4.9 Non-financial assets

The carrying amounts of non-financial assets, are assessed at each reporting date to ascertain whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. An impairment loss is recognized as an expense in the profit and loss account for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less cost to sell and value in use. Value in use is ascertained through discounting of the estimated future cash flows using a discount rate that reflects current market assessment of the time value of money and the risk specific to the assets. For the purpose of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units).

An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized. Prior impairments of non-financial assets (other than goodwill) are reviewed for possible reversal at each reporting date.

4.10 Reserves for development works

Reserve for development works is recognized in accordance with the provisions available in the Constitution of the Islamic Republic of Pakistan. This reserve would be used for the construction of new/ongoing hydel power development projects through Annual Development Plans of the GoP. Such reserves are created from retained earnings. Payment on behalf of non-core business is also charged against such reserve.

4.11 Grants

WAPDA Hydroelectric receives two type of grants: against specific expenses or for specific assets. When the grant relates to an expense item, it is recognized as income over the period necessary to match the costs that it is intended to compensate. Where the grant relates to an asset, it is recognized as deferred income and charged to income in equal amounts over the expected useful life of the related asset.

Where the WAPDA Hydroelectric receives non-monetary grants, the asset and the grant are recorded at nominal amounts and released to the statement of profit and loss over the expected useful life of the relevant asset by equal annual installments.

4.12 Staff retirement benefits

4.12.1 Defined benefit plans

The WAPDA Hydroelectric operates its own unfunded defined benefit plan for medical, free electricity and pension benefits schemes for its active and former employees. Due to materially different risks associated with each benefit plan the entity has disaggregated the plan for disclosure purposes. The entity underwrites the actuarial risk associated with the plan. The entity has determined the net defined benefit liability by consulting a qualified actuary.

The entity recognizes the net defined benefit liability in the statement of financial position. The cost of providing benefits under the defined benefit plan is determined by a independent qualify actuary using the projected unit credit method. Re-measurements, comprise of actuarial gains and losses from changes in actuarial and experience assumptions are recognized immediately in the statements of financial position with a corresponding debit or credit to retained earnings through Other Comprehensive Income in the period in which they occur. Re-measurement of net defined benefit liability recognized in Other Comprehensive Income shall not be reclassified to statement of Profit or Loss in subsequent periods.

Past service costs are recognized in the profit or loss on earlier of; the date of the plan amendment or curtailment, and the date when entity recognizes related restructuring cost. Net interest is calculated by applying the discount rate to the net defined benefit liability. The entity recognizes the current service cost, past service cost, gains and losses on curtailments, non-routine settlements and net interest expense or income changes in the net defined benefit obligation in the statement of financial position.

4.12.2 Leave encashment

Employees of the WAPDA Hydroelectric are entitled to accumulate the unutilized privilege leaves up to 365 days which are encashable only at the time of retirement or leaving the service of the WAPDA Hydroelectric.

4.12.3 General provident fund and WAPDA welfare fund

WAPDA Hydroelectric operates self contributed general provident fund and WAPDA Welfare fund for its employees. Deductions are made from the salaries of the employees and remitted to the funds and afterward utilized as per standard operating procedures approved by WAPDA.

4.13 Foreign currencies

Foreign currency transactions are recorded using the rate of conversion applicable on the date of transaction. All monetary assets and liabilities in foreign currencies are translated at exchange rates prevailing at the statement of financial position date except in the case of foreign currency loans covered by the State Bank of Pakistan's Exchange Risk Coverage Scheme which are translated at the rates provided under the scheme. Exchange differences for the period up to the date of commissioning of assets financed out of foreign currency loans are capitalized to the extent they are eligible for capitalization. All other exchange differences are charged to statement of profit or loss.

4.14 Revenue recognition

Revenue is recognized to the extent it is probable that the economic benefits will flow to the Hydroelectric and revenue can be measured reliably. The specific accounting polices are:

Sale of energy

- Revenue from the sale of electricity is recognized net of hydel levies on transmission of electricity to the power infrastructure (transmission system) of the National Transmission and Dispatch Company Limited (NTDCL).

Grant income

- Grant related to fixed assets are taken to income over the useful life of the fixed assets in order to match with the corresponding depreciation expense.

- Grant for operating expenditures are amortized on the basis of expenditure incurred in accordance with the terms attached to the respective grants.

Profit on bank deposits and investment income

- Profit on deposit accounts and investments is recognized using effective interest rate.

Sale of scrap and store

- Revenue from sale of scrap and store items is recognized when title of items passes to buyers which is generally on dispatch of goods.

4.15 Hydel levies

Hydel levies include net hydel profit payable (NHP) to the provinces as per instructions of the Federal Government; water usage charges payable to the Government of Azad Jammu & Kashmir; and water management charges payable to the Indus River System Authority (IRSA), levied by the GoP. These levies are billed to the Central Power Purchasing Agency (CPPA-G) and recognized in statement of financial position as receivable and unpaid amount of levies is recognized as payable against hydel levies.

4.16 Taxation

Any income of the WAPDA established under the WAPDA Act 1958 is exempt from income tax under clause-66 (xvi) of the Second Schedule of (Part-I) to the Income Tax Ordinance, 2001.

Income of the WAPDA Hydroelectric is exempt from income tax as per provisions of Clause 66 (xvi) Part-I of Second Schedule to the Income Tax Ordinance, 2001. Interest income under section (u/s) 151, property income u/s 155, and cash withdrawals from bank u/s 231A of the Income Tax Ordinance, 2001 is also exempt and in this connection exemption certificates are issued by Commissioner Income Tax on yearly basis.

4.17 Financial liabilities

4.17.1 Initial recognition

Financial liabilities are recognized initially at fair value plus any directly attributable transaction costs. The WAPDA Hydroelectric financial liabilities mainly includes loans & borrowings, trade and other payables, retention money, debt service liability, payable in respect of third parties and accrued interest.

4.17.2 Subsequent measurement

Financial liabilities are subsequently measured at amortized cost using the Effective Interest Rate (EIR) method less impairment (if any). EIR is calculated by taking into account any discount or premium. The EIR charge is recognized in the statement of profit or loss. Due to short term nature of the financial liabilities the amortized cost close approximate of fair value.

4.17.2.1 Loan and borrowings

After initial recognition, interest bearing loans and borrowings are subsequently measured at amortized cost using the effective interest rate method. Gains and losses are recognized in the income statement when the liabilities are derecognized.

4.17.3 Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability is discharged, cancelled or expires.

4.17.4 Offsetting of financial assets and financial liabilities:

A financial asset and a financial liability is offset and the net amount is reported in the statement of financial position if the WAPDA Hydroelectric regulated business has legal enforceable right to set off the recognized amount and intends either to settle on a net basis or to realize the assets and settle the liability simultaneously. Corresponding income on assets and charge on liability are reported at net amount.

5. OPERATING FIXED ASSETS - owned

Particulars	2017								
	Cost			Depreciation				Book value as at 30 June 2017	Rate %
	As at 30 June 2016	Addition/ Adjustment/ (Deletion)	As at 30 June 2017	As at 30 June 2016	For the year	Deletion/ Adjustment	As at 30 June 2017		
	PKR '000'								
Land	442,152,909	54,291 (11,011)	442,196,189	-	-	-	-	442,196,189	-
Buildings and civil works	201,109,116	241,657 (23,388)	201,327,385	80,430,929	3,477,801	(20,858)	83,887,872	117,439,513	2
Power generation plant assets	182,310,782	1,209,162 -	183,519,944	113,021,989	4,388,829	(8,370)	117,402,448	66,117,496	1.99-7
Transmission line equipment	8,337,981	- (20,000)	8,317,981	866,264	360,093	3,533	1,229,890	7,088,091	3.96
Dams and reservoir	427,533,997	489,941 (103,093)	427,920,845	104,923,129	7,554,861	-	112,477,990	315,442,855	2
General / plant assets	2,343,726	90,707 (2,136)	2,432,297	1,125,078	180,825	6,399	1,312,302	1,119,995	10
Office equipment	124,079	40,723 (2,110)	162,692	61,657	11,267	10,919	83,843	78,849	10-25
Furniture and fixture	643,863	17,689 (4,930)	656,622	573,130	3,867	1,415	578,212	78,410	10
Transportation equipment	2,012,728	121,434 (51,201)	2,082,961	1,652,714	66,198	23,728	1,742,640	340,321	20
2017	1,266,569,181	2,265,604 (217,869)	1,268,616,916	302,654,890	16,043,541	16,766	318,715,197	949,901,719	

5.1 OPERATING FIXED ASSETS - owned

Particulars	2016 - restated								
	Cost			Depreciation					
	As at 30 June 2015	Addition/ Adjustment/ (Deletion)	As at 30 June 2016	As at 30 June 2015	For the year	Addition/ Adjustment/ (Deletion)	As at 30 June 2016	Book value as at 30 June 2016	Rate %
	PKR '000'								
Land	441,742,704	445,608 (35,403)	442,152,909	-	-	-	-	442,152,909	-
Buildings and civil works	200,857,341	257,028 (5,253)	201,109,116	76,971,862	3,465,168	(6,101)	80,430,929	120,678,187	2
Power generation plant assets	181,941,461	402,690 (33,369)	182,310,782	108,717,132	4,277,523	27,334	113,021,989	69,288,793	1.99-7
Transmission line Equipment	8,337,951	30 -	8,337,981	624,771	254,259	(12,766)	866,264	7,471,717	3.96
Dams and reservoir	427,312,798	221,199 -	427,533,997	97,188,256	7,752,703	(17,830)	104,923,129	322,610,868	2
General / plant assets	2,155,008	205,097 (16,379)	2,343,726	965,612	137,856	21,810	1,125,078	1,218,648	10
Office equipment	94,053	37,057 (7,031)	124,079	49,834	6,505	5,318	61,657	62,422	10-25
Furniture and fixture	632,520	11,862 (519)	643,863	568,275	2,534	2,321	573,130	70,733	10
Transportation equipment	1,890,700	156,494 (34,466)	2,012,728	1,596,060	52,703	3,951	1,652,714	360,014	20
2016 - restated	1,264,964,536	1,737,065 (132,420)	1,266,569,181	286,681,802	15,949,051	24,037	302,654,890	963,914,291	

5.2 Operating fixed assets by Power Station

Power Station	2017							
	Cost			Depreciation				Book value as at 30 June 2017
	As at 30 June 2016	Addition/ Adjustment/ (Deletion)	As at 30 June 2017	As at 30 June 2016	For the year	Deletion/ Adjustment	As at 30 June 2017	
	----PKR '000'----							
Tarbela	290,255,454	971,310 (3,543)	291,223,221	150,783,720	4,416,758	(3,466)	155,197,012	136,026,209
Ghazi Barotha	573,899,739	414,428 (11,282)	574,302,885	58,041,014	5,650,684	(640)	63,691,058	510,611,827
Mangla	247,165,223	546,971 (103,181)	247,609,013	54,264,318	2,774,025	-	57,038,343	190,570,670
Warsak	12,297,255	69,604 (1,539)	12,365,320	8,513,202	172,956	1,816	8,687,976	3,677,344
Chashma	50,843,519	34,094 (150)	50,877,463	15,990,982	1,099,669	-	17,090,651	33,786,812
Rasul	4,662,210	3,326 -	4,665,536	2,339,044	58,318	-	2,397,362	2,268,174
Dargai	2,514,970	1,089 -	2,516,059	1,284,242	19,709	-	1,303,951	1,212,108
Nandipur	3,909,795	713 (396)	3,910,112	2,376,155	5,109	(396)	2,380,868	1,529,244
Shadiwal	2,212,982	3,622 (23,986)	2,192,618	1,490,287	5,364	-	1,495,651	696,967
Chichoki	1,636,272	1,827 (194)	1,637,905	1,054,663	19,523	-	1,074,186	563,719
Kurram Garhi	682,567	6,514 -	689,081	452,069	3,317	-	455,386	233,695
Renala Khurd	453,762	731 -	454,493	150,820	562		151,382	303,111
Chitral	661,710	- -	661,710	262,420	10,262	-	272,682	389,028
Khan Khwar	9,613,897	11,375 (23,024)	9,602,248	1,404,913	344,635	1,688	1,751,236	7,851,012
Allai Khwar	15,140,205	36,439 (2,417)	15,174,227	1,467,687	403,885	(1,087)	1,870,485	13,303,742
Gomal Zam	8,070,501	422 -	8,070,923	598,702	190,633	-	789,335	7,281,588
Jinnah Hydel	17,258,971	23,858 -	17,282,829	1,458,733	403,027	-	1,861,760	15,421,069
Jabban	4,018,156	17,909 (235)	4,035,830	284,637	173,779	896	459,312	3,576,518
Dubair Khwar	20,800,626	13,301 (2,541)	20,811,386	218,454	287,390	(600)	505,244	20,306,142
Others	471,367	103,971 (45,381)	534,057	218,828	3,934	18,555	241,317	292,740
2017	1,266,569,181	2,047,735	1,268,616,916	302,654,890	16,043,541	16,766	318,715,197	949,901,719
2016 - restated	1,264,964,536	1,604,645	1,266,569,181	286,681,802	15,949,051	24,037	302,654,890	963,914,291

5.3 The land, buildings & civil works and dams & reservoir were revalued at 30 June 2015 by an independent well reputed valuer, M/s National Engineering Services Pakistan (Pvt) Ltd (NESPAK) resulting in a surplus of Rs. 758,430 million over the written down value of Rs. 127,535 million.

The power generation plant assets were revalued at 30 June 2012 by an independent valuer M/s Iqbal A. Nanjee & Company (Pvt.) Limited and resulted in a surplus of Rs. 58,259 million over the written down value of Rs. 20,950 million.

5.3.1 Had the assets been carried under the cost model the carrying amounts would be as follows:

		2017	2016
		PKR '000'	
Land	(5.3.4)	5,728,780	5,685,500
Buildings and civil works	(5.3.5.1)	37,914,681	38,657,509
Power generation plant assets	(5.3.6.1)	16,150,114	15,898,754
Dams and reservoir	(5.3.7.1)	63,247,653	64,465,862
		123,041,228	124,707,625

5.3.2 Revaluation surplus on the revalued class of assets are as follows:

	Land (Note 5.3.4)	Buildings & Civil Works (Note 5.3.5)	Power generation plant assets (Note 5.3.6)	Dams and reservoir (Note 5.3.7)	Total
	PKR '000'				
2017					
Revalued WDV	442,196,189	117,431,950	48,042,556	289,505,654	897,176,349
Historical cost WDV	5,728,780	37,914,681	16,150,114	63,247,653	123,041,228
Revaluation surplus	436,467,409	79,517,269	31,892,442	226,258,001	774,135,121
2016					
Revalued WDV	442,152,909	120,673,894	50,078,435	296,317,103	909,222,341
Historical cost WDV	5,685,500	38,657,509	15,898,754	64,465,862	124,707,625
Revaluation surplus	436,467,409	82,016,385	34,179,681	231,851,241	784,514,716

5.3.3 Difference in yearly depreciation charge of revalued assets:

	Building & Civil Works	Power generation plant assets	Dams and reservoir	Total
	PKR '000'			
2017				
Revalued depreciation	3,477,801	3,209,093	7,199,051	13,885,945
Historical depreciation	978,685	921,853	1,605,811	3,506,349
Incremental depreciation	2,499,116	2,287,240	5,593,240	10,379,596
2016				
Revalued depreciation	3,465,168	3,639,295	7,195,043	14,299,506
Historical depreciation	965,780	1,383,317	1,599,928	3,949,025
Incremental depreciation	2,499,388	2,255,978	5,595,115	10,350,481

5.3.4 **Land at cost and revalued amount**

Power Stations	Cost as at 1 July 2016	Revalued WDV as at 1 July 2016	Addition/ (Disposal /Adjustment)	Cost as at 30 June 2017	Revalued WDV as at 30 June 2017
	PKR '000'				
Tarbela	406,654	23,447,870	-	406,654	23,447,870
Mangla	162,703	115,774,000	-	162,703	115,774,000
Ghazi Barotha	4,456,599	296,568,077	43,676	4,500,275	296,611,753
Warsak	1,306	685,000	-	1,306	685,000
Chashma	2,256	980,000	-	2,256	980,000
Rasul	917	654,790	-	917	654,790
Dargai	250	832,400	-	250	832,400
Nandipur	873	1,159,940	(396)	477	1,159,544
Shadiwal	228	452,000	-	228	452,000
Chichoki	120	414,000	-	120	414,000
Kurram Garhi	23	163,000	-	23	163,000
Renala Khurd	110	270,900	-	110	270,900
Chitral	5,895	103,366	-	5,895	103,366
Allai Khwar	47,597	47,597	-	47,597	47,597
Khan Khwar	102,028	102,028	-	102,028	102,028
Dubair Khwar	18,990	18,990	-	18,990	18,990
Gomal Zam	161	161	-	161	161
Jabban	84,759	84,759	-	84,759	84,759
Jinnah Hydel	394,031	394,031	-	394,031	394,031
Total	5,685,500	442,152,909	43,280	5,728,780	442,196,189

5.3.5 Building & civil works asset at revalued amount

Power Stations	Revalued amount as at 1 July 2016	Addition/ (Disposal/ Adjustment)	Revalued amount as at 30 June 2017	Revalued accumulated depreciation as at 1 July 2016	(Disposal/ Adjustment)	Depreciation charge for the year	Revalued accumulated depreciation as at 30 June 2017	Revalued WDV as at 30 June2017
	PKR '000'							
Tarbela	52,938,089	59,090	52,997,179	33,350,552	-	952,509	34,303,061	18,694,118
Mangla	18,117,441	13,847	18,131,288	13,520,604	531	328,121	13,849,256	4,282,032
Ghazi Brotha	75,085,739	90,399	75,176,138	11,138,841	-	1,352,050	12,490,891	62,685,247
Warsak	10,725,368	4,383	10,729,751	7,964,034	3,260	129,484	8,096,778	2,632,973
Chashma	21,305,278	19,736	21,325,014	5,800,862	-	390,066	6,190,928	15,134,086
Rasul	2,180,919	1,400	2,182,319	1,407,510	-	24,873	1,432,383	749,936
Dargai	1,402,636	293	1,402,929	1,020,402	-	18,491	1,038,893	364,036
Nandipur	2,697,953	-	2,697,953	2,344,996	(364)	2,810	2,347,442	350,511
Shadiwal	1,663,773	(23,361)	1,640,412	1,411,122	(21,025)	3,265	1,393,362	247,050
Chichoki	1,032,357	(14)	1,032,343	880,526	-	16,969	897,495	134,848
Kuram Garhi	452,908	6,454	459,362	386,266	-	3,317	389,583	69,779
Renala Khurd	165,792	-	165,792	137,341	-	340	137,681	28,111
Chitral	551,055	-	551,055	258,271	-	9,906	268,177	282,878
Allai Khawar	2,021,093	13,045	2,034,138	113,878	-	36,379	150,257	1,883,881
Dubair Khawar	1,066,095	8,946	1,075,041	31,798	-	19,006	50,804	1,024,237
Khan Khawar	1,982,384	3,703	1,986,087	174,939	9	48,374	223,322	1,762,765
Jabban	963,953	13,088	977,041	46,941	-	20,253	67,194	909,847
Jinnah Hydel	6,745,881	7,259	6,753,140	435,937	-	121,588	557,525	6,195,615
	201,098,714	218,268	201,316,982	80,424,820	(17,589)	3,477,801	83,885,032	117,431,950

5.3.5.1 Building & civil works asset at cost

Power Stations	Cost of Asset as at 1 July 2016	Addition/ (Disposal /Adjustment)	Cost as at 30 June 2017	Accumulated depreciation as at 1 July 2016	(Disposal /Adjustment)	Depreciation charge for the year	Accumulated depreciation as at 30 June 2017	Book value as at 30 June 2017
	PKR '000'							
Tarbela	4,864,735	59,090	4,923,825	3,092,517	-	86,698	3,179,215	1,744,610
Mangla	1,116,190	12,402	1,128,592	496,894	531	16,538	513,963	614,629
Ghazi Barotha	25,196,531	90,399	25,286,930	6,364,730	-	477,836	6,842,566	18,444,364
Warsak	531,151	4,383	535,534	273,337	4,147	5,902	283,386	252,148
Chashma	6,928,905	19,736	6,948,641	2,062,992	-	138,260	2,201,252	4,747,389
Rasul	161,677	1,400	163,077	37,068	-	2,877	39,945	123,132
Dargai	88,569	293	88,862	23,961	-	1,277	25,238	63,624
Nandipur	88,387	-	88,387	41,606	(364)	622	41,864	46,523
Shadiwal	64,297	(75)	64,222	23,937	(71)	798	24,664	39,558
Chichoki	36,799	(14)	36,785	19,512	-	526	20,038	16,747
Kurram Garhi	11,906	6,454	18,360	6,591	-	549	7,140	11,220
Renala Khurd	23,064	-	23,064	5,612	-	438	6,050	17,014
Chitral	40,940	-	40,940	22,803	-	764	23,567	17,373
Allai Khwar	2,021,093	13,045	2,034,138	113,878	-	36,379	150,257	1,883,881
Dubair Khwar	1,066,095	8,946	1,075,041	31,798	-	19,006	50,804	1,024,237
Khan Khwar	1,982,384	3,703	1,986,087	174,934	9	48,374	223,317	1,762,770
Jabban	963,953	13,088	977,041	46,941	-	20,253	67,194	909,847
Jinnah Hydel	6,745,881	7,259	6,753,140	435,937	-	121,588	557,525	6,195,615
	51,932,557	240,109	52,172,666	13,275,048	4,252	978,685	14,257,985	37,914,681

5.3.6 Power generation plant assets at revalued amount

Power Stations	Revalued amount as at 1 July 2016	Addition/ (Disposal /Adjustment)	Revalued amount as at 30 June 2017	Revalued accumulated depreciation as at 1 July 2016	(Disposal /Adjustment)	Depreciation charge for the year	Revalued accumulated depreciation as at 30 June 2017	Book value as at 30 June 2017
	----------PKR '000'----------							
Tarbela	89,403,411	865,892	90,269,303	72,474,529	-	1,203,372	73,677,901	16,591,402
Ghazi Barotha	50,530,915	257,316	50,788,231	24,734,869	-	1,556,063	26,290,932	24,497,299
Warsak	479,381	74,479	553,860	256,720	19,582	21,388	297,690	256,170
Chashma	14,540,697	7,596	14,548,293	7,466,619	(8,770)	447,239	7,905,088	6,643,205
Rasul	39,478	-	39,478	20,931	-	1,474	22,405	17,073
Dargai	263,072	-	263,072	256,585	-	-	256,585	6,487
Nandi Pur	42,312	-	42,312	30,247	(31)	652	30,868	11,444
Shadiwal	85,589	-	85,589	76,553	-	281	76,834	8,755
Chichoki	177,210	149	177,359	170,169	-	12	170,181	7,178
Kurram Garhi	65,933	-	65,933	65,273	-	-	65,273	660
Renala Kurd	15,145	-	15,145	12,619	-	-	12,619	2,526
Chitral	2,350	-	2,350	1,944	-	49	1,993	357
	155,645,493	1,205,432	156,850,925	105,567,058	10,781	3,230,530	108,808,369	48,042,556

5.3.6.1 Power generation plant assets at cost

Power Stations	Cost as at 1 July 2016	Addition/ (Disposal /Adjustment)	Cost as at 30 June 2017	Accumulated depreciation as at 1 July 2016	(Disposal /Adjustment)	Depreciation charge for the year	Accumulated depreciation as at 30 June 2017	Book value as at 30 June 2017
	----------PKR '000'----------							
Tarbela	9,311,442	865,892	10,177,334	6,928,651	(15,726)	199,258	7,112,183	3,065,151
Ghazi Barotha	16,009,434	257,316	16,266,750	7,884,259	-	444,443	8,328,702	7,938,048
Warsak	1,563,644	74,479	1,638,123	803,534	-	55,741	859,275	778,848
Chashma	9,392,853	7,596	9,400,449	4,798,857	(8,770)	276,673	5,066,760	4,333,689
Rasul	32,466	-	32,466	15,106	-	890	15,996	16,470
Dargai	9,742	-	9,742	9,191	-	-	9,191	551
Nandi Pur	19,600	-	19,600	12,149	(31)	464	12,582	7,018
Shadiwal	16,846	-	16,846	13,058	-	113	13,171	3,675
Chichoki	8,088	149	8,237	7,675	-	12	7,687	550
Kurram Garhi	14,589	-	14,589	14,294	-	-	14,294	295
Renala Kurd	902	-	902	1,381	-	-	1,381	(479)
Chitral	29,777	-	29,777	22,175	-	1,004	23,179	6,598
	36,409,383	1,205,432	37,614,815	20,510,630	(24,527)	978,598	21,464,701	16,150,114

5.3.7 Dams and reservoir at revalued amount

Power Stations	Revalued amount as at 1 July 2016	Addition/ (Disposal /Adjustment)	Revalued amount as at 30 June 2017	Revalued accumulated depreciation as at 1 July 2016	(Disposal /Adjustment)	Depreciation charge for the year	Revalued accumulated depreciation as at 30 June 2017	Revalued WDV as at 30 June 2017
	PKR '000'							
Tarbela	123,972,552	-	123,972,552	44,630,204	-	2,231,506	46,861,710	77,110,842
Mangla	104,098,839	384,858	104,483,697	34,329,141	-	1,874,279	36,203,420	68,280,277
Ghazi Brotha	150,778,557	1,989	150,780,546	21,372,860	-	2,714,030	24,086,890	126,693,656
Chashma	13,245,000	-	13,245,000	2,026,410	-	238,410	2,264,820	10,980,180
Rasul	1,767,953	-	1,767,953	893,116	-	31,829	924,945	843,008
Gomal Zam	6,055,377	-	6,055,377	349,444	(755)	108,997	457,686	5,597,691
	399,918,278	386,847	400,305,125	103,601,175	(755)	7,199,051	110,799,471	289,505,654

5.3.7.1 Dams and reservoir at cost

Power Stations	Cost as at 1 July 2016	Addition/ (Disposal /Adjustment)	Cost as at 30 June 2017	Accumulated depreciation as at 1 July 2016	(Disposals /Adjustments)	Depreciation charge for the year	Accumulated depreciation as at 30 June 2017	Book value as at 30 June 2017
	PKR '000'							
Tarbela	5,407,471	-	5,407,471	3,798,995	-	102,742	3,901,737	1,505,734
Mangla	20,541,721	384,858	20,926,579	2,596,909	-	390,609	2,987,518	17,939,061
Ghazi Brotha	48,984,886	1,989	48,986,875	12,391,557	-	930,713	13,322,270	35,664,605
Chashma	3,691,996	-	3,691,996	1,122,367	-	70,148	1,192,515	2,499,481
Rasul	47,070	-	47,070	3,388	-	2,590	5,978	41,092
Gomal Zam	6,055,377	-	6,055,377	349,443	(755)	109,009	457,697	5,597,680
	84,728,521	386,847	85,115,368	20,262,659	(755)	1,605,811	21,867,715	63,247,653

	Note	2017	2016 Restated
6. CAPITAL WORK IN PROGRESS		PKR '000'	
Opening balance of direct cost:		127,314,170	74,410,522
Addition in direct cost during the year		67,794,551	53,837,068
Deletion during the year:			
R&D - Survey and Investigation	(32)	(373,238)	(264,912)
Transferred to operating fixed assets		-	(668,508)
		(373,238)	(933,420)
Closing balance of direct cost	(6.1)	194,735,483	127,314,170

6.1 Projects breakup movement

	2017								
	Diamer Bhasha Dam (Note 6.3)	Terbela 4th Extension (Note 6.4)	Golan Gol	Dasu	Kheyal Khawar	Mangla Upgradation	Warsak 2nd Rehabilitation	Other Projects	Total
	PKR '000'								
Opening balance as at 1 July 2016									
Direct cost incurred	61,650,168	32,630,070	13,634,879	9,225,527	2,592,522	678,080	-	6,902,924	127,314,170
Movement in direct cost during the year:									
Direct cost incurred	11,647,195	22,329,547	5,965,808	25,387,008	391,574	1,110,687	962,732	-	67,794,551
R&D - Survey and Investigation						-	-	(373,238)	(373,238)
	11,647,195	22,329,547	5,965,808	25,387,008	391,574	1,110,687	962,732	(373,238)	67,421,313
Closing balance as at 30 June 2017									
Direct cost incurred	73,297,363	54,959,617	19,600,687	34,612,535	2,984,096	1,788,767	962,732	6,529,686	194,735,483

6.2 During the year, the management has reviewed the aforesaid practice and has considered that the finance costs which are also allowed under tariff as revenue don't meet the criteria of borrowing cost to be capitalized as part of the CWIP. Accordingly, the aforesaid finance cost has been charged to profit and loss account during the year.

IDC till 1 July 2016	16,718,609	7,213,170	2,631,366	1,791,922	360,882	-	-	367,814	29,083,763
IDC for the year	7,696,591	4,268,882	1,596,139	1,576,749	167,650	-	142,572	(367,814)	15,080,569
IDC till 30 June 2017	24,415,200	11,481,952	4,227,505	3,368,671	528,532	-	142,572	-	44,164,332

6.3 This includes advance of Rs. 51.884 million (2016: Rs. 43.625 million) given to DC/LAC Chillas for acquistion of land for Diamer Basha Dam.

6.4 This includes net exchange loss of Rs. 1,577 million (2016: exchange gain Rs. 327 million) arised on foreign currecny components of Interim Payment Certificates (IPCs) of contractors and consultants.

6.5

	2016 - restated							
	Basha Dam	Terbela 4th Extension	Golan Gol	Dasu	Kheyal Khawar	Mangla Upgradation	Other Projects	Total
	PKR '000'							
Opening balance as at 1 July 2015								
Direct cost incurred	30,804,117	18,141,328	9,903,840	6,428,068	1,781,990	330,736	7,020,443	74,410,522
Movement in direct cost during the year:								
Direct cost incurred	30,846,051	14,488,742	3,731,039	2,797,459	810,532	347,344	815,901	53,837,068
Transfers to operating assets	-	-	-	-	-	-	(668,508)	(668,508)
R&D - Survey and Investigation	-	-	-	-	-	-	(264,912)	(264,912)
	30,846,051	14,488,742	3,731,039	2,797,459	810,532	347,344	(117,519)	52,903,648
Closing balance as at 30 June 2016								
Direct cost incurred	61,650,168	32,630,070	13,634,879	9,225,527	2,592,522	678,080	6,902,924	127,314,170
Project-wise break up of IDC								
IDC till 1 July 2015	9,328,873	3,303,906	1,579,428	373,512	200,374	-	367,814	15,153,907
IDC during the year	7,389,736	3,909,264	1,051,938	1,418,410	160,508	-	-	13,929,856
IDC till 30 June 2016	16,718,609	7,213,170	2,631,366	1,791,922	360,882	-	367,814	29,083,763

	Note	2017	2016
		PKR '000'	
7. LONG TERM ADVANCES - considered good			
Long term advances to employees against purchase of:			
House buildings		117,809	99,457
Plots		426,141	399,235
Vehicles		2,833	3,695
Others		288	1,765
	(7.1)	547,071	504,152
Less: current portion shown under current assets			
House buildings		11,781	9,946
Plots		42,614	39,924
Vehicles		567	739
Others		58	353
		55,020	50,962
		492,051	453,190

7.1 These represent loans provided to the permanent employees of the Wapda Hydroelectric at mark up rate of Employee Provident Fund applicable to the employees. It is recovered in 120 installments in respect of purchase of plot and house and in 60 installments for purchase of car, motorcycle etc. These advances are unsecured and considered good by the management of the WAPDA Hydroelectric. These advances are not being carried at amortized cost as the related impact would be immaterial.

8. STORES, SPARES AND LOOSE TOOLS			
Stores and spares		4,424,715	4,631,878
Loose tools		269,497	950,913
Scrap / unserviceable materials		1,487	1,422
		4,694,212	5,582,791
9. TRADE DEBTS			
Receivable from CPPA - related party	(9.1)	53,472,267	19,477,252

9.1 This represents unsecured receivable balance and is considered good by the management. This includes receivable against net hydel profit amounting to Rs. 42,224 million (2016: Rs. 5,616 million), Water Usage Charges amounting to Rs. 213 million (2016: Rs. 145 million) and IRSA charges amounting to Rs. 46 million (2016: Rs. 35 million) respectively.

9.2 Aging of trade debts

Not past due	9,953,273	9,363,245
Past due:		
0 - 30 days	10,211,608	8,269,257
More than 60 days	33,307,386	1,844,750
	53,472,267	19,477,252

10. UNBILLED NET HYDEL PROFIT ARREARS

10.1 This represents unbilled portion of net hydel profit arrears receivable from Central Power Purchase Agency (CPPA) against the first and second installments and payable to Government of Khyber Pakhtunkhwa.

10.2 In pursuant to Memorandum of Understanding (MoU) signed on 25th February 2016, between GoP and Government of Khyber Pakhtunkhwa (GoKPK), which included the settlement of past arrears of NHP, the Council of Common Interest (CCI) gave concurrence to the MoU during its 28th meeting held on 29th February 2016. Under the MoU a total amount of Rs. 70,000 million was agreed to be paid by the WAPDA Hydroelectric on account of arrears of NHP to GoKPK as full and final settlement. The settlement was decided to be paid in four installments as follows:

	Installment
	PKR '000'
Financial Year - 2016	25,000,000
Financial Year - 2017	15,000,000
Financial Year - 2018	15,000,000
Financial Year - 2019	15,000,000
	70,000,000

10.3 In compliance with the directions of the CCI, the WAPDA Hydroelectric disbursed an amount of Rs. 25,000 million on 21 June 2016 against the installments due for the financial year 2016. The WAPDA Hydroelectric has paid total of Rs. 30,291 million from Rs. 70,000 million to GoKPK as at 30 June 2017. The CCI has allowed the WAPDA Hydroelectric to recover the total arrears payable as above through its tariff petition. The NEPRA has determined an additional tariff for the WAPDA Hydroelectric in its tariff determination dated 25 May 2016 for recovery of the above Rs.70,000 million.

11. SHORT TERM INVESTMENTS	Note	2017	2016
		PKR '000'	
Held to maturity - Unquoted:			
Investment in Term Deposit Receipt (TDR)	(11.1)	2,000,000	-
Innovative Investment Bank Limited	(11.2)	261,000	261,000
		2,261,000	261,000
Less: Impairment charged		(261,000)	(261,000)
		2,000,000	-

11.1 This carries mark-up at the rate of 6.46% per annum with maturity of six month. In order to make adequate financial provisions and to streamline the pension distribution system, the WAPDA Authority in its meeting held on 26 January 2017 approve changes in WAPDA Accounting Manual, Budget Manual and Pension Standard Operating Procedures (SOP). As the result of these changes the WAPDA Hydroelectric opened and maintained "Pension Reserve Fund" with Allied Bank Limited for the serving/ retired employees of the WAPDA Hydroelectric.

11.2 This represents investment made in the Innovative Investment Bank (Formerly Crescent Standard Investment Bank). On maturity, the balance remained unpaid, hence the case was lodged with the Judicial Department of Lahore High Court for the recovery of the said amount. The Honorable Lahore High Court decided the case in favor of the Hydroelectric and attached the property with forced sale value of Rs. 220 million and appointed Court Auctioneers for recovery of this amount. However, full impairment has been recognized against this investment in prior year financial statements.

12. LOAN AND ADVANCES

Advance to: (considered good)			
- employees against expense		885,443	496,891
- suppliers & other's		496,114	311,372
		1,381,557	808,263
Bridge financing extended to water wing	(12.1)	1,286,471	-
Receivable from non-core business (PSI)	(12.2)	2,052,762	-
		4,720,790	808,263

12.1 This represent interest free unsecured bridge financing payable with in one year extended to water wing for Khurram Tangi Dam and Kachhi Canal Project and includes mobilization advance of Rs. 858 million given to designated contractor for Khurram Tangi Dam.

12.2 This represent receivable against debt service liability (DSL) related to foreign relent loans paid to Government of Pakistan for FY 2014-15, 2015-16 and 2016-17 on behalf of Kot Addu Power Company Limited (KAPCO) and Neelum Jhelum Hydropower Company (Private) Limited.

13. PREPAYMENTS

This includes prepayments of Rs. 2,747 million (2016: 1,900 million) to Chief resident representative Karachi against import of material.

14. CASH AND BANK BALANCES	Note	2017	2016
		PKR '000'	
Direct working capital balances			
Cash in transit		479,390	88,198
Balance with the banks:			
- current accounts			
authority own balance		400,145	56,852
		879,535	145,050
Balances held for specific utilizations:			
Balance with the banks:			
- current accounts			
un-utilized balance of loans and grants	(14.2)	22,187,587	4,159,141
		22,187,587	4,159,141
- deposit accounts			
un-utilized balance of loans	(14.2)	26,039,707	11,207,305
redemption sinking fund	(14.3)	5,617,761	2,874,261
authority own balance		3,361,060	28,553,822
		35,018,528	42,635,388
		57,206,115	46,794,529
		58,085,650	46,939,579

14.2 Un-utilized balance of loans and grants

Held in current accounts:			
IDA relent loan for Dasu Hydro project	(19.1.2.8)	2,166,636	3,192,036
Foreign direct loan for Dasu Hydro project	(19.2.2)	19,737,101	-
IDA relent loan for 4th Extension of Tarbela project	(19.1.2.5)	99,295	46,480
IBRD relent loan for 4th Extension of Tarbela project	(19.1.2.6)	96,038	32,640
US aid grant for Mangla refurbishment project		88,517	887,985
		22,187,587	4,159,141
Held in deposit accounts:			
Cash development loan for Basha land acquisition	(19.3.2.2)	9,922,212	11,207,305
Un-utilized balance of long term financing for Dasu Hydro project	(18)	16,117,495	-
		26,039,707	11,207,305

14.3 This includes Redemption Sinking Fund which was created in March 2013 with HBL Wapda House branch for the payment of SUKUK-II Ijarah rentals due in January and July each year till July 2017 and Jinnah Hydel Power station supplier credit due in February and August each year till August 2020. The profit is accrued on daily product basis for monthly credit of the same at one month KIBOR+15bps. The KIBOR is revised on 1st working day of each calendar month.

14.4 Deposit accounts carry interest at the rate ranging from 4.25% to 6% (2016: 4% to 6.75%) per annum.

15. RESERVES FOR DEVELOPMENT WORKS		2017	2016
		PKR '000'	
			Restated
Reserve for development works	(15.1)	131,375,721	103,981,284

15.1 Provision for reserve for development works has been created in accordance with policy stated in note 4.10. The GoP has allowed to plough back/ invest these reserves in the construction of new/ongoing Hydel power development projects through Annual Development Plans of the Government of Pakistan.

16. GOVERNMENT OF PAKISTAN'S INVESTMENT	Note	2017	2016
		PKR '000'	
			Restated
		63,000,716	63,000,716

This represent investment funds provided by the GoP mainly for Diamir Basha and Mangla Dam raising Hydel Power projects from time to time. This also includes debt service liability payable to GoP converted into equity.

17. REVALUATION SURPLUS

Revalued written down value	(5.3.2)	897,176,349	909,222,341
Historical cost written down value	(5.3.2)	123,041,228	124,707,625
		774,135,121	784,514,716

18. LONG TERM FINANCING

18.1 WAPDA Hydroelectric has entered into agreements with Habib Bank Limited lead consortium of seven banks on 29 March 2017 for Dasu Hydropower Project financing amounting Rs. 144,000 million for the period of fifteen (15) years including five (5) years grace period. This loan has the following structure of facilities:

	GoP Guarantee Backed Financing (GBF) Facilities		Assets Backed Financing (ABF) Facilities		Total
	Sukuks (Musharaka)	TFCs	Diminishing Musharaka	Commercial Facility	
	PKR '000'				
Total amount of facilities	52,800,000	35,200,000	33,600,000	22,400,000	144,000,000
Availed during the year	(15,000,000)	(10,000,000)	-	-	(25,000,000)
Un-availed balance of facilities at 30 June 2017	37,800,000	25,200,000	33,600,000	22,400,000	119,000,000
Face value per certificate (Rs.)	10,000	10,000	-	-	-
Principal repayment will commence	8 November 2022		-	-	-
Profit on rental payments	6 month KIBOR + margin of 1.45% payable semi annually		-	6 month KIBOR + margin of 200 basis points p.a	-
Musharaka assets share	62.75%	-	32.25%	-	100%

18.2 The Sukuks and TFCs are secured by way of guarantee of the GoP to the Pak Brunei Investment Company Limited (Trustee). Mangla Dam's land total of Rs. 103,244 million is being used as Musharaka Assets. While Power Generation Plant Assets of Ghazi Barotha and Tarbela HPP total amounting Rs. 77,106 million have been hypothecated in favour of Security Trustee for securing Islamic and Commercial Asset Backed facilities.

19. LOANS AND BORROWINGS - INTEREST BEARING	Note	2017	2016
		PKR '000'	
Foreign loans:			
- relent	(19.1)	89,101,175	64,109,745
- direct	(19.2)	24,872,538	5,162,932
Local loans:			
- cash development loans	(19.3)	90,190,896	76,494,093
		204,164,609	145,766,770
Less: current portion shown under current liabilities			
foreign relent loans		3,896,581	3,882,763
foreign direct loans - Exim Bank China		1,292,259	1,290,733
cash development loans		491,109	303,197
		5,679,949	5,476,693
		198,484,660	140,290,077

	Note	2017	2016
		PKR '000'	
19.1 Foreign relent loans:			
Operational power station loans	(19.1.1)	15,914,162	19,045,866
Development project loans	(19.1.2)	73,187,013	45,063,879
		89,101,175	64,109,745

19.1.1 Operational power stations loans (Foreign relent loans)

Loan No.	Note	Rate of interest per annum	Installments outstanding as on 30 June 2017	Repayment commence-ment / Maturity	2017	2016
					PKR '000'	
Ghazi Brotha						
ADB-1424-PAK		14.00%	8	2001/2021	1,883,257	2,354,071
KFW-9566316		14.00%	12	2003/2023	1,784,085	2,081,431
Pk-P-47	19.1.1.1	17.00%	6	2005/2020	1,708,276	2,277,700
					5,375,618	6,713,202
Chashma Hydel						
French Credit Bank		11.00%	4	1999/2019	60,446	90,668
French State Bank		11.00%	4	1999/2019	55,302	82,960
ADB-1143-PAK	19.1.1.2	14.00%	0	1997/2017	-	90,161
ADB-1144-PAK		14.00%	0	1997/2017	-	108,673
CITI Bank of Japan		11.00%	16	2005/2025	847,106	952,994
					962,854	1,325,456
Allai, Dubair & Khan Khwar projects						
IDB-PAK-0117	19.1.1.3	17.00%	12	2012/2023	7,405,225	8,639,429
Jabban Power station						
AFD Credit Facility	19.1.1.4	15.00%	22	2014/2028	2,170,465	2,367,779
					15,914,162	19,045,866

19.1.1.1 These loans are obtained for Ghazi Brotha hydel power station from foreign financial institutions by the Government of Pakistan (Borrower) and further re-lent to the WAPDA Hydroelectric. These loans are secured by way of Government Guarantee in favor of those institutions and the WAPDA Hydroelectric is responsible for repayment to Government of Pakistan.

19.1.1.2 These loans are obtained for Chashma hydel power station from foreign financial institutions by the Government of Pakistan (Borrower) and further re-lent to the WAPDA Hydroelectric. These loans are secured by way of Government Guarantee in favor of those institutions and the WAPDA Hydroelectric is responsible for repayment to Government of Pakistan.

19.1.1.3 This represents Islamic Development Bank loan of US $ 150.200 million under Istisna's Financing Agreement dated 1st Dec 2008 for Khan, Allai and Dubair Khwar Hydro Projects taken by the GoP (Borrower). The borrower has relent the loan to the WAPDA Hydroelectric being executing agency of Khwar Projects. The loan will be repaid in 15 years including 3 years of grace period.

19.1.1.4 This represents French Development Agency (AFD) loan of Euro 26.500 million under Subsidiary Loan Agreement dated 13 Dec 2010 for Jabban Power station taken by the GoP (Borrower). The borrower has relent the loan to the WAPDA Hydroelectric being executing agency for the Jabban project. The loan will be repaid in 18 years including 3 years of grace period.

19.1.2 Development projects loans (Foreign relent loans)

Loan No.	Note	Rate of interest per annum	Installments outstanding as on 30 June 2017	Repayment commence-ment / Maturity	2017	2016
Golen Gol					PKR '000'	
Kuwait Fund Loan No. 742	19.1.2.1	17.00%	16	2013/2025	3,551,662	2,062,256
Saudi Fund Loan No. 10/479	19.1.2.2	17.00%	16	2013/2025	2,584,700	2,783,420
Saudi Fund Loan No. 14/609	19.1.2.3	15.00%	30	2019/2033	3,524,032	3,035,207
OPEC Fund Loan No. 1205-P	19.1.2.4	17.00%	21	2013/2028	1,350,145	463,634
					11,010,539	8,344,517

Loan No.	Note	Rate of interest per annum	Installments outstanding as on 30 June 2017	Repayment commence-ment / Maturity	2017	2016
Tarbela 4th Extension						
IDA CREDIT No. 5079-PK	19.1.2.5	15.00%	39	2017/2037	13,444,953	12,887,898
IBRD 8144-PK	19.1.2.6	15.00%	23	2020/2031	29,052,974	12,944,093
					42,497,927	25,831,991
Keyal Khwar						
KFW-320517	19.1.2.7	15.00%	80	2020/2059	523,081	523,081
KFW-3003374	19.1.2.7	15.00%	60	2020/2049	626,168	589,694
					1,149,249	1,112,775
Dasu Hydro						
IDA CREDIT No. 5498-PK	19.1.2.8	15.00%	40	2020/2039	17,548,249	9,774,596
Warsak Rehabilitation (Phase 2)						
AFD Credit Facility	19.1.2.9	15.00%	28	2023/2036	981,049	-
					73,187,013	45,063,879

19.1.2.1 This represents Kuwait Fund loan of Kuwaiti Dinar 11.00 million under Subsidiary Loan Agreement dated 5th Sep 2008 for Golen Gol Hydro Power Project taken by the GoP (Borrower). The disbursement of loan has started in 2011. The borrower has relent the loan to the WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 15 years including 2 years of grace period.

19.1.2.2 This represents Saudi Fund loan of Saudi Riyals 150.00 million under Subsidiary Loan Agreement dated 5th Sep 2008 for Golen Gol Hydro Power Project taken by the GoP (Borrower).The disbursement of loan started in 2011. The borrower has relent the loan to the WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 15 years including 2 years of grace period.

19.1.2.3 This represents Saudi Fund loan of Saudi Riyals 216.750 million under Subsidiary Loan Agreement dated 28 April 2014 for Golen Gol Hydro Power Project taken by the GoP (Borrower). The disbursement of loan started in 2011. The borrower has relent the loan to the WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 20 years including 5 years of grace period.

19.1.2.4 This represents Organization of Petroleum Exporting Country (OPEC) fund loan of USD 15 million for Golen Gol Hydro Power Project extended to GoP (Borrower). The disbursement of loan started in June 2009. The borrower has relent the loan to the WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 15 years 5 years of grace period. The Subsidiary Loan Agreement has been notified by the Ministry of Finance, Revenue, Economic Affairs, Statistics and Privatization on 5 June 2017.

19.1.2.5 This represents relent loan from International Development Association (IDA) of Special Drawing Rights (SDR) 283.7 million equivalent to of $ 440.00 million under Subsidiary Loan Agreement dated 12 April 2012 for Tarbela 4th Extension Hydro Power Project taken by the GoP (Borrower). The borrower has relent the loan to the WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 25 years including 5 years of grace period.

Loan Utilization	For the year		Cumulative	
	2017	2016	2017	2016
	PKR '000'			
Opening balance	46,480	615,823	-	-
Withdrawal of loan during the year	557,055	577,197	13,444,953	12,887,898
	603,535	1,193,020	13,444,953	12,887,898
Less: Utilization of funds during the year	(504,240)	(1,146,540)	(13,345,658)	(12,841,418)
Closing balance	99,295	46,480	99,295	46,480

19.1.2.6 This represents International Bank for Reconstruction and Development (IBRD) loan of $ 400.00 million under Subsidiary Loan Agreement dated 12 April 2012 for Tarbela 4th Extension Hydro Power Project taken by the GoP (Borrower). The borrower has relent the loan to the WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 18.5 years including 7 years of grace period.

Loan Utilization	For the year		Cumulative	
	2017	2016	2017	2016
	PKR '000'			
Opening balance	32,640	146,073	-	-
Withdrawal of loan during the year	16,108,881	9,468,544	29,052,974	12,944,093
	16,141,521	9,614,617	29,052,974	12,944,093
Less: Utilization of funds during the year	(16,045,483)	(9,581,977)	(28,956,936)	(12,911,453)
Closing balance	96,038	32,640	96,038	32,640

19.1.2.7 This represents Frankfurt am Main (KfW) loan of Euro 97.080 million in total, to be disbursed in two trenches. Under Trench - 1 (Kfw 320517) - Euro 4.415 million will be disbursed that will be repaid in 48 years including 8 years of grace period. Under trench - 2 (Kfw 3003374), Euro 72.66 million will be disbursed that will be repaid in 34 years including 4 years of grace period. The disbursement of loan for second trench started in 2015. The loan taken by the GoP (Borrower) has relent under Subsidiary Loan Agreement dated 27 Dec 2011 for Keyal Khwar Hydro Power Project.

19.1.2.8 This represents relent loan from International Development Association (IDA) of Special Drawing Rights (SDR) 379.7 million equivalent to of US $ 588.4 million under subsidiary loan agreement dated 13 October 2014 for Dasu Hydro Power Project taken by the GoP (Borrower). The borrower has relent the loan to the WAPDA Hydroelectric being executing agency for the project. Wapda will disburse US$ 15 million on the request of the NTDC for feasibility study and detail design of transmission lines. The NTDC will repay this amount directly to GoP with out channeling it to the WAPDA. The loan will be repaid in 25 years including 5 of years of grace period.

Loan Utilization	For the year		Cumulative	
	2017	2016	2017	2016
	PKR '000'			
Opening balance	3,192,036	4,655,637	-	-
Withdrawal of loan during the year	7,773,653	720,456	17,548,249	9,774,596
	10,965,689	5,376,093	17,548,249	9,774,596
Less: Utilization of funds during the year	(8,799,053)	(2,184,057)	(15,381,613)	(6,582,560)
Closing balance	2,166,636	3,192,036	2,166,636	3,192,036

19.1.2.9 This represents French Development Agency (AFD) loan of Euro 41.5 million under Subsidiary Loan Agreement dated 02 August 2016 for Warsak Rehabilitation Hydropower Project (Phase-2) taken by the Government of Pakistan (Borrower). The borrower has relent the loan to the WAPDA Hydroelectric being executing agency for the Warsak Rehabilitation Project. The loan will be repaid in 14 years including 6 years of grace period.

19.2 **Foreign direct loans:**

Operational power station loans	(19.2.1)	3,876,779	5,162,932
Development project loans	(19.2.2)	20,995,760	-
		24,872,539	5,162,932

19.2.1 **Operational project loans - Foreign direct loans - Exim Bank China**

This represents supplier's credit facility of US$ 36,928 (2016: US$ 49,23849.238 million) for the construction of Jinnah Hydro Power Project, a turn key project against the sanctioned limit of US $ 123.097 million. The loan is repayable in fourteen years inclusive of four years grace period, in 20 semi annually installments starting from 18 August 2010. Rate of mark-up is 5% annually with no floor and no cap (2016: Nil). The loan is secured through stand by letter of credit to back issuance of 20 promissory notes issued at the time of commencement of the project in 2006.

	2017	2016	2017	2016
	USD '000'		PKR '000'	
Outstanding balance as at 1 July 2016	49,238	61,548	5,162,932	6,270,730
Exchange loss for the year	-	-	4,028	165,396
	49,238	61,548	5,166,960	6,436,126
Less: Repayments during the year	12,310	12,310	1,290,181	1,273,194
Outstanding balance as at 30 June 2017	36,928	49,238	3,876,779	5,162,932

19.2.2 **Development project loans - Foreign direct loans - Credit Suisse AG, Singapore**

This represents supplier's credit facility of US$ 350 million (2016: US$ Nil) for the construction of Dasu Hydro Power Project. Out of the total facility amount, US$ 200 million is given under first utilization and rest US$ 150 million will be disbursed on 29 June 2018 under second utilization. The loan is repayable in ten years inclusive of six years grace period, in 8 semi annually installments starting from 30 June 2023. Rate of mark-up is US$ LIBOR Swap Rate + 3.0% (2016: Nil). The loan is secured through guarantee given by GoP and International Development Association (IDA).

	2017	2016	2017	2016
	USD '000'		PKR '000'	
Outstanding balance as at 1 July 2016	-	-	-	-
	-	-	-	-
Add: Loan received during the year	200,000	-	20,995,760	-
Outstanding balance as at 30 June 2017	200,000	-	20,995,760	-

		2017	2016	2017	2016
		USD '000'		PKR '000'	
19.3 Cash development loans					
Operational power station loans			(19.3.1)	6,876,597	7,156,928
Development project loans			(19.3.2)	83,314,299	69,337,165
				90,190,896	76,494,093

19.3.1 Operational power station loans - Cash development loans

Power Station & Year of Disbursement	Note	Rate of interest per annum	Installments outstanding as on 30 June 2017	Repayment commence-ment / Maturity	2017	2016
					PKR '000'	
Ghazi Brotha						
2005-06	19.3.1.1	9.79%	14	2012/2031	5,675,069	5,862,685
Tarbela (HPS)						
1997-98	19.3.1.2	17.50%	6	2004/2023	688,675	751,537
1998-99	19.3.1.2	17.50%	7	2005/2024	389,296	417,009
					1,077,971	1,168,546
Jabban						
2007-08	19.3.1.1	10.14%	16	2014/2033	28,743	29,461
2009-10	19.3.1.1	12.59%	18	2016/2035	94,814	96,236
					123,557	125,697
					6,876,597	7,156,928

19.3.1.1 These loans have been obtained for Ghazi brotha and Jabban projects from Federal Government for construction of the projects. The loans will be repaid in 25 years including 5 years of grace period.

19.3.1.2 These loans have been obtained for Tarbela hydel power station from Federal Government for payment of net hydel profit to provincial Government of Khyber Pakhtunkhwa. The loans will be repaid in 25 years including 5 years of grace period.

19.3.2 Development projects loans - Cash development loans

Project & Year of Disbursement	Note	Rate of interest per annum	Installments outstanding as on 30 June 2017	Repayment commence-ment / Maturity	2017	2016
					PKR '000'	
Harpo						
2009-10	19.3.2.1	12.59%	18	2016/2035	37,926	38,495
Bashoo						
2007-08	19.3.2.1	10.14%	16	2014/2033	15,221	15,601
2009-10	19.3.2.1	12.59%	18	2016/2035	25,284	25,663
					40,505	41,264
Diamir Basha						
2007-08	19.3.2.2	10.14%	16	2014/2033	278,418	285,365
2009-10	19.3.2.2	12.59%	18	2016/2035	972,450	987,041
2011-12	19.3.2.2	12.64%	20	2018/2037	11,700,000	11,700,000
2012-13	19.3.2.2	10.65%	20	2019/2038	3,785,000	3,785,000
2013-14	19.3.2.2	11.79%	20	2020/2039	27,500,000	27,500,000
2014-15	19.3.2.2	10.53%	20	2021/2040	15,000,000	15,000,000
2015-16	19.3.2.2	7.37%	20	2022/2041	10,000,000	10,000,000
2016-17	17.3.2.2	6.54%	20	2023/2042	14,000,000	-
					83,235,868	69,257,406
					83,314,299	69,337,165

19.3.2.1 These loans have been obtained from Federal Government for feasibility studies of Hydel development projects. The loans will be repaid in 25 years including 5 years of grace period.

19.3.2.2 These loans have been obtained from Federal Government for the land acquisition of Diamir Basha Dam project. The loans will be repaid in 25 years including 5 years of grace period.

20. LOANS FOR PAYMENT OF NHP ARREARS	Note	2017	2016
		PKR '000'	
- Bilateral Islamic finance facility - Musharaka		-	25,000,000

20.1 In financial year 2016, WAPDA Hydroelectric entered into a Musharka arrangement with Meezan Bank Limited as co-owner of Musharka assets to generate funds for the payment of net hydel profit to Government of Khyber Pakhtunkhwa as per the instruction of Council of Common Interest (CCI) and NEPRA under the Islamic mode of financing. Under the agreement, the WAPDA Hydroelectric sold 73,452 acres of Musharka land having value of Rs. 28,933 million to the bank at a price of Rs. 25,000 million. Mark up is chargeable at the rate of 6 months Kibor minus 0.35% per annum and is subject to cap and floor of 20% and 2%, respectively. WAPDA Hydroelectric repaid the entire amount during current year 2017.

21. DEFERRED GRANTS		2017	2016
		PKR '000'	
Balance as on 01 July		4,948,367	3,915,409
Grants received during the year		774,970	1,145,064
Transfer to loan and borrowings from HPTI	(19.1.2.9)	(745,276)	-
Grants amortized during the year		(1,125,969)	(112,106)
Closing balance	(21.1)	3,852,092	4,948,367

21.1 This related to:			
- Gomal Zam	(21.1.1)	2,407,877	2,501,644
- Mangla Dam Rehabilitation Project	(21.1.2)	1,384,940	1,279,992
- Hydropower Training Institute (HPTI)		42,440	754,928
- Golen Gol		16,835	16,835
- Tarbela		-	387,048
- Ghazi Barotha		-	7,920
		3,852,092	4,948,367

21.1.1 The Gomal Zam grant was received for the construction of Gomal Zam Project and its been amortized over 30 years economic useful life of the plant and equipment of the project.

21.1.2 The grant for Mangla Refurbishment Project was received from USAID in 2013 to enhance the total capacity of Mangla Power Station by 330 megawatts (MW) from the current 980 MW to 1310 MW. Grant is also being used for refurbishing and upgrading units 5 and 6 of Mangla Power Station along with related plant facility enhancements.

22. DEFERRED LIABILITIES	Note	2017	2016
		PKR '000'	
WAPDA Second Sukuk Company Limited	(22.1)	-	305,985
Employee benefits	(22.2)	32,792,195	31,252,991
		32,792,195	31,558,976

22.1 This represents ijarah rental payable to WAPDA Second Sukuk Company Limited against ijarah agreement dated 2 July 2007 in respect of certain Tarbela Dam power generation machines. The rental is payable in bi-annual installments and has been fully retired during the year.

22.2 The breakup post employment benefits is given below:

Particulars	2017			
	Post employment benefits			
	Free medical facility	Free electricity facility	Pension	Total
	PKR '000'			
Liability recognized in the statement of financial position	3,131,821	2,148,227	27,512,147	32,792,195
Changes in the present value of defined benefit obligation:				
Opening defined benefit obligation	3,052,000	2,112,826	26,088,165	31,252,991
Service cost	79,181	65,284	549,837	694,302
Interest cost	335,720	232,411	2,869,698	3,437,829
Benefits paid	(335,080)	(262,294)	(1,995,553)	(2,592,927)
Closing defined benefit obligation	3,131,821	2,148,227	27,512,147	32,792,195
Charge for the year:				
Current service cost	79,181	65,284	549,837	694,302
Interest cost	335,720	232,411	2,869,698	3,437,829
	414,901	297,695	3,419,535	4,132,131

Particulars	2016			
	Post employment benefits			
	Free medical facility	Free electricity facility	Pension	Total
	PKR '000'			
Liability recognized in the statement of financial position	3,052,000	2,112,826	26,088,165	31,252,991
Changes in the present value of defined benefit obligation:				
Opening defined benefit obligation	5,554,063	2,566,197	19,711,470	27,831,730
Service cost	135,559	55,532	631,121	822,212
Interest cost	663,735	303,388	2,249,499	3,216,622
Benefits paid	(45,882)	(75,929)	(1,896,445)	(2,018,256)
Actuarial (gains)/ losses	(3,255,475)	(736,362)	5,392,520	1,400,683
Closing defined benefit obligation	3,052,000	2,112,826	26,088,165	31,252,991
Charge for the year:				
Current service cost	135,559	55,532	631,121	822,212
Interest cost	663,735	303,388	2,249,499	3,216,622
	799,294	358,920	2,880,620	4,038,834

22.2.1 Latest actuarial valuation has been conducted as on 25 November 2016 on the basis of following principal assumptions:

	Free medical benefits	Free electricity benefits	Pension benefits
Expected rate for discounting liabilities	11%	11%	11%
Expected rate for increase in pensionable salary	-	-	10%
Expected rate for increase in cost of pensioners	-	-	6%
Expected rate for increase in medical cost	10%	-	-
Expected rate for increase in electricity cost	n/a	10%	-
Average expected remaining working life	10 years	10 years	10 years
Average duration of liabilities (actives + pensioners)	27 years	27 years	27 years

The sensitivity of the Present Value of Defined Benefit Obligation (PVDBO) for the benefit plans is as follows:

	Free medical benefits	Free electricity benefits	Pension benefits
Discount rate + 1%	(444,458)	(287,830)	(3,660,363)
Discount rate - 1%	378,139	281,633	1,235,223
Salary increase + 1%	-	-	(521,777)
Salary increase - 1%	-	-	(2,236,638)
Medical cost increase + 1%	248,396	-	-
Medical cost increase - 1%	(354,541)	-	-
Electricity cost increase + 1%	-	191,816	-
Electricity cost increase - 1%	-	(225,583)	-

23. RETENTION MONEY PAYABLE

This represents the retention money payable against the contract works.

24. TRADE AND OTHER PAYABLE

	Note	2017	2016
		PKR '000'	
Trade creditors		10,609,661	5,369,992
Security deposits		1,990,309	1,630,567
Due to other wings of WAPDA	(24.1)	138,155	1,018,503
Accrued liabilities		797,104	367,611
Taxes payable		355,944	126,490
Other liabilities		509,039	420,475
		14,400,212	8,933,638

24.1 Due to other wings of WAPDA

WAPDA Coordination Wing	4,590	571,031
WAPDA Water wing	133,565	447,472
	138,155	1,018,503

25. PAYABLE AGAINST HYDEL LEVIES

Net Hydel Profit (NHP) payable to Khyber Pakhtunkhwa	(25.1)	17,224,898	5,129,916
Water usage charges (WUC) payable to A.J.K Government	(25.2)	139,102	71,461
Water Management Charges (WMC) payable to IRSA	(25.3)	42,523	46,877
	(25.4)	17,406,523	5,248,254

25.1 This represents payable against NHP to GoKPK. The WAPDA Hydroelectric charged Rs. 1.10/kWh, Rs. 301.8274/kWh and Rs. 181.0964/kWh on electricity sold to CPPA-G against GoP notification S.R.O 191 (I)/2016 dated 7th March 2016 and S.R.O. 570 (I)/2016 dated June 24, 2016 respectively from the dates of the notifications. The amount represents the remaining balance payable to GoKPK at the year end.

25.2 This represents water usage charges payable to GoAJK . As per Memorandum of Understanding signed in 2003, water usage charges @ Rs.0.15 per unit generated at Mangla Power House are to be paid to A.J.K Government.

25.3 This represents payable of water management charges to IRSA. These charges are levied by IRSA vide letter no. A-II-6/10/2010-IRSA dated 25 August 2011 i.e. 01 July 2011 @ Rs.0.005/kWh for hydro power generation.

25.4 Movement during the year

	2017			
	NHP payable to KPK	WUC payable to A.J.K	WMC payable to IRSA	Total
	PKR '000'			
Balance as at 1st July 2016	5,129,916	71,462	46,877	5,248,255
Billed during the year	33,809,764	788,584	153,983	34,752,331
Paid during the year	(21,714,782)	(720,944)	(158,337)	(22,594,063)
Balance as at 30 June 2017	17,224,898	139,102	42,523	17,406,523

	2016			
	NHP payable to KPK	WUC payable to A.J.K	WMC payable to IRSA	Total
	PKR '000'			
Balance as at 1st July 2015	3,500,000	209,152	16	3,709,168
Billed during the year	36,092,534	1,011,872	208,225	37,312,631
Paid during the year	(34,462,618)	(1,149,562)	(161,364)	(35,773,544)
Balance as at 30 June 2016	5,129,916	71,462	46,877	5,248,255

26. PAYABLE TO GOVERNMENT OF PAKISTAN

This represents the balance amount of principal and interest payable to GoP (debt service liability - DSL) against the schedules repayments of foreign relent loans (Note 19.1) and cash development loans (Note 19.3).

27. ACCRUED INTEREST

This represents interest of long term loans and borrowings note 19.

28. OTHER LIABILITIES	Note	2017	2016
		PKR '000'	
Payable to provinces	(28.1)	18,088	17,831
Other liabilities		1,564,345	890,151
		1,582,433	907,982

28.1 This represents amount payable to Governments of Punjab (GoPb), KPK and Sindh for 4% return on assets transferred to the WAPDA Hydroelectric from these provinces at the time of unbundling of WAPDA.

29. CONTINGENCIES AND COMMITMENTS

29.1 Contingencies

29.1.1 During the year ended June 30, 2009 WFSC was defrauded by a forged transfer of Sukuk Certificates valuing Rs. 180 million belonging to NFC to a ghost company, Swift Engineering Solutions (SES); the certificates were transacted a number of times and now these are partly held by Meezan Bank Limited (MBL), Soneri Bank Limited (SBL) and Bank Islami Pakistan Limited (BIPL).

29.1.2 WFSC lodged a case of fraud with the Federal Investigation Agency (FIA). On the basis of an inquiry report dated 5 Aug 2009, FIA registered an FIR bearing No. 28/2009 and recovered from the accomplices of the principal accused a publicly declared absconder who has fled the country:

a) Rs. 13,477,000 in the form of hard cash, and prize bonds of Rs. 1,775,000;
b) a house in Khyber block, Allama Iqbal Town Lahore valuing Rs. 6,500,000;
c) an under construction Floor Mills in the name and style of 'Hussain Floor Mills' at Ferozewala District, Sheikhupura having land measuring 8 Kanals 13 marlas with a value of Rs. 6,300,000 with building constructed thereon of Rs. 6,500,000; and
d) Land measuring 1 kanal 1 marla at Ferozewala District, Sheikhupura.

29.1.3 On 8 Mar 2010, FIA submitted a challan u/s 173 Cr PC in the court of Special Judge (Central) Lahore against twelve (12) accused out of which two including the principal accused are public absconders who are presently outside Pakistan. The case of extradition of the absconders is being pursued with different agencies/ courts in and outside Pakistan. The Civil Court appointed WFSC as custodian of cash, prize bonds and Hussain Floor Mills whereas the house in Khyber block, Allama Iqbal Town Lahore was returned to the occupant on the condition that pending the final decision of the case, the house shall not be disposed off in any manner.

29.1.4 On 30 Sep 2013, the Court gave its verdict and out of the twelve accused, acquitted six and declared the two main accused who have fled the country as public absconders, while the remaining have been sentenced to various periods of imprisonment and fine; the Court has further adjudicated that all the recoveries as stated at Note 29.1.2 are confiscated in favor of WFSC (the complainant).

29.1.5 WFSC has invested the recovered cash of Rs. 13,477,000 in saving account on the directions of the Civil Court.

29.1.6 On 12 Dec 2009 WFSC Filed Interpleader suit u/s 88 CPC in the Civil Court of Lahore for deciding the lawful ownership of defrauded Sukuk Certificates and deposited the 8th and 9th Ijarah rental amount with the Civil Court. Meanwhile, WFSC filed an appeal in the Lahore High Court against the order dated 21 May 2010 of the Civil Judge, Lahore and the honorable High Court (LHC) ordered to continue to deposit the Ijarah rental against the defrauded Sukuk Certificates with the Civil Court and further directed the Civil Court to deposit the same in a profit bearing scheme in a scheduled bank. Accordingly, 10th, 11th, 12th, 13th & 14th (final) Ijarah rentals and the principal amount of Rs. 180 million payable against the demised Sukuk Certificates were deposited in the scheduled bank by the Civil Court.

29.1.7 The Honorable Lahore High Court, Lahore on 17 February 2015 had decided the case in favor of WAPDA and set aside the impugned judgment and decree and hold that the suit is maintainable and that the trial court erred is rejecting the plaint. Accordingly, WAPDA has filed an application in the Civil Court, Lahore with the pray to revise the original inter-plodder suit for deciding the true ownership of the defrauded Sukuk Certificates amounting to Rs. 180 million. M/s Al-Mezan investment Management Company, Soneri Bank Ltd and National Fertilizer Corporation Pakistan (Private) Limited have filed appeals in Honorable Supreme Court of Pakistan against the judgment of Lahore High Court, Lahore.

29.1.8 Meanwhile, MBL, SBL, and BIPL being the affectees' / plaintiffs' filed separate suits against the Company (WFSC) asserting the validity of their purchase transactions. However, in the case of MBL the Honorable Sindh High Court, Karachi vide order dated 31 May 2012 decided that MBL's suit is not maintainable under the Financial Institutions (Recovery of Finance) Ordinance 2001. Accordingly, the suit was to be registered / fixed as a fresh ordinary case and written statement was filed by defendant / WAPDA Hydroelectric. The case is now filed for framing of issues. The Honorable Court on our request has directed the plaintiffs to first satisfy the Honorable Court on the issue of jurisdiction. The Honorable Supreme Court dismissed the appeals on 10 October 2016 and the case decided in the favour of WAPDA.

29.1.9 The interpleader suit decision dated 14 April 2017, passed by Mr. Khalil Ahmed, Civil Judge 1st Class, Lahore which decreed in favour of National Fertilizer Corporation Pakistan (Private) Limited. National Fertilizer Corporation (NFC) is held entitled to withdraw amount of their 72 physical Sukuk Certificates to Ex.D1-23/1 to Ex.D1-23/72 valuing Rs. 180 million and all Ijara Rentals 8th to 14th which have been deposited by the WFSC in the Punjab Bank, Mall View Plaza, Bank Square, Account No. PLS.2774-1 by the order of the court. National Fertilizer Corporation may withdraw the same after the expiry of period of appeal by filing an application in the court in this regard. The other MBL, SBL and BIPL have filed an appeal with the Honorable High Court at Lahore on 13 July 2017 against the decision of Civil Court dated 14 April 2017, which is allowed by Honorable High Court at Lahore. The suit ibid will continue before the Honorable High Court at Lahore. WAPDA Hydroelectric's solicitors expects a favorable outcome in this regard.

29.2 Commitments

29.2.1 Capital commitments contracted for but not incurred as at 30 June 2017 (through forward cost) amounted to Rs. 1,732,765 million (2016: Rs. 2,965,040 million).

29.2.2 Commitments under letter of credit amounts to Rs. 1,395 million. (2016: Rs.1,984 million).

29.2.3 Commitments under Stand by letter of credit (SBLC) in favor of supplier for construction of Jinnah Hydro Project amounting to Rs. US$ 40.160 million (2016: US$ 54.778 million).

29.2.4 The commitments in respect of Ijarah rentals payable to WAPDA Second Sukuk Company Limited and WAPDA Third Sukuk Company Limited are explained below:-

	Note	2017	2016
		PKR '000'	
With in one year		2,746,047	3,324,835
With in one to five years		5,982,228	8,290,382
		8,728,275	11,615,217

29.2.5 Rental commitments against Musharka arrangement (Note 20.1) as at 30 June 2017 were Rs. Nil (2016: Rs. 27,878 million).

29.2.6 The commitments in respect of arrears of net hydel profit payable to the GoKPK are explained below:-

With in one year	15,000,000	15,000,000
With in one to five years	15,000,000	30,000,000
	30,000,000	45,000,000

29.2.7 In the light of Council of Common Interest (CCI) decision dated 16 December 2016, Federal Government through WAPDA Hydroelectric was directed to pay arrears of Rs. 82.71 billion against NHP in 4 installments to GOPb. The Council also directed the WAPDA Hydroelectric to file a tariff petition for recovery of these arrears and payment of NHP @ 1.10 per kWh from FY 2016-17 onwards. Following is the breakup of yearly arrears of NHP:

Rs. 38,120 million being the 1st Installment to be paid in FY-2016-17
Rs. 14,860 million being the 2nd Installment to be paid in FY-2017-18
Rs. 14,860 million being the 3rd Installment to be paid in FY-2018-19
Rs. 14,860 million being the 4th Installment to be paid in FY-2019-20

For the first installment the WAPDA Hydroelectric was directed to issue irrevocable Promissory Note of one year duration to GoPb by 31 December 2016. In this regard the WAPDA Hydroelectric has already issued the requisite Promissory Note in favour of GoPb on 10 January 2017. The WAPDA Hydroelectric has filed tariff petition to the NEPRA on 30 March 2017 in light of CCI decision.

30. REVENUE

Variable charges	(30.1)	3,174,783	2,280,171
Fixed charges		62,060,282	52,495,914
		65,235,065	54,776,085

30.1 The amount is net of sale tax amounting to Rs. 539 million (2016: 530 million).

31. COST OF ELECTRICITY

Formations	Salaries, wages and benefits (Note 31.2)	Retirement and other benefits (Note 31.3)	Sukuk Ijarah rentals (Note 31.4)	Repairs and maintenance	Depreciation (Note 5)	Dams inspection and monitoring cost	Power, gas and water	NEPRA fees	Insurance (Note 31.5)	Consultancy charges	Fuel charges	Return on assets to provinces	Sundry expenses	Total
	2017													
	PKR '000'													
Tarbela	1,040,585	1,543,906	3,036,615	231,492	4,416,758	405,881	108,653	49,019	2,409	-	3,474	4,972	-	10,843,764
Ghazi Barotha	519,967	483,192	-	91,597	5,650,684	183,215	17,127	19,824	14,045	-	1,050	4,000	-	6,984,701
Mangla	588,255	717,346	-	150,583	2,773,499	246,836	69,227	13,872	1,069	-	1,167	-	28	4,541,882
Warsak	301,224	414,197	-	78,561	172,958	6,493	66,173	3,322	1,115	2,161	991	4,000	-	1,051,195
Chashma	291,228	371,098	-	143,917	1,101,842	9,323	21,435	2,516	6,895	-	14,703	-	-	1,962,957
Rasul	45,187	37,595	-	7,699	58,318	-	143	301	33	-	-	-	-	149,276
Dargai	53,653	42,678	-	5,798	19,709	-	683	273	-	-	-	-	-	128,004
Nandipur	50,326	38,819	-	4,485	5,109	-	343	189	11	-	-	-	-	99,082
Shadiwal	39,368	28,706	-	3,463	5,364	-	138	185	3	-	225	-	-	77,450
Chichoki	41,363	25,443	-	7,010	19,523	-	141	180	-	-	-	-	-	93,660
Kurram Garhi	29,129	18,389	-	-	3,317	-	30	55	-	-	-	-	-	50,920
Renala	12,608	9,000	-	5,944	582	-	140	15	-	-	-	-	-	28,289
Chitral	18,522	9,237	-	2,207	10,262	-	302	14	-	-	2,332	-	-	42,876
Khan Khwar	118,659	35,782	-	8,823	344,535	-	701	984	3,626	-	142	-	-	513,352
Allai Khwar	97,689	17,199	-	2,632	403,885	2,113	370	1,654	7,221	-	17	-	-	532,780
Gomal Zam	43,663	14,021	-	904	190,633	-	-	238	2,602	-	-	-	-	252,066
Jinnah	138,954	82,389	-	27,330	403,027	-	877	1,312	12,147	-	-	-	-	665,136
Jabban	39,077	18,499	-	11,441	173,779	-	435	1,449	4,105	500	-	-	-	249,285
Dubair Khwar	104,082	14,087	-	1,140	287,390	2,851	436	1,776	-	-	175	-	-	411,937
Others	33,670	210,743	-	18,529	2,286	-	3,597	-	-	584	-	-	36,983	306,397
Total	3,591,524	4,132,131	3,036,615	803,555	16,043,540	858,712	290,949	98,978	55,281	3,245	24,276	12,972	37,011	28,984,789

31.1 COST OF ELECTRICITY

Formations	Salaries, wages and benefits (Note 31.2)	Retirement and other benefits (Note 31.3)	Sukuk Ijarah rentals (Note 31.4)	Repairs and maintenance	Depreciation (Note 5)	Dams inspection and monitoring cost	Power, gas and water	NEPRA fees	Insurance (Note 31.5)	Consultancy charges	Fuel charges	Return on assets to provinces	Total
	2016 - restated												
	PKR '000'												
Tarbela	1,112,183	824,618	3,611,130	316,202	4,373,733	290,312	105,706	-	2,114	500	3,934	4,972	10,644,804
Ghazi Barotha	557,336	104,270	-	104,208	5,637,464	102,577	29,202	-	13,488	760	1,247	4,000	6,554,602
Mangla	612,946	358,199	-	209,802	2,784,989	43,355	66,540	-	1,221	-	2,027	-	4,059,079
Warsak	310,083	211,973	-	123,024	157,371	10,162	47,853	-	1,108	1,291	1,075	-	863,940
Chashma	310,626	139,862	-	205,420	1,098,639	13,492	20,183	-	3,173	482	13,755	-	1,805,632
Rasul	44,552	11,530	-	10,932	70,883	-	102	-	34	620	-	-	138,653
Dargai	63,391	8,632	-	14,456	12,004	-	602	-	-	200	-	-	99,285
Nandipur	52,157	9,495	-	2,930	3,456	-	405	-	4	300	6	-	68,753
Shadiwal	36,938	3,912	-	1,739	4,021	-	109	-	-	200	167	-	47,086
Chichoki	31,686	13,066	-	7,302	17,239	-	185	-	-	-	-	-	69,478
Kurram Garhi	30,992	217	-	1,687	2,917	-	104	-	-	-	-	-	35,917
Renala	12,719	1,303	-	6,204	583	-	175	-	-	409	-	-	21,393
Chitral	20,314	514	-	3,665	10,262	-	275	-	4	200	1,348	-	36,602
Khan Khwar	92,399	4,428	-	51,549	372,835	-	547	-	3,878	-	387	-	526,023
Allai Khwar	49,795	-	-	2,296	551,599	-	398	-	7,536	24	818	-	612,266
Gomal Zam	29,362	591	-	147	190,848	-	-	-	2,720	-	357	-	224,025
Jinnah	119,603	4,520	-	13,344	442,823	-	653	-	11,013	962	-	-	592,918
Jabban	35,725	66	-	1,142	129,951	-	13	-	-	3,201	-	-	170,098
Dubair Khwar	54,197	-	-	824	103,889	-	490	-	-	-	129	-	159,529
Others	37,317	2,342,238	-	29,843	3,545	-	2,835	229,995	-	1,298	-	-	2,647,071
Total	3,614,371	4,038,834	3,611,130	1,106,736	15,949,051	459,398	276,377	229,995	46,293	10,447	25,050	8,972	29,377,154

	2017	2016
	------ PKR '000'------	
31.2 Salaries, wages and benefits		
Pay and allowances	3,398,482	3,026,147
Other benefits	193,042	588,224
	3,591,524	3,614,371
31.3 Retirement and other benefits		
Pension	3,419,535	2,860,620
Free Electricity	297,695	358,920
Free Medical	414,901	799,294
	4,132,131	4,038,834
31.4 Sukuk Ijarah rentals		
Sukuk-II	1,128,153	1,505,963
Sukuk-III	1,908,462	2,105,167
	3,036,615	3,611,130

31.5 As per the WAPDA Equipment Protection Scheme (WEPS), WAPDA Hydroelectric equipment of power houses have been given insurance coverage based on written down value of equipment.

32. OPERATING EXPENSES

Formations	Authority overheads	R&D - Survey and Investigation (Note 6 & 32.1)	Vehicle running expenses	Outside services employed	Travelling expenses	Office expenses	Advertis-ement and periodicals	Legal and profess-ional charges	Commu-nication	Rent, rates and taxes	Other	Total
	2017											
	PKR '000'											
Tarbela	343,472	-	64,998	76,168	12,941	6,603	5,631	676	2,183	156	187	513,016
Ghazi Barotha	134,036	-	34,210	606	7,088	1,742	4,197	1,082	1,741	-	52	184,754
Mangla	130,114	-	29,081	-	10,621	3,223	3,878	2,732	2,138	1,339	1,668	184,794
Warsak	43,122	-	10,442	-	5,725	1,244	2,203	56	951	-	144	63,887
Chashma	43,737	-	24,979	-	6,909	1,862	3,523	348	1,064	211	394	83,027
Rasul	4,619	-	1,018	-	1,244	118	190	85	162	-	-	7,436
Dargai	5,455	-	608	-	1,115	159	67	-	155	-	-	7,559
Nandipur	4,364	-	1,206	-	854	241	254	24	137	-	-	7,080
Shadiwal	3,660	-	1,214	-	572	73	200	12	90	-	1,514	7,335
Chichoki	3,897	-	2,314	-	1,072	73	172	116	34	-	-	7,678
Kurram Garhi	2,433	-	296	-	518	21	-	22	26	-	271	3,587
Renala	1,194	-	567	-	634	49	122	18	81	-	40	2,705
Chitral	1,354	-	382	-	521	38	-	-	51	-	-	2,346
Khan Khwar	10,630	-	3,434	-	3,781	336	610	29	452	-	-	19,272
Allai Khwar	11,097	-	1,425	-	1,148	61	154	-	116	-	-	14,001
Gomal Zam	3,985	-	1,285	-	891	197	-	-	234	-	853	7,445
Jinnah	15,313	-	3,675	-	2,259	444	760	-	253	1,309	-	24,013
Jabban	5,329	-	2,046	7,414	3,840	583	43	-	129	-	-	19,384
Dubair Khwar	12,215	-	1,262	-	834	97	102	94	81	-	63	14,748
Others	4,017	689,099	3,594	22	2,199	388	531	13,051	13	715	-	713,629
Total	784,043	689,099	188,036	84,210	64,766	17,552	22,637	18,345	10,091	3,730	5,186	1,887,695

32.1 OPERATING EXPENSES

Formations	Authority overheads	R&D - Survey and Investigation (Note 6 & 32.1)	Vehicle running expenses	Outside services employed	Travelling expenses	Office expenses	Advertis-ement and periodicals	Legal and profess-ional charges	Commu-nication	Rent, rates and taxes	Other	Total
	2016											
	PKR '000'											
Tarbela	271,320	-	53,627	74,143	9,131	6,222	4,470	2,134	2,356	131	611	424,145
Ghazi Barotha	110,100	-	36,084	594	6,531	2,296	2,329	1,748	1,811	11	-	161,504
Mangla	88,108	-	31,665	-	10,781	3,509	1,414	1,057	1,576	1,505	242	139,857
Warsak	40,740	-	11,605	-	4,430	1,297	1,348	-	672	-	681	60,773
Chashma	56,568	-	28,639	-	7,253	1,455	1,999	401	1,008	-	-	97,323
Rasul	4,573	-	1,059	-	1,149	109	47	9	136	-	-	7,082
Dargai	1,908	-	582	-	1,036	203	257	-	110	-	130	4,226
Nandipur	4,859	-	1,754	-	1,000	96	92	61	106	-	291	8,259
Shadiwal	2,628	-	1,099	109	571	118	49	8	53	-	83	4,718
Chichoki	2,386	-	1,953	86	971	81	-	245	34	-	-	5,756
Kurram Garhi	1,153	-	303	-	482	28	-	300	16	-	-	2,282
Renala	594	-	602	12	587	31	2	18	75	-	-	1,921
Chitral	336	-	593	-	607	74	-	-	83	-	-	1,693
Khan Khwar	12,723	-	2,400	-	3,058	262	403	139	463	-	-	19,448
Allai Khwar	12,785	-	2,053	-	1,170	111	3	116	107	-	-	16,345
Gomal Zam	1,637	-	1,243	26	694	227	45	-	209	-	-	4,081
Jinnah	8,038	-	3,649	-	1,910	383	1,156	-	2,698	1,198	-	19,034
Jabban	2,435	-	604	-	300	125	38	-	52	-	-	3,554
Dubair Khwar	13,370	-	757	-	739	143	3	161	54	-	-	15,227
Others	20,132	264,912	6,606	-	1,951	378	8,489	8,949	300	917	-	312,634
Total	656,393	264,912	186,877	74,970	54,351	17,148	22,146	15,346	11,919	3,762	2,038	1,309,862

32.1 R&D - Survey and Investigation includes research and development expenses of projects which cannot be developed due to financial or technical reasons and the projects which are not to be developed by the Pakistan WAPDA Hydroelectric (i.e. the Feasibility is sold to Federal or Provincial Government or Organization). It also includes the expenses of the office of GM Hydro-planning incurred during the year.

		Note	2017	2016
			PKR '000'	
33.	OTHER INCOME			
33.1	**Income from financial assets**			
	Profit on bank balances		2,348,016	1,718,998
	Interest income - Investments		306,086	213,509
			2,654,102	1,932,507
33.2	**Income from assets other than financial assets**			
	Amortization of grant	(21)	1,125,969	112,106
	Income from lease of other property		82,822	82,856
	Miscellaneous income		116,333	99,905
	Income from non-utility operation		3,471	1,871
	Interest income - advance to staff		1,072	1,059
	Sale of scrap		15,587	51
	Sale of stores		1,737	1,863
			1,346,991	299,711
			4,001,093	2,232,218

			2017	2016
			PKR '000'	
34.	FINANCE COSTS			Restated
	Development hydel projects			
	Interest on foreign relent loans	(6.2)	7,751,792	6,540,120
	Interest on cash development loans	(6.2)	7,696,591	5,820,970
			15,448,383	12,361,090
	Operational hydel stations			
	Interest on foreign relent loans	(19.1)	2,861,413	3,419,107
	Interest on foreign direct loans	(19.2)	220,166	283,776
	Interest on cash development loans	(19.3)	793,556	2,392,767
	Interest on bilateral Islamic finance facility - musharakah	(20.1)	1,442,898	4,000
			5,318,033	6,099,650
	Bank charges		4,932	10,463
	Other charges		577,485	195,634
			582,417	206,097
			21,348,833	18,666,837

35. FINANCIAL RISK MANAGEMENT

35.1 **Financial risk factors**

The WAPDA Hydroelectric financial liabilities comprise of interest bearing loans and borrowings, trade and other payables, accrued interest, retention money, debt service liability and payable in respect of third parties. The main purpose of these financial liabilities is to raise finances for the Hydroelectric operations. The Hydroelectric has trade debts, loan and advances, other receivables and cash and short term deposits that arrive directly from its operations. The WAPDA Hydroelectric also holds long term advances and deposits.

The WAPDA Hydroelectric activities expose it to a variety of financial risks: market risk (including currency risk, interest rate risk and other price risk), credit risk and liquidity risk. The WAPDA Hydroelectric overall risk management programmed focuses on the liquidity crisis and seeks to minimize potential adverse effects on the financial performance.

Risk management is carried out by management of the WAPDA Hydroelectric. The management provides principles for overall risk management, as well as policies covering specific areas such as currency risk, interest rate risk, credit risk and liquidity risk.

35.1.1 **Market risk**

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices will affect the WAPDA Hydroelectric's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return on risk.

(a) **Foreign currency risk management**

Pak Rupee (PKR) is the functional currency and presentational currency of the Hydroelectric and as a result currency exposure arises from transactions and balances in currencies other than PKR. The Hydroelectric's potential currency exposure comprises of:

- Transactional exposure in respect of non functional currency monetary items.
- Transactional exposure in respect of non functional currency expenditure and revenues.

The potential currency exposures are discussed below:

Transactional exposure in respect of non functional currency monetary items

Monetary items, including financial assets and liabilities, denominated in currencies other than the functional currency of the WAPDA Hydroelectric are periodically restated to PKR equivalent, and the associated gain or loss is taken to the income statement account. The foreign currency risk related to monetary items is managed as part of the risk management strategy.

Transactional exposure in respect of non functional currency expenditure

Certain operating and capital expenditure is incurred by the WAPDA Hydroelectric in currencies other than the functional currency. These currency risks are managed as a part of overall risk management strategy.

Exposure to foreign currency risk

The WAPDA Hydroelectric's exposure to foreign currency risk was as follows based on notional amounts:

	2017	2016
	US $ '000'	
Long term loans	236,928	49,238

The following significant exchange rates applied during the year:

	Average rate		Reporting date spot rate	
	2017	2016	2017	2016
US $	104.80	104.37	104.85	104.83

Sensitivity analysis

A ten percent strengthening of the Pak Rupee against the US $ at 30 June 2017 would have increased profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular interest rates, remain constant. The analysis was performed on the same basis for 30 June 2016.

	Increase/ (decrease) in basis points	Effect on profit before tax
2017	%	PKR '000'
Financial liability		
	10	2,485,375
		2,485,375
2016		
Financial liability		
	10	516,015
		516,015

A 10 percent weakening of the Pak Rupee against the US $ at 30 June 2017 would have equal but opposite effect on US $ to the amounts shown above, on the basis that all other variables remain constant.

(b) **Interest rate risk**

The interest rate risk is the risk that the value of the financial instrument will fluctuate due to changes in the market interest rates. Sensitivity to interest rate risk arises from mismatches of financial assets and liabilities that mature in a given period.

The WAPDA Hydroelectric has no significant long-term interest-bearing assets. The WAPDA Hydroelectric interest rate risk arises from interest bearing loans and borrowings. Borrowings obtained at variable rates expose the Hydroelectric to cash flow interest rate risk.

At the statement of financial position date the interest rate profile of the WAPDA Hydroelectric's interest bearing financial instruments is:

	2017	2016	2017	2016
	%		PKR '000'	
Fixed rate instruments				
Financial liabilities:				
Loans and borrowings	5% to 17.5%	3.62% to 17.5%	229,164,609	170,766,770

Fair value sensitivity analysis for fixed rate instruments

The WAPDA Hydroelectric does not account for any fixed rate financial assets and liabilities at fair value through profit or loss. Therefore, a change in interest rate at the statement of financial position date would not affect profit or loss of the WAPDA Hydroelectric.

	2017	2016	2017	2016
	%		PKR '000'	
Floating rate instruments				
Financial assets:				
Bank balances in deposit accounts	4.25% to 6%	4% to 6.75%	35,018,528	42,635,388

Fair value sensitivity analysis for floating rate instruments

The following table demonstrates the sensitivity to a reasonably possible change in floating interest rates, with all other variables held constant, of the WAPDA Hydroelectric's profit (through the impact on floating rate borrowings).

	Increase/ (decrease) in basis points	Effect on profit before tax
2017	%	PKR '000'
Financial assets:		
Bank balances	1	(24,874)
		(24,874)
2016		
Financial assets:		
Bank balances	1	(34,683)
		(34,683)

(c) Other price risk

Other price risk is a risk that fair value or future cash flows of a financial instruments will fluctuate because of changes in the market prices (other than those arising from currency risk and interest rate risk), whether those changes are caused by specific to the individual financial instruments or its issuer, or factors effecting all similar instruments traded in the market.

As at 30 June 2017, WAPDA Hydroelectric is not exposed to any significant price risk.

35.1.2 Credit risk

Credit risk represents the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge its obligation. The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was as follows:

	2017	2016
	PKR '000'	
Long term advances	547,071	504,152
Long term security deposits	1,489	1,483
Trade debts	53,472,267	19,477,252
Unbilled net hydel profit arrears	1,447	24,513,916
Short term investments	2,000,000	-
Loan and advances	4,224,676	496,891
Accrued interest	-	23,387
Other receivables	267,642	308,060
Bank balances	58,085,650	46,794,529
	118,600,242	92,119,670

Credit risk related to trade debts is managed by established procedures and controls relating to customer's credit risk management. Outstanding receivables are regularly monitored.

The maximum credit risk exposure at reporting date is carrying value of financial assets stated above.

The credit quality of financial assets that are neither past due nor impaired can be assessed by reference to external credit ratings (if available) or to historical information about counterparty default rate. The table below shows the bank balances held with some major counterparties at the statement of financial position date.

Bank	Rating			2017	2016
	Short term	Long term	Agency		
				PKR '000'	
National Bank of Pakistan	A1+	AAA	PACRA	22,611,328	25,937,088
Allied Bank Limited	A1+	AA+	PACRA	428,978	114,298
United Bank Limited	A1+	AAA	JCR-VIS	353,256	232,671
Habib Bank Limited	A1+	AAA	JCR-VIS	11,884,771	8,395,197
MCB Bank Limited	A1+	AAA	PACRA	3,130,580	91,644
Standard Chartered Bank	A1+	AAA	PACRA	3	3
Soneri Bank Limited	A1+	AA-	PACRA	4,145,000	89,736
Askari Bank Limited	A1+	AA+	PACRA	10,080,824	11,207,305
Bank Alfalah Limited	A1+	AA+	PACRA	1,966,350	651,912
Habib Metropolitan Limited	A1+	AA+	PACRA	3,005,170	131,527
				57,606,260	46,851,381

At 30 June 2017 the WAPDA Hydroelectric has only customer Central Power Purchasing Agency (CPPA-G) that owed Hydroelectric balance of Rs. 53,472 million (2016: Rs.19,477 million) and unbilled net hydel profits arrears Rs. 1 million (2016: Rs.24,514 million).

Due to WAPDA Hydroelectric's long standing business relationships with CPPA and also it is related party of the Hydroelectric and after giving due consideration to their strong financial standing, management does not expect to the provision against receivables. Accordingly, the credit risk is minimal.

35.1.3 Liquidity risk

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities.

The WAPDA Hydroelectric approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Hydroelectric's reputation.

The table below analyses the WAPDA Hydroelectric's financial liabilities into relevant maturity groupings based on the remaining period at the statement of financial position to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows.

	2017				
	Carrying Amount	Contractual cash flows	Less than 1 year	Between 1 and 5 years	Over 5 years
As at 30 June 2017	PKR '000'				
Loans and borrowings -					
Interest bearing	204,164,609	204,164,609	5,679,949	22,719,796	175,764,864
Long term financing	25,000,000	25,000,000	-	-	25,000,000
Trade and other payable	13,603,108	13,603,108	13,603,108	-	-
Payable against hydel levies	17,406,523	17,406,523	17,406,523	-	-
Accrued Interest	2,106,930	2,106,930	2,106,930	-	-
Other liabilities	1,582,433	1,582,433	1,582,433	-	-
	263,863,603	263,863,603	40,378,943	22,719,796	200,764,864

	2016				
	Carrying Amount	Contractual cash flows	Less than 1 year	Between 1 and 5 years	Over 5 years
As at 30 June 2016	PKR '000'				
Loans and borrowings -					
Interest bearing	145,766,770	145,766,770	5,476,693	21,906,772	118,383,305
Loans for payment of hydel levies	25,000,000	25,000,000	-	25,000,000	-
Trade creditor and other payables	8,566,027	8,566,027	8,566,027	-	-
Payable against hydel levies	5,248,254	5,248,254	5,248,254	-	-
Accrued interest	1,698,755	1,698,755	1,698,755	-	-
Other liabilities	907,982	907,982	907,982	-	-
	187,187,788	187,187,788	21,897,711	46,906,772	118,383,305

The contractual cash flows relating to the above financial liabilities have been determined on the basis of mark-up rates effective as at 30 June. The rates of mark up have been disclosed in respective notes to the financial statements.

35.1.3.1 Fair values estimation

The carrying values of all financial assets and liabilities reflected in financial statements approximate their fair values. The fair value of financial liabilities for disclosure purposes is estimated by discounting the future contractual cash flows at the current market interest rate that is available to the group for similar financial instruments. Fair value is determined on the basis of objective evidence at each reporting date.

Financial instruments by categories	2017			
	Cash and cash equivalent	Loans and advances	Held to maturity	Total
Assets as per statement of financial position	PKR '000'			
Long term advances	-	547,071	-	547,071
Long term security deposits	-	1,489	-	1,489
Trade debts	-	53,472,267	-	53,472,267
Unbilled net hydel profit arrears	-	1,447	-	1,447
Loan and advances	-	4,720,790	-	4,720,790
Other receivables	-	267,642	-	267,642
Short term investments	-	-	2,000,000	2,000,000
Cash and bank balances	57,206,115	-	-	57,206,115
	57,206,115	59,010,706	2,000,000	118,216,821

	2016			
	Cash and cash equivalent	Loans and advances	Held to maturity	Total
	PKR '000'			
Assets as per statement of financial position				
Long term advances	-	504,152	-	504,152
Long term security deposits	-	1,483	-	1,483
Trade debts	-	19,477,252	-	19,477,252
Unbilled net hydel profit arrears	-	24,513,916	-	24,513,916
Loan and advances	-	808,263	-	808,263
Accrued interest	-	23,387	-	23,387
Other receivables	-	308,060	-	308,060
Cash and bank balances	46,794,529	-	-	46,794,529
	46,794,529	45,636,513	-	92,431,042

	2017
	At Amortized Cost
Financial liabilities as per statement of financial position	**PKR '000'**
Loans and borrowings - Interest bearing	204,164,609
Long term financing	25,000,000
Payable to Government of Pakistan	580,439
Trade and other payable	13,247,164
Payable against hydel levies	17,406,523
Accrued Interest	2,106,930
WAPDA Second Sukuk Company Limited	-
Other liabilities	1,582,433
	264,088,098

	2016
	At Amortized Cost
Financial liabilities as per statement of financial position	**PKR '000'**
Loans and borrowings - Interest bearing	170,766,770
Loans for payment of hydel levies	25,000,000
Payable to Government of Pakistan	14,437,756
Trade and other payable	8,439,537
Payable against hydel levies	5,248,254
Accrued Interest	1,698,755
WAPDA Second Sukuk Company Limited	305,985
Other liabilities	907,982
	226,805,039

35.1.3.2 **Fair value hierarchy**

The WAPDA Hydroelectric uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

Level 1: quoted (unadjusted) prices in active markets for identical assets or liabilities.

Level 2: other techniques for which all inputs which have a significant effect on the recorded fair value are observable either, directly or indirectly.

Level 3: techniques which use inputs that have a significant effect on the recorded fair value that are not based on observable market data.

As at 30 June 2017, the WAPDA Hydroelectric did not hold any financial instruments carried at fair value.

35.2 Capital risk management

The WAPDA Hydroelectric's objectives when managing capital are to safeguard the Hydroelectric's ability to continue as a going concern. The Hydroelectric manages its capital structure and make adjustments to it, in the light of the changes in economic conditions.

The Hydroelectric monitors capital using gearing ratio, which is net debt divided by equity plus net debt. Debt represent long term loans (including current portion) obtained by Hydroelectric. Total equity includes reserves for development works, Government of Pakistan's investment and surplus on revaluation of operating fixed assets plus net debt.

The gearing ratios as at 30 June 2017 and 30 June 2016 were as follows:

	Note	2017	2016
		PKR '000'	
Long term financing	(18)	25,000,000	-
Loans and borrowings - Interest bearing	(19)	204,164,609	145,766,770
Loans for payment of NHP arrears	(20)	-	25,000,000
Total debt		229,164,609	170,766,770
Less: Cash and bank balances	(14)	(58,085,650)	(46,939,579)
Net debt		171,078,959	123,827,191
Total equity		1,139,590,517	1,092,338,749
Gearing ratio		15%	11%

36. NUMBER OF EMPLOYEES

The WAPDA Hydroelectric as at 30 June 2017 has 8,672 (2016: 8,046) active employees all of whom are entitled to post employment benefits and 7,864 (2016: 7,670) pensioners to whom post employment benefits payments are disbursed.

37. INSTALLED CAPACITY AND NET ELECTRIC OUTPUT

	2017	2016
Installed Capacity (MW)	6,902	6,902
Net Electric Output (GWh)	30,797	33,151

38. TRANSACTIONS WITH RELATED PARTIES

The related parties comprise associated undertakings, subsidiaries, undertakings with common control, Government of Pakistan (GoP) and key management personnel. Balances due from and due to related parties are shown in their respective notes. Details of transactions during the period are as follows:

Nature of relationship	Nature of transaction	2017	2016
		PKR '000'	
Associated undertaking	Revenue	65,235,065	54,776,085
Key management personnel	Authority overhead	409,295	333,945
Affiliate	Insurance premium	55,281	46,293
Subsidiary	Ijarah rentals	3,410,310	3,611,130

39. DATE OF AUTHORIZATION OF ISSUE

These financial statements were authorized for issuance on 30 November 2017.

40. GENERAL

40.1 Figures have been rounded off to the nearest thousands of rupees, unless otherwise stated.

40.2 Corresponding figures have been rearranged, reclassified and restated, wherever necessary. However, no significant rearrangement, reclassification and restatement have been made except as stated in note 4.4.1 and mentioned below:

40.2.1

Classified from	Classified to	Note	2017	2016
			PKR '000'	
Long term advances	Current portion of long term advances	(7)	55,020	50,962
Loan and advances	Prepayments	(13)	3,424,480	1,900,061
Loan and advances	Accrued interest		-	23,387
Loan and advances	Other receivables		267,642	308,060
Loan and advances	Tax refunds due from Government		3,053	65,506

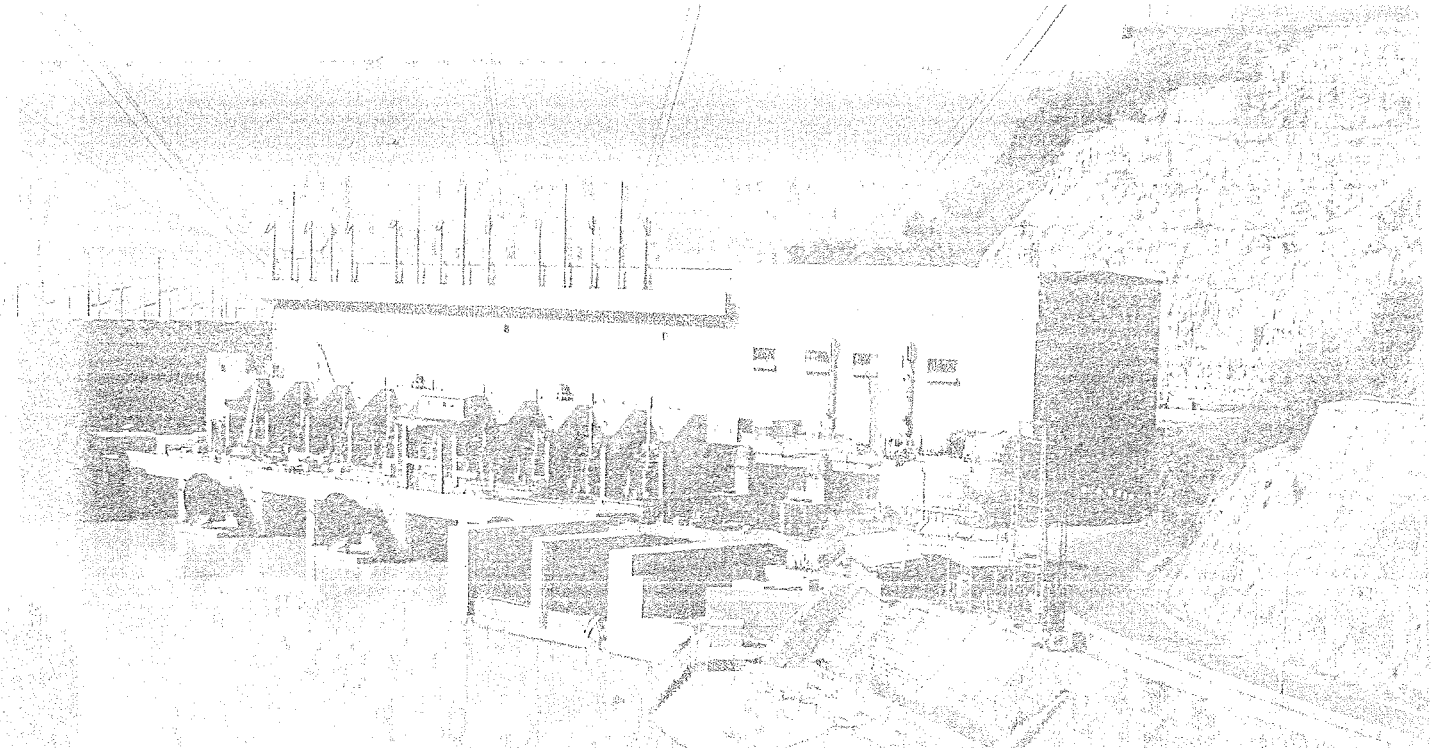
40.2.3 In prior years, reserve for development works erroneously classified under GoP investment. This has now been rectified by restating the corresponding financial statements. The effect of restatement is summarized as follows:

Impact on statement of financial position	2015 PKR '000'
Increase in reserve for development works	9,522,000
Decrease in Government of Pakistan's investment	9,522,000

MEMBER (FINANCE)

MEMBER (POWER)

General Manager Finance (Power)
WAPDA House, Lahore



PAKISTAN WAPDA HYDROELECTRIC

ANNUAL ACCOUNTS 2017 - 18

Pakistan Water and Power Development Authority

www.wapda.gov.pk

MANAGEMENT REPORT

FY 2017 - 18

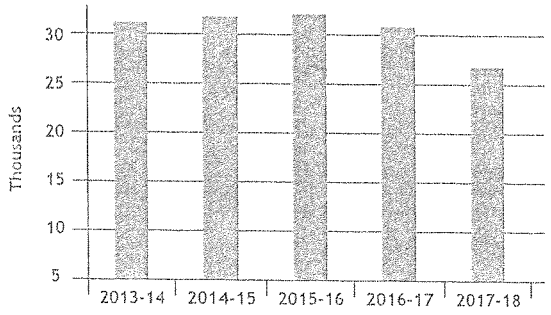
WAPDA Power Wing (Hydroelectric) is operating under generation license granted by the Power Regulator 'NEPRA', for operation, maintenance and development of hydel power resources in Pakistan.

Operational Performance

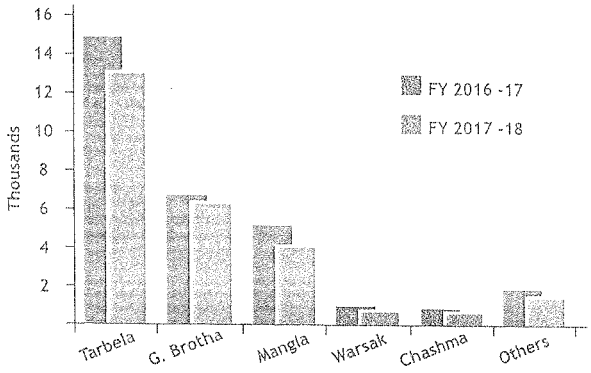
WAPDA-Hydroelectric owns and operates 19 hydel power stations with aggregated installed generation capacity of 6,902 MW. Major hydel power stations include Tarbela (3,478 MW), Ghazi Barotha (1,450 MW), Mangla (1,000 MW) Warsak (243 MW).

The utilization of capacity for Hydel generation is largely dependent on net head of respective power station and quantum of water indents allowed by IRSA. During FY 2017-18 the Net Electrical Output (NEO) for the year stood at **26,775 GWh** as compared to last year 30,797 GWh with decrease in Generation 4,022 GWh due to less generation from Tarbela and Mangla Power Station.

Generation Trend (Gwh)



Power Station-wise Generation (Gwh)



Profitability Position

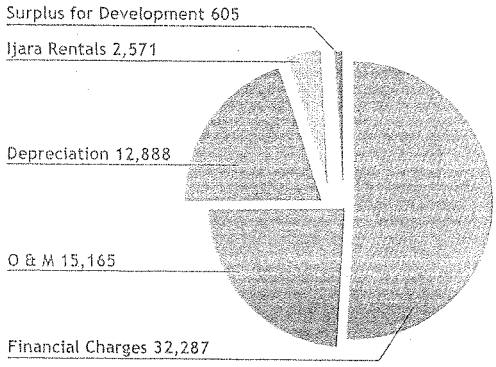
Power sales revenue (excluding Hydel Levies and GST) during FY 2017-18 stood at **Rs. 59,317 million** (2017: Rs 65,235 million), This decrease is mainly due to less generation and application of old and reduced tariff (after recovery of revenue gap up to 22 Feb, 2018). The cost of electricity stood at **Rs. 30,624 million** (2017: 27,668 million) bringing the net revenue surplus of **Rs. 605 million** (2017: 20,220 million). The value of property, plant & equipment and Capital Work in Progress (CWIP) has increased to the level of **Rs. 1,169,379** million (2017: Rs. 1,151,047 million).

The return on Average Capital Employed (at net carrying cost) worked out as 10.6% for the year as compared to 14.6% of last year.

Profit & Loss Comparison

PARTICULARS	FY 2017 - 18 (Mln. Rs.)	FY 2016 - 17 (Mln. Rs.)
Sales (Exclusive GST)	[illegible]	65,235
Other Income	[illegible]	4,001
Total Revenue	[illegible]	69,236
Cost of Sales		
O&M	[illegible]	11,792
Depreciation/Ijara Rental	[illegible]	15,875
Total Cost of Sales	[illegible]	27,668
Surplus/ (Deficit)	[illegible]	41,569
Less: Financial Charges	[illegible]	21,349
Profit for the year	[illegible]	20,220
Add: Incremental depreciation due to revaluation	[illegible]	8,078
Surplus for Development	[illegible]	28,298

Cost & Profitability 2017 -18



Liquidity Position

During FY 2017-18 **Rs. 120,248 million** (FY 2016-17: Rs. 125,040 million) has been billed to CPPA on account of cost of sale, Hydel Levies & GST. CPPA has made payment of **Rs. 72,396 million** (FY 2016-17: Rs. 91,045 million) during the year against above invoices. Trade Receivable from CPPA (inclusive of Hydel Levies) has increased to the level of Rs. 101,324 million on 30th June, 2018 as against Rs. 53,472 million on 30th June, 2017.

During the year Rs. 5,096 million have been paid on account of Salaries, Wages and Benefits, Rs. 2,141 million on account of Post-Retirement Benefits to the pensioners of WAPDA and Rs.1,081 million for Repair and Maintenance expenses.

Repair & Maintenance

WAPDA Hydroelectric has managed plant availability factor well above the Power Purchase Agreement (PPA) requirements through timely preventive maintenance of its Hydel Power Stations. Aprt from routine maintenance following major repair works were also completed during period under report:

(i). Replacement of Old Rotary/Dynamic Excitation Systems of Units 1 -4 of Tarbela Power Station with the Latest Digital Static Excitation Systems

(ii). Up-Gradation of Excitation Systems of Units 7 & 8 of Tarbela Power Station

(iii). Replacement of 2 Nos. Power Swing Air Compressors of Units 1-10 of Tarbela Power Station

(iv). Installation, Testing & Commissioning of 03 Nos. Circuit Breakers (Type- GI317xd), Switchyard Units 11-14 of Tarbela Power Station

(v). Replacement of Air Blast Circuit Breaker with SF-6 Circuit Breaker in Mangla Power Station

(vi). Major Overhauling of 2 Units of Warsak Power Station.

Rehabilitation and Up-gradation

- PC-I for Refurbishment and Up-gradation of generating units of Mangla Power Station was approved by ECNEC. Rehabilitation works are in progress.
- Bidding for four (4) Packages is in process.
- PC-I of the Rehabilitation & Up-gradation of Warsak Power Station was approved by ECNEC. Consultancy Services for engineering support and Construction Supervision has been awarded.
- Bidding documents for the various Packages of the Projects are under preparation.
- PC-I for Capacity Enhancement of Chitral Hydel Power Station has been approved by Ministry of Planning, Development and Reforms. Hiring of Consultancy Services for Construction Supervision is under process.
- PC-I for Rehabilitation of Dargai and Kurram Garhi Power Station were sent to MoW&P who has cleared the same and forwarded it to Planning Commission for scrutiny and clearance. Hiring of Consultancy Services for Construction Supervision is under process.
- Construction of main building of HPTI Mangla is under progress.
- Contract for Consultant's Services for HPTI main building construction supervision is signed with M/s NESPak Ltd.

Power Expansion

During FY 2017-18 WAPDA has completed 106 MW Golen Gol HPP and 1,410 MW Tarbela 4th Extension which are producing electricity on Test Run basis. These new projects will increase installed capacity from 6,902 MW to 8,418 MW.

The under development hydel projects of WAPDA would add 6,782 MW to the installed capacity up to the year 2024. Out of these projects, 122 MW Keyal Khwar hydel power project is at advance stage. Preliminary works of priority Mega hydel projects DASU-I (2,160 MW) and Diamer Bhasha Dam (4,500 MW) are also underway.

During FY 2017-18 Rs. 28,771 million (excluding Interest During Construction) have been spent on hydroelectric development projects. Project wise capital expenditure and its financing is as follows:

Capital Work in Progress (CWIP) Balance (Mln Rs)

	2017	Incr/(Decr)	2018
Basha Dam Project	73,297	3,904	[illegible]
Tarbela 4th Ext.	54,960	11,647	[illegible]
Golen Gol Project	19,601	7,324	[illegible]
Dasu HPP	34,613	4,236	[illegible]
Keyal Khwar HPP	2,984	(183)	[illegible]
Mangla Rehabilitation	1,789	2,637	[illegible]
Warsak 2nd Rehabilitation	963	59	[illegible]
Others	6,530	(852)	[illegible]
TOTAL	194,735	28,771	[illegible]

Financing of CWIP

	2017	Incr/(Decr)	2018
Foreign Relent loans	73,187	16,603	[illegible]
Cash Development Loans	83,314	(176)	[illegible]
Dasu Loans	---	8,800	[illegible]
Self source	38,234	3,545	[illegible]
TOTAL	194,735	28,771	[illegible]

Debt Service Liability

WAPDA has paid Rs.9,725 million (2017: Rs.22,499 million) for debt servicing of FRL, SUKUK and China EXIM Supplier Credit for Jinnah Hydel Power Station as per debt retirement schedule.

Hydel Levies

During the period Rs.35,523 million have been paid to GoKPK and Rs.24,317 mln to Govt. of Punjab on account of Net Hydel Profit (NHP), Rs.701 million as Water Usage Charges (WUC) to GoAJ&K and Rs.131 million as IRSA Charges.

Payables against Hydel Levies stood at Rs.17,266 mln as on 30-06-2018 (Rs.17,407 million as on 30-06-2017).

Acknowledgement

On behalf of WAPDA Authority we applaud the valuable contribution of the WAPDA Hydro-electric employees towards achieving the targets set for the period under report and we hope that the employees will continue performing with the same zeal and dedication during the next year.

Muhammad Ikram Khan
Member (Finance)

Muhammad Arshad Ch.
Member (Power)

AUDIT REPORT

As at end of June, 2018

KPMG Taseer Hadi & Co.
Chartered Accountants
351 Shadman-1, Jail Road,
Lahore 54000 Pakistan
+92 (42) 111-KPMGTH (576484), Fax +92 (42) 3742 9907

INDEPENDENT AUDITORS' REPORT

To the management of Wapda Hydroelectric – 'NEPRA regulated business'

Opinion

We have audited the financial statements of Wapda Hydroelectric – 'NEPRA regulated business', which comprise the statement of financial position as at 30 June 2018, and the statement of profit or loss, the statement of comprehensive income, the statement of changes in equity, the statement of cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

In our opinion, the accompanying financial statements are prepared in all material respects, in accordance with the framework as described in note 2.1 to the financial statements.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditors' Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Wapda Hydroelectric – 'NEPRA regulated business', in accordance with the ethical requirements that are relevant to our audit of the financial statements in Pakistan, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of matter - basis of accounting and restriction on use and distribution

We draw attention to note 2.1 to the financial statements, which describes the basis of accounting. These financial statements are prepared to assist Wapda Hydroelectric – 'NEPRA regulated business' to comply with basis of accounting as referred in note 2.1 to the financial statements. As a result, the financial statements may not be suitable for another purpose. Our report is intended solely for the management and lenders of Wapda Hydroelectric – 'NEPRA regulated business' and should not be used by or distributed to parties other than the management and lenders of Wapda Hydroelectric – 'NEPRA regulated business'. Our opinion is not modified in respect of this matter.

Responsibilities of management and those charged with governance for the financial statements

Management is responsible for the preparation of the financial statements in accordance with the framework as described in note 2.1 to the financial statements, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Wapda Hydroelectric – 'NEPRA regulated business's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate Wapda Hydroelectric – 'NEPRA regulated business' or to cease operations, or has no realistic alternative but to do so.

KPMG

KPMG Taseer Hadi & Co.

Those charged with governance are responsible for overseeing the Wapda Hydroelectric – 'NEPRA regulated business's financial reporting process.

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Wapda Hydroelectric – 'NEPRA regulated business's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Wapda Hydroelectric – 'NEPRA regulated business's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Wapda Hydroelectric – 'NEPRA regulated business' to cease to continue as a going concern.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

The engagement partner on the audit resulting in this independent auditor's report is Kamran I. Yousafi.

KPMG Taseer Hadi & Co.
Chartered Accountants

Lahore

Date: 06 August 2019

Statement of Financial Position

As at 30 June, 2018

	Note	2018	2017 (Restated)
		PKR '000'	
Assets			
Non-current assets			
Property, plant and equipment	5	945,871,656	956,311,452
Capital work in progress	6	223,506,927	194,735,483
Long term advances and deposits	7	569,652	493,540
		1,169,948,235	1,151,540,475
Current assets			
Stores, spares and loose tools	8	5,094,858	4,694,212
Trade debts	9	101,324,336	53,472,267
Unbilled net hydel profits	10	37,403,094	1,447
Short term investments	11	28,000,000	2,000,000
Loan and advances	12	3,663,741	4,775,810
Prepayments and other receivables	13	4,584,120	3,692,122
Tax refunds due from Government		25,130	3,053
Cash and bank balances	14	69,686,696	58,085,650
		249,781,885	126,724,561
Total assets		1,419,730,120	1,278,265,036
Equity and liabilities			
Equity			
Government of Pakistan's investment	15	63,000,716	63,000,716
Reserves for development works	16	132,160,793	133,182,636
		195,161,509	196,183,352
Surplus on revaluation of property, plant and equipment	17	770,894,369	778,737,938
		966,055,878	974,921,290
Non current liabilities			
Long term financing - interest bearing	18	336,424,538	223,484,660
Deferred grants	19	8,499,955	3,852,092
Deferred liabilities	20	41,613,347	32,792,195
Retention money payable		1,507,919	1,458,312
		388,045,759	261,587,259
Current liabilities			
Current portion of long term financing	18	6,764,930	5,679,949
Trade and other payables	21	36,337,400	14,980,652
Payable against hydel levies	22	17,266,236	17,406,523
Accrued interest		4,195,904	2,106,930
Other liabilities	23	1,064,013	1,582,433
		65,628,483	41,756,487
Contingencies and commitments	24		
		1,419,730,120	1,278,265,036

The annexed notes from 1 to 36 form an integral part of these financial statements.

Member (Finance)

Member (Power)

Statement of Profit or Loss

For the year ended 30 June, 2018

	Note	2018	2017 (Restated)
		PKR '000'	
Revenue	25	59,317,434	65,235,065
Cost of electricity	26	(27,490,413)	(25,779,924)
Gross profit		31,827,021	39,455,141
Operating expenses	27	(3,133,793)	(1,887,695)
Other income	28	4,198,176	4,001,093
Operating profit		32,891,404	41,568,539
Finance cost	29	(32,286,698)	(21,348,833)
Profit for the year		604,706	20,219,706

- The annexed notes from 1 to 36 form an integral part of these financial statements.

Member (Finance)

Member (Power)

Statement of Cash Flows

For the year ended 30 June, 2018

	Note	2018	2017 (Restated)
		PKR '000'	
Cash flows from operating activities			
Profit for the year		694,706	20,219,706
Adjustments of non-cash items			
Depreciation of property, plant and equipment	5	12,887,616	12,838,676
Finance cost	29	32,286,698	21,348,833
Ijarah rental		2,571,259	3,036,615
Provision against employee benefits		4,492,525	4,132,131
Amortization of grants		(144,065)	(1,125,969)
		52,094,033	40,230,286
		52,698,739	60,449,992
Working capital changes			
(Increase) / decrease in current assets:			
Stores, spare parts and loose tools		(400,646)	888,579
Trade debts		(47,852,069)	(33,995,015)
Unbilled net hydel profits		(37,401,647)	24,512,469
Loan and advances		2,029,039	(2,626,056)
Bridge financing extended to water wing		(908,517)	(1,286,471)
Prepayments		(911,058)	(1,524,419)
Other receivables		19,960	63,805
Tax refunds due from Government		(23,077)	62,453
Increase / (decrease) in current liabilities:			
Other liabilities		(318,426)	674,451
Trade and other payables		(4,869,796)	5,466,574
Payable against hydel levies		(140,267)	12,158,269
		(90,976,418)	4,394,639
Cash generated from operations		(38,277,679)	64,844,631
Ijarah rental paid		(2,571,259)	(3,342,600)
Employee benefits paid	20.1	(2,141,491)	(2,592,927)
		(4,712,750)	(5,935,527)
Net cash flows used in operating activities		(42,990,429)	58,909,104
Cash flows from investing activities			
Capital expenditure incurred on property, plant and equipment		(2,447,821)	(2,030,969)
Capital expenditure incurred on capital work in progress		(28,771,444)	(67,421,313)
Short term investments		(29,000,000)	(2,000,000)
Long term advances and deposits		(84,565)	(42,925)
Retention money payable		49,607	102,616
Net cash flows used in investing activities		(60,254,223)	(71,392,591)
Cash flows from financing activities			
Proceeds from long term financing		119,778,425	71,098,563
Finance costs paid		(6,938,430)	(20,940,658)
Repayment of long term financing		(2,796,315)	(26,558,041)
Grants received	19	4,791,928	29,694
Net cash flows from financing activities		114,845,608	23,629,558
Net increase in cash and cash equivalents during the year		11,600,956	11,146,071
Cash and cash equivalents at the beginning of the year		58,085,650	46,939,579
Cash and cash equivalents at the end of the year	14	69,686,606	58,085,650

Member (Finance)

Member (Power)

Statement of Comprehensive Income

For the year ended 30 June, 2018

	2018	2017 (Restated)
	PKR '000'	
Profit for the year	604,706	20,219,706
Other comprehensive income:		
Items not to be reclassified to profit or loss in subsequent periods:		
- Actuarial loss on defined benefit plans	(9,470,118)	-
Total comprehensive (loss) / income for the year	(8,865,412)	20,219,706

The annexed notes from 1 to 36 form an integral part of these financial statements.

Member (Finance)

Member (Power)

Statement of Changes in Equity

For the year ended 30 June, 2018

	Note	Revaluation surplus (Note 17)	Reserves: Reserve for development works (Note 16)	Reserves: Government of Pakistan investment (Note 15)	Reserves: Unappropriated profit / (loss)	Total
		PKR '000'				
Balance as at 01 July 2016 as previously reported		784,514,717	103,981,284	63,000,716	-	951,496,717
Impact of correction of error	5.3	2,301,409	903,458	-	-	3,204,867
Balance as at 01 July 2016, restated		786,816,126	104,884,742	63,000,716	-	954,701,584
Profit for the year, restated		-	-	-	20,219,706	20,219,706
Other comprehensive income		-	-	-	-	-
Total comprehensive income for the year, restated		-	-	-	20,219,706	20,219,706
Incremental depreciation due to revaluation, restated	5.2.2	(8,078,188)	8,078,188	-	-	-
Transfer to reserve for development works, restated		-	20,219,706	-	(20,219,706)	-
Balance as at 30 June 2017, restated		778,737,938	133,182,636	63,000,716	-	974,921,290
Profit for the year		-	-	-	604,706	604,706
Other comprehensive loss		-	-	-	(9,470,118)	(9,470,118)
Total comprehensive loss for the year		-	-	-	(8,865,412)	(8,865,412)
Incremental depreciation due to revaluation	5.2.2	(7,843,569)	7,843,569	-	-	-
Transfer to reserve for development works		-	(8,865,412)	-	8,865,412	-
Balance as at 30 June 2018		770,894,369	132,160,793	63,000,716	-	966,055,878

The annexed notes from 1 to 36 form an integral part of these financial statements.

Member (Finance)

Member (Power)

Notes to the Financial Statement

For the year ended 30 June, 2018

1. Legal status and operations

1.1 Pakistan Water and Power Development Authority (WAPDA) is a body, fully owned by the Government of Pakistan (GoP) through Ministry of Water and Power, created by virtue of the Pakistan Water and Power Development Authority Act, 1958 (West Pakistan Act No. XXXI of 1958), commonly known as WAPDA ACT, as amended from time to time. The statutory mandate of WAPDA is to develop and utilize the water and power resources of Pakistan on a unified and multipurpose basis. WAPDA remained empowered among others, to frame schemes for the generation, transmission and distribution of power and the construction, maintenance and operation of power houses and grids. The registered office of WAPDA is situated at WAPDA House, Shahrah-e-Quaid-e-Azam, Lahore.

In line with the Strategic Plan 1992 approved by the Cabinet Committee, WAPDA Power Wing had been restructured comprising of the generations, distribution and transmission activities. Assets and liabilities relating to generation activities (other than hydel generation activities) were transferred to 4 Generation Companies (GENCOs) on 01 March 1999 and distribution activities were transferred to 8 Distribution Companies (DISCOs) on 01 July 1998, while transmission activities were transferred to National Transmission and Dispatch Company (NTDC) on 01 March 1999.

1.2 Special purpose financial statements

These are the special purpose financial statements of Pakistan Water and Power Development Authority (Hydroelectric - Nepra regulated business) prepared in accordance with the special purpose framework specified in note 2.1 to the financial statements.

1.3 WAPDA Hydroelectric

WAPDA Hydroelectric decided to segregate the operation and development of hydel activities (WAPDA Hydroelectric- NEPRA regulated business) from its non core activities (non-regulated business) under NEPRA Rules, 2009. The regulated business comprises activities purely related to the hydel generation and development.

These financial statements only represent the financial information of WAPDA Hydroelectric - NEPRA regulated business.

National Electric Power Regulatory Authority (NEPRA) has issued Generation License no. GL(Hydel) /05 /2004 to WAPDA on 03 November 2004 valid for Thirty (30) years up to 2034 under section 30 of NEPRA Act 1997 for its Hydel power stations. Under modification-IV to the license vide letter no. NEPRA/R/LAG-23/325-30 dated 09 January 2015 issued by NEPRA, WAPDA Hydroelectric is currently generating power from following hydel power stations:

Operational Power Plants

1	Tarbela	8	Nandipur	15	Jinnah Hydel
2	Mangla	9	Shadiwal	16	Allai Khwar
3	Warsak	10	Rasul	17	Dubair Khwar
4	Ghazi Brotha	11	Dargai	18	Khan Khwar
5	Chashma	12	Chitral	19	Jabban
6	Renala	13	Kurram Garhi		
7	Chichoki	14	Gomal Zam		

Following projects are under development as at 30 June 2018:

1 Tarbela, 4th Extension
2 Keyal Khwar
3 Golen Gol
4 Diamer Basha Dam
5 Dasu

1.4 Extracts From "WAPDA ACT 1958"

As laid down in Section 22 of WAPDA Act 1958, WAPDA Hydroelectric funds shall consist of:

a) Grants made by the Governments,
b) Loans obtained from the Governments,
c) Grants made by the local bodies as required by the Governments,
d) Sale proceeds of bonds, debentures, commercial paper or other securities issued by WAPDA Hydroelectric and dividends,
e) Loans obtained by the WAPDA Hydroelectric with special or general sanction of the Government,
f) Foreign aid and loans obtained from the International Bank for Reconstruction and Development or otherwise, with the sanction and, under guarantee of (and such terms and conditions as may be approved by the Government), and
g) All other sums received by WAPDA Hydroelectric.

As provided in Section 24 of WAPDA Act, 1958 the liability of the Government of Pakistan to the creditors of WAPDA Hydroelectric shall be limited to the extent of the grant made by the Government and loans passed by WAPDA Hydroelectric with sanction of the Government.

Regarding fixing rate for sale of power, Section 25 of the WAPDA Act, 1958 provides that WAPDA Hydroelectric shall ordinarily sell power at bulk. The rate at which WAPDA Hydroelectric shall sell power be so fixed as to provide for meeting the operating cost, interest charges and depreciation of assets, the redemption at due time of loans other than those covered by depreciation, the payment of any taxes and a reasonable return on investment.

As provided in Section 26 of the WAPDA Act, 1958 WAPDA Hydroelectric shall maintain complete and accurate books of accounts in such form as may be prescribed by it, provided that separate accounts shall be maintained for all schemes and transactions relating to power.

1.5 Reference From "Constitution of Islamic Republic of Pakistan 1973"

The Article 161 (2) of the Constitution of Islamic Republic of Pakistan provides that the net profits earned by the Federal Government, or any undertaking established or administered by the Federal Government i.e. WAPDA as determined by the Presidential Order no. 3 of June 1991, from the bulk generation of power at a hydroelectric station shall be paid to the province on which the hydroelectric station is situated.

For the purpose of this clause "Net Profits" shall be computed by deducting from the revenues accruing from the bulk supply of power from the bus-bar of a hydroelectric station at a rate to be determined by the Council of Common Interest. Operating expenses of the station shall include any sums payable as taxes, duties, interest or return on investment, depreciations and element of obsolescence, over-heads and provision for reserves.

2. Basis of measurement

2.1 Statement of compliance

These financial statements have been prepared in accordance with the accounting and financial reporting standards as applicable in Pakistan except for the frequency of revaluation of operating fixed assets, non-capitalization of borrowing costs and certain disclosure requirements. The accounting and financial reporting standards applicable in Pakistan comprise of 'International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) as notified and adopted by the Institute of Chartered Accountants of Pakistan (ICAP) and the provisions of and directives issued by NEPRA and Pakistan Water And Power Development Authority. Where provisions of and directives issued by NEPRA and WAPDA Hydroelectric differ from the IFRSs, the provisions of and directives issued by NEPRA and WAPDA Hydroelectric have been followed.

2.2 Basis of preparation

These financial statements have been prepared under the historical cost convention except for recognition of certain employee retirement benefits at present value and recognition of land, building and civil works, power generation plant assets and dams and reservoir that have been measured at revalued amount.

2.3 Functional and presentation currency

These financial statements are presented in Pak Rupee which is also WAPDA Hydroelectric's functional currency.

2.4 Use of estimates and judgments

The preparation of financial statements in conformity with IFRSs requires management to make judgments, estimates and assumptions that affect the application of policies and reported amounts of assets and liabilities, income and expenses.

The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making judgment about carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which estimates are revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Judgments made by the management in the application of IFRSs that have significant effect on the financial statements and estimates with a significant risk of material adjustment in the next year are discussed in the ensuing paragraphs.

2.5 Useful life, residual values, impairment and method of depreciation of property, plant and equipment

WAPDA Hydroelectric reviews the useful lives of property, plant and equipment on regular basis. The residual value, depreciation method and the useful lives of each part of property, plant and equipment that is significant in relation to the total cost of the asset are reviewed, and adjusted if appropriate, at each reporting date.

2.6 Employees' retirement benefits

The cost of employees' defined benefit plans are determined using actuarial valuations. An actuarial valuation involves making various assumptions that may differ from actual developments in the future. These includes the determination of the discount rate, future salary increases, mortality rates, future pension increases, future increase in medical costs and future increase in electricity costs. Due to the complexities involved in the valuation and its long term nature, a defined benefit obligation is highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date. WAPDA Hydroelectric uses the valuation performed by an independent actuary as the present value of its retirement benefit obligations. The valuation is based on assumptions as mentioned in notes to these financial statements.

2.7 Allowance against financial assets

WAPDA Hydroelectric regularly reviews its financial assets for impairment, if any. The allowances in this regard are made, based on management's best estimate, where the prospects of recovery are doubtful.

2.8 Allowance against stores and spares

WAPDA Hydroelectric regularly reviews its stores and spares for impairment. Allowance for obsolesce and damaged items are incorporated (if any).

3. New and amended standards and interpretations

During the year certain amendments to standards or new interpretations became effective, however, the amendments or interpretation did not have any material effect on the financial statements of the entity.

3.1 The following standards, amendments and interpretations of approved accounting standards will be effective for accounting periods beginning on or after 01 July 2018:

- Classification and Measurement of Share-based Payment Transactions - amendments to IFRS 2 clarify the accounting for certain types of arrangements and are effective for annual periods beginning on or after 01 January 2018. The amendments cover three accounting areas (a) measurement of cash-settled share-based payments; (b) classification of share-based payments settled net of tax withholdings; and (c) accounting for a modification of a share-based payment from cash-settled to equity-settled. The new requirements could affect the classification and / or measurement of these arrangements and potentially the timing and amount of expense recognized for new and outstanding awards. The amendments are not likely to have an impact on these financial statements.

- Transfers of Investment Property (Amendments to IAS 40'Investment Property'-effective for annual periods beginning on or after 01 January 2018) clarifies that an entity shall transfer a property to, or from, investment property when, and only when there is a change in use. A change in use occurs when the property meets, or ceases to meet, the definition of investment property and there is evidence of the change in use. In isolation, a change in management's intentions for the use of a property does not provide evidence of a change in use. The amendments are not likely to have an impact on these financial statements.

Annual improvements to IFRS standards 2014-2016 cycle. The new cycle of improvements addresses improvements to following approved accounting standards:

- Amendments to IAS 28'Investments in Associates and JointVentures'(effective for annual periods beginning on or after 01 January 2018) clarifies that a venture capital organization and other similar entities may elect to measure investments in associates and joint ventures at fair value through profit or loss, for each associate or joint venture separately at the time of initial recognition of investment. Furthermore similar election is available to non-investment entity that has an interest in an associate or joint venture that is an investment entity, when applying the equity method, to retain the fair value

measurement applied by that investment entity associate or joint venture to the investment entity associate's or joint venture's interests in subsidiaries. This election is made separately for each investment entity associate or joint venture. The amendments are not likely to have an impact on these financial statements.

- IFRIC 22'ForeignCurrency Transactions and AdvanceConsideration'(effective for annual periods beginning on or after 01 January 2018) clarifies which date should be used for translation when a foreign currency transaction involves payment or receipt in advance of the item it relates to. The related item is translated using the exchange rate on the date the advance foreign currency is received or paid and the prepayment or deferred income is recognized. The date of the transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it) would remain the date on which receipt of payment from advance consideration was recognized. If there are multiple payments or receipts in advance, the entity shall determine a date of the transaction for each payment or receipt of advance consideration. The amendments are not likely to have an impact on these financial statements.

- IFRIC 23 'Uncertaintyover Income Tax Treatments' (effective for annual periods beginning on or after 01 January 2019) clarifies the accounting for income tax when there is uncertainty over income tax treatments under IAS 12. The interpretation requires the uncertainty over tax treatment be reflected in the measurement of current and deferred tax. The application of interpretation is not likely to have an impact on these financial statements.

- IFRS 15'Revenuefrom contracts withcustomers'(effective for annual periods beginning on or after 01 July 2018). IFRS 15 establishes a comprehensive framework for determining whether, how much and when revenue is recognized. It replaces existing revenue recognition guidance, including IAS 18 'Revenue',IAS 11'Construction Contracts'and IFRIC 13'CustomerLoyaltyProgrammes'.The entity is currently in the process of analyzing the potential impact of changes required in revenue recognition policies on adoption of the standard.

- IFRS 9'Financial Instruments'and amendment–Prepayment Features with Negative Compensation (effective for annual periods beginning on or after 01 July 2018 and 01 January 2019 respectively). IFRS 9 replaces the existing guidance in IAS 39 Financial Instruments: Recognition and Measurement. IFRS 9 includes revised guidance on the classification and measurement of financial instruments, a new expected credit loss model for calculating impairment on financial assets, and new general hedge accounting requirements. It also carries forward the guidance on recognition and derecognition of financial instruments from IAS 39. The entity is currently in the process of analyzing the potential impact of changes required in classification, measurement of financial instruments and the disclosure requirements of the standard.

- IFRS 16 'Leases' (effective for annual period beginning on or after 01 January 2019). IFRS 16 replaces existing leasing guidance, including IAS 17 'Leases', IFRIC 4 'Determining whether an Arrangement contains a Lease', SIC-15 'Operating Leases- Incentives' and SIC-27 'Evaluating the Substance of Transactions Involving the Legal Form of a Lease'. IFRS 16 introduces a single, on-balance sheet lease accounting model for lessees. A lessee recognizes a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. There are recognition exemptions for short-term leases and leases of low-value items. Lessor accounting remains similar to the current standard i.e. lessors continue to classify leases as finance or operating leases. The application of interpretation is not likely to have an impact on these financial statements.

- Amendment to IAS 28 'Investments in Associates and Joint Ventures' - Long Term Interests in Associates and Joint Ventures (effective for annual period beginning on or after 01 January 2019). The amendment will affect companies that finance such entities with preference shares or with loans for which repayment is not expected in the foreseeable future (referred to as long-term interests or'LTI'). The amendment and accompanying example state that LTI are in the scope of both IFRS 9 and IAS 28 and explain the annual sequence in which both standards are to be applied. The amendment is not likely to have an impact on these financial statements.

- Amendments to IAS 19'Employee Benefits'-Plan Amendment, Curtailment or Settlement (effective for annual periods beginning on or after 01 January 2019). The amendments clarify that on amendment, curtailment or settlement of a defined benefit plan, an entity now uses updated actuarial assumptions to determine its current service cost and net interest for the period; and the effect of the asset ceiling is disregarded when calculating the gain or loss on any settlement of the plan and is dealt with separately in other comprehensive income. The amendment is not likely to have an impact on these financial statements.

- Annual Improvements to IFRS Standards2015–2017Cycle - the improvements address amendments to following approved accounting standards:

  - IFRS 3 Business Combinations and IFRS 11 Joint Arrangement - the amendment aims to clarify the accounting treatment when a entity increases its interest in a joint operation that meets the definition of a business. An entity remeasures its previously held interest in a joint operation when it obtains control of the business. An entity does not remeasure its previously held interest in a joint operation when it obtains joint control of the business.

  - IAS 12 Income Taxes - the amendment clarifies that all income tax consequences of dividends (including payments on financial instruments classified as equity) are recognized consistently with the transaction that generates the distributable profits.

  - IAS 23 Borrowing Costs - the amendment clarifies that a entity treats as part of general borrowings any borrowing originally made to develop an asset when the asset is ready for its intended use or sale.

The above amendments are effective from annual period beginning on or after 01 January 2019 and are not likely to have an impact on entity's financial statements.

4. Significant accounting policies

4.1 Property, plant and equipment

Property, plant and equipment are stated at cost or revalued amount less accumulated depreciation and any identified impairment loss.

Property, plant and equipment are measured at cost except for land, building and civil works, dams and reservoir and power generation plant assets. Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to WAPDA Hydroelectric and the cost of the item can be measured reliably. All other repair and maintenance costs are charged to profit or loss during the period in which they are incurred.

Land, building and civil works, dam and reservoir and power generation plants and assets are subsequently measured at revalued amount. Surplus arising on revaluation of land, building and civil works, dams and reservoirs and power generation plant assets is credited to surplus on revaluation of property, plant and equipment. Deficit arising on subsequent revaluation of property, plant and equipment is transferred to profit or loss. The surplus on revaluation of property, plant and equipment to the extent of incremental depreciation charged on the related assets, is transferred directly to reserves for development works.

The revaluation of respective property, plant and equipment is carried out depending upon the management's assessment that the changes in fair value over the period is not insignificant.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and carrying amount of the asset) is included in the profit or loss in the year the asset is derecognized.

Depreciation is charged to profit or loss on straight-line method so as to write off the cost of property, plant and equipment over their estimated remaining useful lives at the rates specified below. However, depreciation charged on assets that directly relates to construction and acquisition of other assets is included in the cost of such assets. Depreciation on addition to property, plant and equipment is charged from the month in which the asset is available for use and continued till the month of disposal. The revalued assets are depreciated over the remaining useful lives of the assets from the date of revaluation.

Depreciation for the year is based on economic useful life of individual assets. Depreciation is not charged to fully depreciated assets.

Following depreciation and residual value rates are applied:

Sr. no	Description of assets		Depreciation rate	Residual value
1	Civil works/buildings		2%	2%
	Dams and reservoirs		1-1.25%	2%
2	Generation plant and equipment			
	a.	Turbines	2.29%	5-20%
	b.	Generators (Class - F insulation)	2.82%	1%
	c.	Generators (Class - B insulation)	3.30%	1%
	d.	GIS Switch Gear	1.99%	0.50%
	e.	Switchyard equipment	3.96%	1%
	f.	MV/LV Switch gear Control and Protection Equipment	3.96%	1%
	g.	Telecommunication and SCADA Equipment	4.99%	0.25%
	h.	Cranes	3.30%	1%
	i.	Trash Rack and Cleaning Machines	3.30%	1%
	j.	Truck Trailer	4.95%	1%
	k.	HV Circuit Breaker Air Blast Type	3.96%	1%
	l.	HV Circuit Breaker SF-6 Type	3.30%	1%
	m.	Transmission line equipment	3.96%	1%
	n.	Rehabilitation assets	7.00%	-
3	Mobile plant and equipment's		20%	1%
4	Other equipment's (All others except computer accessories)		10%	1%
5	Computer accessories		25%	1%
6	Vehicles		20%	5%
7	Assets subject to sukuks		7%	2%

4.2 Capital work-in-progress

Capital work in progress is stated at cost less accumulated impairment losses, if any. Projects of capital work in progress are transferred to operational formations of WAPDA Hydroelectric when 100% progress is certified by the consultants and verified by WAPDA Hydroelectric's own engineers. Capital work in progress mainly includes direct cost incurred on the development projects and mobilization advances given to designated contractors and consultants.

4.3 Borrowing cost

Interest during construction directly attributable to the construction of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, is charged to profit or loss in accordance with the directive of WAPDA dated 29 March 2017. Correspondingly investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is credited to profit or loss.

4.4 Stores, spare parts and loose tools

These are valued at lower of cost or net realisable value. The cost is calculated according to moving average, items in transit are value stated at cost comprising invoice value plus incidental charges thereon.

4.5 Financial instruments

Financial assets and liabilities are recognized when WAPDA Hydroelectric becomes a party to contractual provisions of the instrument and de-recognized when WAPDA Hydroelectric loses control of contractual rights that comprise the financial asset and in case of financial liability when the obligation specified in the contract is discharged, cancelled or expired. Any gain or loss on derecognition of financial assets and liabilities are included in profit or loss for the year.

Non-derivative financial assets

WAPDA Hydroelectric initially recognizes loans and receivables on the date that they are originated. All other financial assets (including assets designated as at fair value through profit and loss) are recognized initially on the trade date, which is the date that WAPDA Hydroelectric becomes a party to the contractual provisions of the instrument.

WAPDA Hydroelectric derecognizes a financial asset when the contractual rights to the cash flows from the assets expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all the risks and rewards of ownership of the financial assets are transferred. Any interest in such transferred financial assets that is created or retained by WAPDA Hydroelectric is recognized as a separate asset or liability.

WAPDA Hydroelectric classifies non-derivative financial assets into the following categories:

- Financial assets at fair value through profit or loss
- Held-to-maturity financial assets
- Loans and receivables; and
- Available-for-sale financial assets.

Loans and receivables

Loans and receivables are financial assets with fixed or determinable payments that are not quoted in an active market. Such assets are recognized initially at fair value plus any directly attributable transaction costs. Subsequent to initial recognition, loans and receivables are measured at amortized cost using the effective interest rate method, less any impairment losses.

Loans and receivables includes deposits, long term advances, trade debts, other receivables and cash and bank balances of WAPDA Hydroelectric.

Held-to-maturity investments

Non-derivative financial assets with fixed or determinable payments and fixed maturities are classified as held-to-maturity when WAPDA Hydroelectric has the positive intention and ability to hold it to maturity. After initial measurement held-to-maturity investments are measured at amortized cost using the effective interest method. This method uses an effective interest rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to the net carrying amount of the financial asset. Gains and losses are recognized in the profit or loss when the investments are derecognized or impaired, as well as through the amortization process.

Cash and cash equivalents

Cash and cash equivalents are carried in the statement of financial position at cost.

As at 30 June 2018 no financial assets of WAPDA Hydroelectric are classified under following categories:

- Financial assets at fair value through profit or loss, and
- Available-for-sale financial assets.

Non-derivative financial liabilities

WAPDA Hydroelectric initially recognizes debt securities issued and subordinated liabilities, if any, on the date that they are originated. All other financial liabilities are recognized initially on the trade date, which is the date that WAPDA Hydroelectric becomes a party to the contractual provisions of the instrument.

WAPDA Hydroelectric derecognizes a financial liability when its contractual obligations are discharged, cancelled or expired.

Financial liabilities are recognized initially at fair value less any directly attributable transaction costs. Subsequent to initial recognition, these liabilities are measured at amortized cost, using the effective interest rate method. Finance costs are charged to profit or loss on an accrual basis.

Financial liabilities comprise of long term financing, retention money payable, accrued interest, other liabilities, trade and other payables.

Offsetting

Financial assets and liabilities are offset and the net amount presented in the statement of financial position when, and only when, WAPDA Hydroelectric has a legal right to offset the amounts and intends either to settle them on a net basis or to realize the asset and settle the liability simultaneously.

4.6 Impairment

Financial assets

Financial assets are assessed at each reporting date to determine whether there is objective evidence that they are impaired. A financial asset is impaired if objective evidence indicates that a loss event has occurred after the initial recognition of the asset, and that the loss event had a negative effect on the estimated future cash flows of that asset that can be estimated reliably. Objective evidence that financial assets are impaired may include default or delinquency by a debtor, indications that a debtor or issuer will enter bankruptcy.

Individually significant financial assets are assessed for specific impairment. All individually significant receivables found not to be specifically impaired are then collectively assessed for any impairment that has been incurred but not yet identified. Receivables that are not individually significant are collectively assessed for impairment by grouping together receivables with similar risk characteristics.

An impairment loss in respect of a financial asset measured at amortized cost is calculated as the difference between its carrying amount and the present value of the estimated future cash flows discounted at theasset's original effective interest rate. Losses are recognized in profit or loss and reflected in an allowance account against receivables. When a subsequent event causes the amount of impairment loss to decrease, the decrease in impairment loss is reversed through profit or loss.

Non-financial assets

The carrying amounts of non-financial assets other than stores, spares and loose tools and unbilled net hydel profits, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then theasset'srecoverable amount is estimated. The recoverable amount of an asset or cash-generating unit is the higher of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a discount rate that reflects current market assessment of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the "cash-generating unit, or CGU").

WAPDAHydroelectric'scorporate assets do not generate separate cash inflows. If there is an indication that a corporate asset may be impaired, then the recoverable amount is determined for the CGU to which the corporate asset belongs. An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in profit or loss.

Impairment loss recognized in prior periods is assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that theasset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

4.7 Reserves for development works

Reserve for development works is recognized in accordance with the provisions available in the Constitution of the Islamic Republic of Pakistan. This reserve would be used for the construction of new / ongoing hydel power development projects through Annual Development Plans of the Government of Pakistan. Such reserves are created from retained earnings. Payment on behalf of non-core business, if any, are also charged against such reserves.

4.8 Grants

WAPDA Hydroelectric receives two type of grants: against specific expenses or for specific assets. When the grant relates to an expense item, it is recognized as income over the period necessary to match the costs that it is intended to compensate. Where the grant relates to an asset, it is recognized as deferred income and charged to profit or loss over the expected useful life of the related asset.

Where WAPDA Hydroelectric receives non-monetary grants, the asset and the grant are recorded at market value and released to the statement of profit or loss over the expected useful life of the relevant asset by equal annual installments.

4.9 Employees' retirement benefits

4.9.1 Defined benefit plans

WAPDA Hydroelectric operates its own unfunded defined benefit plan for medical, free electricity and pension benefits schemes for its active and former employees. Due to materially different risks associated with each benefit plan the entity has disaggregated the plan for disclosure purposes. The entity underwrites the actuarial risk associated with the plan. The entity has determined the net defined benefit liability by consulting a qualified independent actuary.

The entity recognizes the net defined benefit liability in the statement of financial position. The cost of providing benefits under the defined benefit plan is determined by a independent qualify actuary using the projected unit credit method. Re-measurements, comprising of actuarial gains and losses from changes in actuarial and experience assumptions are recognized immediately in the statements of financial position with a corresponding debit or credit to retained earnings through other comprehensive income in the period in which they occur. Re-measurement of net defined benefit liability recognized in other comprehensive income shall not be reclassified to profit or loss in subsequent periods.

Past service costs are recognized in the profit or loss on earlier of; the date of the plan amendment or curtailment, and the date when entity recognizes related restructuring cost. Net interest is calculated by applying the discount rate to the net defined benefit liability. The entity recognizes the current service cost, past service cost, gains and losses on curtailments, non-routine settlements and net interest expense or income changes in the net defined benefit obligation in the statement of financial position.

4.9.2 Leave encashment

Employees of WAPDA Hydroelectric are entitled to accumulate the unutilized privilege leaves up to 365 days which are encashable only at the time of retirement or leaving the service , accordingly accruals are made annually to cover the obligation for accumulating compensated absences on the basis of accumulated leaves of each employee.

4.9.3 General provident fund and WAPDA welfare fund

WAPDA Hydroelectric operates self contributed general provident fund and WAPDA Welfare fund for its employees. Wapda Hydroelectric and the employees equal contributions which are remitted to the funds and afterwards utilized as per standard operating procedures approved WAPDA. The contribution by the employees is deducted from the salaries whereas contribution by WAPDA Hydroelectric is charged to profit or loss.

4.10 Foreign currencies

Foreign currency transactions are recorded using the rate of conversion applicable on the date of transaction. All monetary assets and liabilities in foreign currencies are translated at exchange rates prevailing at the reporting date except in the case of foreign currency loans covered by the State Bank of Pakistan's Exchange Risk Coverage Scheme which are translated at the rates provided under the scheme. Exchange differences for the period up to the date of commissioning of assets financed out of foreign currency loans are capitalized to the extent they are eligible for capitalization. All other exchange differences are charged to profit or loss.

4.11 Revenue recognition

Revenue is recognized to the extent it is probable that the economic benefits will flow to the entity and revenue can be measured reliably. The specific accounting polices are:

Sale of energy

- Revenue from the sale of electricity is recognized net of hydel levies on transmission of electricity to the power infrastructure (transmission system) of the National Transmission and Dispatch Company Limited (NTDCL).

Grant income

- Grant related to fixed assets are taken to income over the useful life of the operating assets in order to match with the corresponding depreciation expense.

- Grant for operating expenditures are amortized on the basis of expenditure incurred in accordance with the terms attached to the respective grants.

Profit on bank deposits and investment income

- Profit on deposit accounts and investments is recognized using effective interest rate.

Sale of scrap and store

- Revenue from sale of scrap and store items is recognized when title of items passes to buyers which is generally on dispatch of goods.

4.12 Hydel levies

Hydel levies include net hydel profit payable (NHP) to the provinces as per instructions of the Government of Pakistan; water usage charges payable to the Government of Azad Jammu & Kashmir; and water management charges payable to the Indus River System Authority (IRSA), levied by the GoP. These levies are billed to the Central Power Purchasing Agency (CPPA-G) and recognized in statement of financial position as receivable and unpaid amount of levies is recognized as payable against hydel levies.

4.13 Taxation

Any income of WAPDA Hydroelectric established under the WAPDA Act 1958 is exempt from income tax under clause-66 (xvi) of the Second Schedule of (Part-I) to the Income Tax Ordinance, 2001.

Income of WAPDA Hydroelectric is exempt from income tax as per provisions of Clause 66 (xvi) Part-I of Second Schedule to the Income Tax Ordinance, 2001. Interest income u/s 151, property income u/s 155, and cash withdrawals from bank u/s 231A of the Income Tax Ordinance, 2001 is also exempt and in this connection exemption certificates are issued by Commissioner Income Tax on yearly basis.

5. Property, plant and equipment - owned

Asset class	2018										
	Cost						Accumulated depreciation				
	Opening balance as at 01 July 2017	Additions during the year	Disposals during the year	Transfers	Closing balance as at 30 June 2018	Depreciation rates (%)	Opening balance as at 01 July 2017 - restated	Charge for the year	Disposals / adjustments / transfers	Closing balance as at 30 June 2018	Book value as at 30 June 2018
	(Rupees in thousands)										
Land	442,196,189	2,118	-	(32,184)	442,166,123	-	-	-	-	-	442,166,123
Building and civil works	201,327,385	659,178	(1,540)	32,184	202,017,207	2	83,887,872	3,688,298	4	87,576,174	114,44[illegible]
Power generation plant assets	183,519,944	1,313,709	(51,976)	-	184,781,677	1.99-7	117,402,448	4,364,148	(196)	121,766,400	63,015,277
Transmission line equipment	8,317,981	-	-	-	8,317,981	4	1,229,890	253,250	-	1,483,140	6,834,841
Dams and reservoir	427,920,845	66,830	-	-	427,987,675	1	106,068,258	4,383,861	-	110,452,119	317,535,556
General / plant assets	2,432,297	212,210	(166)	-	2,644,341	10	1,312,302	117,139	9,076	1,438,817	1,205,524
Office equipment	162,692	34,376	(168)	-	196,900	10-25	83,843	11,616	12,156	107,615	89,285
Furniture and fixtures	656,622	25,644	(60)	-	682,206	10	578,212	4,604	2,118	584,934	97,272
Transportation equipment	2,082,961	239,650	(3,994)	-	2,318,617	20	1,742,640	64,700	24,832	1,832,172	486,444
Total	1,268,616,916	2,553,715	(57,904)	-	1,271,112,727		312,305,465	12,887,616	47,990	325,331,071	945,781,656

Asset class	2017										
	Cost						Accumulated depreciation				
	Opening balance as at 01 July 2016	Additions during the year	Disposals during the year	Closing balance as at 30 June 2017	Depreciation rates (%)	Opening balance as at 01 July 2016 - restated	Charge for the year - restated	Disposals / adjustments / transfers	Closing balance as at 30 June 2017 - restated	Book value as at 30 June 2017 - restated
	(Rupees in thousands)									
Land	442,152,909	54,291	(11,011)	442,196,189	-	-	-	-	-	442,196,189
Building and civil works	201,109,116	241,657	(23,388)	201,327,385	2	80,430,929	3,477,801	(20,858)	83,887,872	117,439,513
Power generation plant assets	182,310,782	1,209,162	-	183,519,944	1.99-7	113,021,989	4,388,829	(8,370)	117,402,448	66,117,496
Transmission line equipment	8,337,981	-	(20,000)	8,317,981	3.96	866,264	360,093	3,533	1,229,890	7,088,091
Dams and reservoir	427,533,997	489,941	(103,093)	427,920,845	1	101,718,263	4,349,995	-	106,068,258	321,852,587
General / plant assets	2,343,726	90,707	(2,136)	2,432,297	10	1,125,078	180,825	6,399	1,312,302	1,119,995
Office equipment	124,079	40,723	(2,110)	162,692	10-25	61,657	11,267	10,919	83,843	78,849
Furniture and fixtures	643,863	17,689	(4,930)	656,622	10	573,130	3,667	1,415	578,212	78,410
Transportation equipment	2,012,728	121,434	(51,201)	2,082,961	20	1,652,714	66,198	23,728	1,742,640	340,321
Total	1,266,569,181	2,265,604	(217,869)	1,268,616,916		299,450,024	12,838,675	16,766	312,305,465	956,311,152

3.1 Property, plant and equipment by power station

Power stations	2018									
	Cost					Accumulated depreciation				Book value as at 30 June 2018
	Opening balance as at 01 July 2017 - restated	Additions during the year	Disposals during the year	Transfers	Closing balance as at 30 June 2018	Opening balance as at 01 July 2017 - restated	Charge for the year	Disposals / adjustments / transfers	Closing balance as at 30 June 2018	
	(Rupees in thousands)									
Tarbela	291,223,221	303,106	(52,776)	-	291,473,551	152,965,506	3,136,985	-	156,102,491	135,371,060
Ghazi Barotha	574,302,885	237,743	(181)	-	574,540,447	61,655,542	4,630,612	(200)	66,285,954	508,254,493
Mangla	247,609,013	648,592	(343)	-	248,257,262	55,165,963	1,846,840	(7,170)	57,005,633	191,251,629
Warsak	12,365,326	873,377	(972)	(19,733)	13,217,992	8,687,976	186,542	(13,761)	8,860,757	4,357,235
Chashma	50,877,463	96,388	(55)	5,465	50,979,261	16,852,241	973,594	4,500	17,830,335	33,148,926
Rasul	4,665,556	16,148	-	-	4,681,704	2,365,442	44,357	20,580	2,430,379	2,251,325
Dargai	2,516,059	13,942	-	2,975	2,532,976	1,303,951	23,311	2,002	1,329,264	1,203,712
Nandipur	3,910,112	1,874	-	-	3,911,986	2,380,868	217,749	-	2,598,617	1,313,369
Shadiwal	2,192,618	18,219	-	-	2,210,837	1,495,651	6,920	-	1,502,571	708,266
Chichoki	1,637,905	15,959	-	-	1,653,864	1,074,186	5,494	-	1,079,680	574,184
Kurram Garhi	689,081	20,290	(20)	3,778	713,129	455,386	3,606	3,230	462,222	250,907
Renala Khurd	454,493	367	-	-	454,860	151,382	718	-	152,100	302,760
Chitral	661,710	161	-	-	661,871	272,682	1,873	-	274,555	387,316
Khan Khwar	9,602,248	58,154	-	555	9,660,957	1,751,236	279,326	945	2,031,507	7,629,450
Allai Khwar	15,174,227	11,618	-	-	15,185,845	1,870,485	678,663	(418)	2,548,730	12,637,115
Gomal Zam	8,070,923	12,831	-	(8,289)	8,075,465	789,335	197,626	(6,332)	980,629	7,094,836
Jinnah Hydel	17,282,829	50,784	-	9,600	17,343,213	1,861,760	426,023	(7,363)	2,280,420	15,062,793
Jabban	4,035,830	118,558	(136)	-	4,154,252	459,312	169,837	-	629,149	3,525,103
Dubair Khwar	20,811,386	12,844	-	(555)	20,823,675	505,244	52,422	529	556,195	20,268,480
Others	534,057	42,760	(3,421)	6,204	579,600	241,317	5,118	51,428	297,687	281,913
Total	1,268,616,916	2,553,715	(57,904)	-	1,271,112,727	312,305,465	12,887,616	47,990	325,241,071	945,871,656

5.2 The land, buildings and civil works and dams and reservoir were revalued at 30 June 2015 by an independent well reputed valuer, M/s National Engineering Services Pakistan Private Limited (NESPAK) resulting in a surplus of Rs. 758,430 million over the written down value of Rs. 127,535 million.

The power generation plant assets were revalued at 30 June 2012 by an independent valuer M/s Iqbal A. Nanjee and Company Private Limited and resulted in a surplus of Rs. 58,259 million over the written down value of Rs. 20,950 million.

5.2.1 Had the assets been carried under the cost model the carrying amounts would be as follows:

	Note	2018	2017 *Restated*
		PKR '000'	
Land	5.2.3	5,698,714	5,728,780
Buildings and civil works	5.2.4.1	37,604,356	37,914,681
Power generation plant assets	5.2.5.1	33,297,805	34,225,054
Dams and reservoir	5.2.6.1	89,655,561	90,991,768
		166,256,436	168,860,283

5.2.2 Revaluation surplus on the revalued class of assets are as follows:

	Land (Note 5.2.3)	Building and civil works (Note 5.2.4)	Power generation plant assets (Note 5.2.5)	Dams and reservoir (Note 5.2.6)	Total
2018	PKR '000'				
Revalued WDV	442,166,123	114,433,849	63,015,277	317,535,556	937,150,805
Historical cost WDV	(5,698,714)	(37,604,356)	(33,297,805)	(89,655,561)	(166,256,436)
Revaluation surplus	436,467,409	76,829,493	29,717,472	227,879,995	770,894,369
2017 - *restated*					
Revalued WDV	442,196,189	117,431,950	66,117,496	321,852,587	947,598,222
Historical cost WDV	(5,728,780)	(37,914,681)	(34,225,054)	(90,991,767)	(168,860,283)
Revaluation surplus	436,467,409	79,517,269	31,892,442	230,860,820	778,737,939

5.2.3 Land at cost and revalued amount

Power stations	Cost as at 01 July 2017	Revalued WDV as at 01 July 2017	Addition / (disposals) / adjustments	Cost as at 30 June 2018	Revalued WDV as at 30 June 2018
	PKR '000'				
Tarbela	406,654	23,447,870	-	406,654	23,447,870
Mangla	162,703	115,774,000	-	162,703	115,774,000
Ghazi Barotha	4,500,275	296,611,753	(32,184)	4,468,091	296,579,569
Warsak	1,306	685,000	-	1,306	685,000
Chashma	2,256	980,000	-	2,256	980,000
Rasul	917	654,790	-	917	654,790
Dargai	250	832,400	-	250	832,400
Nandipur	477	1,159,544	-	477	1,159,544
Shadiwal	228	452,000	-	228	452,000
Chichoki	120	414,000	-	120	414,000
Kurram Garhi	23	163,000	-	23	163,000
Renala Khurd	110	270,900	-	110	270,900
Chitral	5,895	103,366	-	5,895	103,366
Allai Khwar	47,597	47,597	2,118	49,715	49,715
Khan Khwar	102,028	102,028	-	102,028	102,028
Dubair Khwar	394,031	394,031	-	394,031	394,031
Gomal Zam	18,990	18,990	-	18,990	18,990
Jabban	161	161	-	161	161
Jinnah Hydel	84,759	84,759	-	84,759	84,759
Total	**5,728,780**	**442,196,189**	**(30,066)**	5,698,714	442,166,123

5.2.4 Building and civil works asset at revalued amount

Power stations	Revalued amount				Accumulated depreciation			Written down value as at 30 June 2018
	As at 01 July 2017	Additions during the year	Disposals / adjustments / transfers	As at 30 June 2018	As at 01 July 2017	Charge for the year	As at 30 June 2018	
	PKR '000'							
Tarbela	52,997,179	36,366	(800)	53,032,745	34,303,061	951,643	35,254,704	17,778,041
Mangla	18,131,288	339,200	-	18,470,488	13,849,256	329,884	14,179,140	4,291,348
Ghazi Brotha	75,176,138	189,956	32,003	75,398,097	12,490,891	1,353,879	13,844,770	61,553,327
Warsak	10,729,751	10,963	-	10,740,714	8,096,778	147,037	8,243,815	2,496,899
Chashma	21,325,014	16,433	(43)	21,341,404	6,190,928	390,283	6,581,211	14,760,193
Rasul	2,182,319	7,145	-	2,189,464	1,432,383	45,640	1,478,023	711,441
Dargai	1,402,929	12,192	-	1,415,121	1,038,893	21,635	1,060,528	354,593
Nandipur	2,697,953	-	-	2,697,953	2,347,441	206,791	2,554,232	143,721
Shadiwal	1,640,412	12,260	-	1,652,672	1,393,362	2,840	1,396,202	256,470
Chichoki	1,032,343	361	-	1,032,704	897,495	3,076	900,571	132,133
Kurram Garhi	459,362	1,337	-	460,699	389,583	3,493	393,076	67,623
Renala Khurd	165,792	-	-	165,792	137,681	462	138,143	27,649
Chitral	551,055	-	-	551,055	268,177	1,702	269,879	281,176
* Allai Khwar	2,034,138	5,521	-	2,039,659	150,258	38,423	188,681	1,850,978
* Dubair Khwar	1,075,041	7,862	-	1,082,903	50,804	2,065	52,869	1,030,034
* Khan Khwar	1,986,087	16,639	-	2,002,726	223,322	36,341	259,663	1,743,063
* Jabban	977,041	2,943	(136)	979,848	67,194	20,307	87,501	892,347
* Jinnah Hydel	6,753,140	-	-	6,753,140	557,526	132,801	690,327	6,062,813
	201,316,982	659,178	31,024	202,007,184	83,885,033	3,688,302	87,573,335	114,433,849

* These formations have not been revalued, since these were constructed after the latest revaluation.

5.2.4.1 Building and civil works asset at cost

Power stations	Cost				Accumulated depreciation			Book value as at 30 June 2018
	As at 01 July 2017	Additions during the year	Disposals / adjustments	As at 30 June 2018	As at 01 July 2017	Charge for the year	As at 30 June 2018	
	PKR '000'							
Tarbela	4,923,825	36,366	(800)	4,959,391	3,179,215	111,973	3,291,188	1,668,203
Mangla	1,128,592	339,200	-	1,467,792	513,963	28,201	542,164	925,628
Ghazi Barotha	25,286,930	189,956	32,003	25,508,886	6,842,566	481,050	7,323,616	18,185,270
Warsak	535,534	10,963	-	546,497	283,386	8,670	292,056	254,441
Chashma	6,948,641	16,433	(43)	6,965,031	2,201,252	132,349	2,333,601	4,631,430
Rasul	163,077	7,145	-	170,222	39,945	2,916	42,861	127,361
Dargai	88,862	12,192	-	101,054	25,238	1,318	26,556	74,498
Nandipur	88,387	-	-	88,387	41,864	622	42,486	45,901
Shadiwal	64,222	12,260	-	76,482	24,664	994	25,658	50,824
Chichoki	36,785	361	-	37,146	20,038	558	20,596	16,550
Kurram Garhi	18,360	1,337	-	19,697	7,140	730	7,870	11,827
Renala Khurd	23,064	-	-	23,064	6,050	438	6,488	16,576
Chitral	40,940	-	-	40,940	23,567	771	24,338	16,602
Allai Khwar	2,034,138	5,521	-	2,039,659	150,257	38,423	188,680	1,850,979
Dubair Khwar	1,075,041	7,862	-	1,082,903	50,804	2,065	52,869	1,030,034
Khan Khwar	1,986,087	16,639	-	2,002,726	223,317	36,341	259,658	1,743,068
Jabban	977,041	2,943	(136)	979,848	67,194	20,307	87,501	892,347
Jinnah Hydel	6,753,140	-	-	6,753,140	557,525	132,801	690,326	6,062,814
	52,172,666	659,178	31,024	[illegible]	14,257,985	1,000,527	[illegible]	[illegible]

5.2.5 Power generation plant assets at revalued amount

Power stations	Revalued amount				Accumulated depreciation				Written down value as at 30 June 2018
	As at 01 July 2017	Additions during the year	Disposals / adjustments / transfers	As at 30 June 2018	As at 01 July 2017	Disposals / adjustments	Charge for the year	As at 30 June 2018	
	PKR '000'								
Tarbela	90,269,303	174,069	(51,976)	90,391,396	73,677,901	(196)	1,035,470	74,713,175	15,678,221
Ghazi Brotha	50,788,231	-	-	50,788,231	26,290,932	-	1,563,835	27,854,767	22,933,464
Warsak	553,860	806,936	(9,600)	1,351,196	297,690	-	20,805	318,495	1,032,701
Chashma	14,548,293	12,490	-	14,560,783	7,905,088		472,703	8,377,791	6,182,992
Rasul	39,478	1,561	-	41,039	22,405	-	2,610	25,015	16,024
Dargai	263,072	-	-	263,072	256,585	-	-	256,585	6,487
Nandipur	42,312	-	-	42,312	30,868	-	9,293	40,161	2,151
Shadiwal	85,589	-	-	85,589	76,834	-	286	77,120	8,469
Chichoki	177,359	9,225	-	186,584	170,181	-	180	170,361	16,223
Kurram Garhi	65,933	18,361	-	84,294	65,273	-	-	65,273	19,021
Renala Khurd	15,145	-	-	15,145	12,619	-	-	12,619	2,526
Chitral	2,350	161	-	2,511	1,993	-	47	2,040	471
* Mangla	8,308,429	168,642	-	8,477,071	6,244,903	-	542,623	6,787,526	1,689,545
* Jabban	2,380,549	115,483	-	2,496,032	264,735	-	93,102	357,837	2,138,195
* Dubair Khwar	2,390,726	-	-	2,390,726	108,393	-	7,226	115,619	2,275,107
* Khan Khwar	1,148,774	582	-	1,149,356	307,282	-	45,967	353,249	796,107
* Jinnah Hydel	8,079,297	6,199	9,600	8,095,096	1,025,820	-	237,164	1,262,984	6,832,112
* Allai Khwar	2,385,063	-	-	2,385,063	323,400	-	254,580	577,980	1,807,083
* Gomal Zam	1,976,181	-	-	1,976,181	319,546	-	78,257	397,803	1,578,378
	183,519,944	1,313,709	(51,976)	184,781,677	117,402,448	(196)	4,364,148	121,766,400	63,015,277

* These formations have not been revalued, since these were constructed after the latest revaluation.

5.2.5.1 Power generation plant assets at cost

Power stations	Cost				Accumulated depreciation				Book value as at 30 June 2018
	As at 01 July 2017	Additions during the year	Disposals / adjustments / transfers	As at 30 June 2018	As at 01 July 2017	Disposals / adjustments	Charge for the year	As at 30 June 2018	
	PKR '000'								
Tarbela	10,177,334	174,069	(51,976)	10,299,427	7,112,183	(196)	141,824	7,253,811	3,045,616
Ghazi Barotha	16,266,750	-	-	16,266,750	8,328,702	-	444,443	8,773,145	7,493,605
Warsak	1,638,123	806,936	(9,600),	2,435,459	859,275	-	64,490	923,765	1,511,694
Chashma	9,400,449	12,490	-	9,412,939	5,067,331	-	277,097	5,344,428	4,068,511
Rasul	32,466	1,561	-	34,027	15,996	-	644	16,640	17,387
Dargai	9,742	-	-	9,742	9,191	-	-	9,191	551
Nandi Pur	19,600	-	-	19,600	12,582	-	464	13,046	6,554
Shadiwal	16,846	-	-	16,846	13,171	-	113	13,284	3,562
Chichoki	8,237	9,225	-	17,462	7,687	-	175	7,862	9,600
Kurram Garhi	14,589	18,361	-	32,950	14,294	-	-	14,294	18,656
Renala Kurd	902	-	-	902	810	-	-	810	92
Chitral	29,777	161	-	29,938	23,479	-	1,009	24,488	5,450
Mangla	8,308,429	168,642	-	8,477,071	6,244,903	-	542,623	6,787,526	1,689,545
Jabban	2,380,549	115,483	-	2,496,032	264,735	-	93,102	357,837	2,138,195
Dubair Khwar	2,390,726	-	-	2,390,726	108,393	-	7,226	115,619	2,275,107
Khan Khwar	1,148,774	582	-	1,149,356	307,282	-	45,967	353,249	796,107
Jinnah Hydel	8,079,297	6,199	9,600	8,095,096	1,025,820	-	237,164	1,262,984	6,832,112
Allai Khwar	2,385,063	-	-	2,385,063	323,400	-	254,580	577,980	1,807,083
Gomal Zam	1,976,181	-	-	1,976,181	319,546	-	78,257	397,803	1,578,378
	64,283,834	1,313,709	(51,976)	65,545,567	30,058,780	(196)	2,189,178	32,247,762	33,297,805

5.2.6 Dams and reservoir at revalued amount

Power stations	Revalued amount			Accumulated depreciation			Written down value as at 30 June 2018
	As at 01 July 2017	Additions / (disposals) / adjustments	As at 30 June 2018	As at 01 July 2017 - *restated*	Charge for the year	As at 30 June 2018	
	PKR '000'						
Tarbela	123,972,552	-	123,972,552	44,630,204	1,115,753	45,745,957	78,226,595
Mangla	104,483,697	65,083	104,548,780	34,331,039	937,140	35,268,179	69,280,601
Ghazi Brotha	150,780,546	1,747	150,782,293	22,051,373	1,696,269	23,747,642	127,034,651
Chashma	13,245,000	-	13,245,000	2,026,410	119,205	2,145,615	11,099,385
Rasul	1,767,953	-	1,767,953	893,025	15,915	908,940	859,013
* Gomal Zam	6,055,377	-	6,055,377	457,685	115,052	572,737	5,482,640
* Allai Khwar	7,239,278	-	7,239,278	709,794	224,925	934,719	6,304,559
* Khan Khwar	4,264,452	-	4,264,452	635,402	98,543	131,680	4,132,772
* Dubair Khwar	13,854,404	-	13,854,404	103,980	27,700	733,945	13,120,459
* Jinnah Hydel	2,257,586	-	2,257,586	229,346	33,359	262,705	1,994,881
	427,920,845	66,830	427,987,675	106,068,258	4,383,861	110,452,119	317,535,556

* These formations have not been revalued, since these were constructed after the latest revaluation.

5.2.6.1 Dams and reservoir at cost

Power stations	Cost			Accumulated depreciation			Written down value as at 30 June 2018
	As at 01 July 2017	Additions / (disposals) / adjustments	As at 30 June 2018	As at 01 July 2017 - *restated*	Charge for the year	As at 30 June 2018	
	PKR '000'						
Tarbela	5,407,471	-	5,407,471	3,849,295	26,221	3,875,516	1,531,955
Mangla	20,926,579	65,083	20,991,662	2,325,792	330,863	2,656,655	18,335,007
Ghazi Brotha	48,986,875	1,747	48,988,622	12,289,000	516,635	12,805,635	36,182,987
Chashma	3,691,996	-	3,691,996	1,133,509	29,503	1,163,012	2,528,984
Rasul	47,070	-	47,070	5,504	237	5,741	41,329
Gomal Zam	6,055,377	-	6,055,377	457,697	115,052	572,749	5,482,628
Allai Khwar	7,239,278	-	7,239,278	709,794	224,925	934,719	6,304,559
Khan Khwar	4,264,451	-	4,264,451	103,980	27,700	131,680	4,132,771
Dubair Khwar	13,854,404	-	13,854,404	635,403	98,541	733,944	13,120,460
Jinnah Hydel	2,257,586	-	2,257,586	229,346	33,359	262,705	1,994,881
	112,731,087	66,830	112,797,917	21,739,320	1,403,036	23,142,356	89,655,561

5.3 During the year the management of WAPDA Hydroelectric has identified that depreciation against cost of Dams and reservoirs was being charged at a higher rate in the financial statements, since the year ended 30 June 2016. To account for the effect, the amounts have been restated in accordance with IAS 8'Accounting policies, changes in accounting estimates and errors'. The effect of retrospective restatement in the financial statements is as follows:

	2017	2016
	PKR '000'	
Impact on statement of financial position		
Increase in property, plant and equipment	6,409,733	3,204,867
Increase in revaluation surplus	4,602,818	2,301,409
Increase in reserve for development works	1,806,915	903,458
Impact on statement of profit or loss		
Decrease in cost of electricity	2,301,409	-

6. Capital work in progress

	Note	2018	2017
		PKR '000'	
Opening balance as at 01 July:		194,735,483	127,314,170
Addition in direct cost during the year		30,663,810	67,794,551
Charged to profit or loss during the year:			
R&D - Survey and investigation / adjustments	27	(1,892,366)	(373,238)
Closing balance as at 30 June	6.1	223,506,927	194,735,483

6.1 Projects breakup movement

	2018								
	Diamer Bhasha Dam (Note 6.2)	Terbela 4th Extension (Note 6.3)	Golan Gol	Dasu Hydropower Project	Keyal Khwar	Mangla Upgradation	Warsak 2nd Rehabilitation	Other Projects	Total
	PKR '000'								
Opening balance as at 1 July 2017									
Direct cost incurred	73,297,363	54,959,617	19,600,687	34,612,535	2,984,096	1,788,767	962,732	6,529,686	194,735,483
Movement in direct cost during the year:									
Direct cost incurred	3,904,332	11,646,556	7,323,566	4,235,737	415,936	2,637,113	58,614	441,936	30,663,810
R&D - Survey and investigation charged to profit or loss	-	-	-	-	(598,623)	-	-	(1,293,743)	(1,892,366)
	3,904,332	11,646,556	7,323,566	4,235,737	(182,687)	2,637,113	58,614	(851,807)	28,771,444
Closing balance as at 30 June 2018									
Direct cost incurred	77,201,695	66,606,173	26,924,253	38,848,272	2,801,409	4,425,880	1,021,346	5,677,879	223,506,927

	2017								
	Diamer Bhasha Dam (Note 6.2)	Terbela 4th Extension (Note 6.3)	Golan Gol	Dasu Hydropower Project	Keyal Khwar	Mangla Upgradation	Warsak 2nd Rehabilitation	Other Projects	Total
	PKR '000'								
Opening balance as at 01 July 2016									
Direct cost incurred	61,650,168	32,630,070	13,634,879	9,225,527	2,592,522	678,080	-	6,902,924	127,314,170
Movement in direct cost during the year:									
Direct cost incurred	11,647,195	22,329,547	5,965,808	25,387,008	391,574	1,110,687	962,732	-	67,794,551
R&D - Survey and Investigation charged to profit or loss	-	-	-	-	-	-	-	(373,238)	(373,238)
	11,647,195	22,329,547	5,965,808	25,387,008	391,574	1,110,687	962,732	(373,238)	67,421,313
Closing balance as at 30 June 2017									
Direct cost incurred	73,297,363	54,959,617	19,600,687	34,612,535	2,984,096	1,788,767	962,732	6,529,686	194,735,483

The project-wise break up of interest during construction (IDC) charged to profit or loss is as follows.

IDC till 1 July 2016	16,718,609	7,213,170	2,631,366	1,791,922	360,882	-	-	367,814	29,083,763
IDC for the year	7,696,591	4,268,682	1,596,139	1,576,749	167,650	-	142,572	(367,814)	15,080,569
IDC till 30 June 2017	24,415,200	11,481,852	4,227,505	3,368,671	528,532	-	142,572	-	44,164,332
IDC for the year	8,506,485	7,798,779	2,000,861	5,815,415	125,952	33,557	147,459	-	24,428,508
IDC till 30 June 2018	32,921,685	19,280,631	6,228,366	9,184,086	654,484	33,557	290,031	-	68,592,840

6.2 This includes advance of Rs. 51.884 million (2017: Rs. 51.884 million) given to DC / LAC Chillas for acquistion of land for Diamer Basha Dam.

6.3 This includes net exchange gain of Rs. 1,734 million (2017: exchange loss Rs. 1,577 million) arised on foreign currency components of Interim Payment Certificates (IPCs) of contractors and consultants.

		Note	2018	2017
7.	Long term advances and deposits - unsecured		PKR '000'	
	Advances	7.1	567,982	492,051
	Security deposits		1,670	1,489
			569,652	493,540

7.1 Long term advances to employees against purchase of:

House buildings		181,428	117,809
Plots		446,754	426,141
Vehicles		2,603	2,833
Others		670	288
	7.1.1	631,455	547,071
Less: current portion shown under current assets			
House buildings		18,143	11,781
Plots		44,675	42,614
Vehicles		521	567
Others		134	58
		63,473	55,020
		567,982	492,051

7.1.1 These represent loans provided to the permanent employees of WAPDA Hydroelectric at mark up rate of Employee Provident Fund applicable to the employees. These loans are recovered in 120 installments in respect of purchase of plot and house and in 60 installments for purchase of car, motorcycle etc. These advances are not being carried at amortized cost as the related impact is immaterial.

		Note	2018	2017
8.	Stores, spares and loose tools		PKR '000'	
	Stores and spares		4,742,237	4,423,228
	Loose tools		351,088	269,497
	Scrap / unserviceable materials		1,533	1,487
			5,094,858	4,694,212

9. Trade debts unsecured, considered good

Receivable from CPPA - related party	9.1	101,324,336	53,472,267

9.1 This includes receivable against net hydel profit for KPK amounting to Rs. 51,178 million (2017: Rs. 42,224 million), Water Usage Charges amounting to Rs. 518 million (2017: Rs. 213 million) and IRSA charges amounting to Rs. 94 million (2017: Rs. 46 million).

	2018	2017
9.2 Aging of trade debts	PKR '000'	
Not past due	15,782,808	9,953,273
Past due:		
0 - 30 days	14,575,795	10,211,608
More than 60 days	[illegible]	33,307,386
	[illegible]	53,472,267

This represents unbilled portion of net hydel profit receivable from Central Power Purchase Agency (CPPA) against the amount paid to the Government of Khyber Pakhtunkhwa and the Government of Punjab.

10.1 In pursuant to Memorandum of Understanding (MoU) signed on 25th February 2016, between the Government of Pakistan (GoP) and the Government of Khyber Pakhtunkhwa (GoKPK), regarding the settlement of past arrears of NHP, the Council of Common Interest (CCI) gave concurrence to the MoU during its 28th meeting held on 29th February 2016. Under the MoU a total amount of Rs. 70,000 million was agreed to be paid by WAPDA Hydroelectric on account of arrears of NHP to GoKPK as full and final settlement. The settlement was decided to be paid in four installments as follows:

	Installment PKR '000'
Financial Year - 2016	25,000,000
Financial Year - 2017	15,000,000
Financial Year - 2018	15,000,000
Financial Year - 2019	15,000,000
	70,000,000

In compliance with the directions of the CCI, WAPDA Hydroelectric has paid total of Rs. 44,998 million out of Rs. 70,000 million to GoKPK as at 30 June 2018. The CCI has allowed WAPDA Hydroelectric to recover the total arrears payable as above through its tariff petition. WAPDA Hydroelectric has been allowed by NEPRA to charge Rs. 181.0964 per KW/month from 07 March 2016 to 22 February 2018 and Rs. 305.549 per KW/month of the installed capacity of all power stations located in Khyber Pakhtunkhwa for the electricity sold to CPPA-G in accordance with the Government of Pakistan notification S.R.O.290(I)/2018 dated 23 February 2018 from the date of notification till the next tariff determination by NEPRA.

10.2 In the light of Council of Common Interest (CCI) decision dated 16 December 2016, the Federal Government through WAPDA Hydroelectric was directed to pay arrears of Rs. 82.71 billion against NHP to the Government of Punjab(GoPb) in 4 installments which are as follows:

	Installment PKR '000'
Financial Year - 2016	38,120,000
Financial Year - 2017	14,860,000
Financial Year - 2018	14,860,000
Financial Year - 2019	14,860,000
	82,700,000

For the first installment WAPDA Hydroelectric was directed to issue irrevocable Promissory Note of one year duration to GoPb by 31 December 2016. In this regard, WAPDA Hydroelectric has already issued the requisite Promissory Note in favour of GoPb on 10 January 2017. WAPDA Hydroelectric has disbursed an amount of Rs. 55,688 million against the installments due for the financial year 2017 and 2018.

The CCI has allowed WAPDA Hydroelectric to recover the total arrears payable as above through its tariff petition. NEPRA has allowed to charge Rs. 2,878.344 per KW/month of the installed capacity of all power stations located in Punjab for the electricity sold to CPPA-G in accordance with the Government of Pakistan notification S.R.O.290(I)/2018 dated 23 February 2018 from the date of notification till the next tariff determination by NEPRA.

11. Short term investments	Note	2018	2017
		---------- PKR '000' ----------	
Held to maturity - Unquoted:			
Investment in Term Deposit Receipt (TDR)	11.1	28,000,000	2,000,000
Innovative Investment Bank Limited	11.2	261,000	261,000
		28,261,000	2,261,000
Less: Impairment charged		(261,000)	(261,000)
		28,000,000	2,000,000

11.1 These are term deposit receipts from various commercial banks having maturity latest by six months. These carry mark-up at the rate of 6.4%-8.9% (2017: 6.46%) per annum.

11.2 This represents investment made in the Innovative Investment Bank (Formerly Crescent Standard Investment Bank). On maturity, the balance remained unpaid, hence the case was lodged with the Judicial Department of Lahore High Court for the recovery of the said amount. The Honorable Lahore High Court decided the case in favor of WAPDA Hydroelectric and attached the property with forced sale value of Rs. 220 million and appointed Court Auctioneers for recovery of this amount.

12. Loan and advances	Note	2018	2017
		PKR '000'	
Advance, considered good			
- current portion of long term advances		63,473	55,020
- employees against expense		795,961	885,443
- suppliers and other		605,497	496,114
		1,464,931	1,436,577
Bridge financing extended to water wing	12.1	2,194,988	1,286,471
Receivable from non-core business (PSI)	12.2	3,822	2,052,762
		3,663,741	4,775,810

12.1 This represents interest free unsecured bridge financing payable with in one year extended to water wing for Kurram Tangi Dam and Kachhi Canal Project and includes mobilization advance of Rs. 1.028 million given to designated contractor for Kurram Tangi Dam.

12.2 This represents receivable against debt service liability (DSL) related to foreign relent loans paid to Government of Pakistan for financial years 2014-15, 2015-16 and 2016-17 on behalf of Kot Addu Power Company Limited (KAPCO) and Neelum Jhelum Hydropower Company (Private) Limited.

13. Prepayments and other receivables	Note	2018	2017
		PKR '000'	
Prepayments	13.1	4,335,538	3,424,480
Other receivables		248,582	267,642
		4,584,120	3,692,122

13.1 This includes prepayments of Rs. 2,955 million (2017: 2,747 million) to Chief Resident Representative Karachi against import of material.

14. Cash and bank balances	Note	2018	2017
		PKR '000'	
Direct working capital balances			
Cash in transit		608,729	479,390
Balance with the banks:			
- current accounts			
authority own balance		2,330,243	400,145
		2,938,972	879,535
Balances held for specific utilizations:			
Balance with the banks:			
- current accounts			
un-utilized balance of loans and grants	14.1	41,097,974	22,187,587
		41,097,974	22,187,587
- deposit accounts			
un-utilized balance of loans	14.2	[illegible]	16,117,495
redemption sinking fund	14.3	[illegible]	5,617,761
authority own balance	14.4	[illegible]	13,283,272
		[illegible]	35,018,528
		[illegible]	57,206,115
		[illegible]	58,085,650

	2018	2017
14.1 Un-utilized balance of loans and grants	PKR '000'	
Held in current accounts:		
IDA relent loan for Dasu Hydro project	1,836,259	2,166,636
Foreign direct loan for Dasu Hydro project	37,025,648	19,737,101
IDA relent loan for 4th Extension of Tarbela project	374,656	99,295
IBRD relent loan for 4th Extension of Tarbela project	590,993	96,038
US aid grant for Mangla refurbishment project	1,270,418	88,517
	41,097,974	22,187,587
14.2 Held in deposit accounts:		
Un-utilized balance of long term financing for Dasu Hydro project	12,346,870	16,117,495

14.3 This includes Redemption Sinking Fund which was created in March 2013 with HBL WAPDA House branch for the payment of SUKUK-II Ijarah rentals due in January and July each year till July 2017 and Jinnah Hydel Power station supplier credit due in February and August each year till august 2020. The profit is accrued on daily product basis for monthly credit of the same at one month KIBOR+15bps. The KIBOR is revised on 1st working day of each calendar month.

14.4 Deposit accounts carry interest at the rate ranging from 4.25% to 6.30% (2017: 4.25% to 6%) per annum.

15. Government of Pakistan's investment

	2018	2017
	PKR '000'	
Government of Pakistan investment	63,000,716	63,000,716

This represent investment funds provided by the GoP mainly for Diamer Basha and Mangla Dam Raising Hydel Power projects from time to time.

16. Reserves for development works

	Note	2018	Restated 2017
		PKR '000'	
Reserve for development works	16.1	132,160,793	133,182,636

16.1 Provision for reserve for development works has been created in accordance with policy stated in note 4.70. The WAPDA Hydroelectric has allowed to plough back / invest these reserves in the construction of new/ongoing Hydel power development projects through Annual Development Plans of GOP.

17. Surplus on revaluation of property, plant and equipment

	Note	2018	2017
		PKR '000'	
Revalued written down value	5.2.2	937,150,805	947,598,222
Historical cost written down value	5.2.2	(166,256,436)	(168,860,283)
		770,894,369	778,737,939

		Note	2018	2017
			--------- PKR '000' --------	
18	Long term financing - interest bearing			
	Foreign loans:			
	- relent - unsecured	18.1	102,771,332	89,101,175
	- direct - secured	18.2	45,566,348	24,872,538
	Local loans:			
	- cash development loans - unsecured	18.3	89,699,788	90,190,896
	- syndicated term finance facility - secured	18.4	25,000,000	25,000,000
	- diminishing musharakah - secured	18.5	80,152,000	-
			343,189,468	229,164,609
	Less: current portion shown under current liabilities			
	foreign relent loans		4,653,998	3,896,581
	foreign direct loans		1,497,311	1,292,259
	cash development loans		613,621	491,109
			6,764,930	5,679,949
			336,424,538	223,484,660
18.1	Foreign relent loans - unsecured:			
	Operational power station loans	18.1.1	12,981,291	15,914,162
	Development project loans	18.1.2	89,790,041	73,187,013
			102,771,332	89,101,175

18.1.1 Operational power stations loans

Loan no.	Note	Rate of interest per annum	Outstanding semi annual installments as on 30 June 2018	Repayment commence-ment / maturity	2018	2017
					--------- PKR '000' --------	
Ghazi Brotha						
ADB-1424-PAK		14.00%	6	2001/2021	1,412,443	1,883,257
KFW-9566316		14.00%	10	2003/2023	1,486,738	1,784,085
Pk-P-47	18.1.1.1	17.00%	4	2005/2020	1,138,851	1,708,276
					4,038,032	5,375,618
Chashma Hydel						
French Credit Bank		11.00%	2	1999/2019	30,223	60,446
French State Bank		11.00%	2	1999/2019	27,647	55,302
CITI Bank of Japan	18.1.1.2	11.00%	14	2005/2025	741,218	847,106
					799,088	962,854
Allai, Dubair and Khan Khwar projects						
IDB-PAK-0117	18.1.1.3	17.00%	10	2014/2023	6,171,021	7,405,225
Jabban Power station						
AFD Credit Facility	18.1.1.4	15.00%	20	2014/2028	1,973,150	2,170,465
					12,981,291	15,914,162

18.1.1.1 These loans have been obtained for Ghazi Brotha hydel power station from foreign financial institutions by the Government of Pakistan (Borrower) and further re-lent to WAPDA Hydroelectric. These loans are secured through Government Guarantee in favor of those institutions and WAPDA Hydroelectric is responsible for repayment to Government of Pakistan.

These loans have been obtained for Chashma hydel power station from foreign financial institutions by the Government of Pakistan (Borrower) and further re-lent to WAPDA Hydroelectric. These loans are secured through Government Guarantee in favor of those institutions and WAPDA Hydroelectric is responsible for repayment to Government of Pakistan.

This represents Islamic Development Bank loan amounting to US$ 150.200 million under Istisna's Financing Agreement dated 01 December 2008 for Khan, Allai and Dubair Khwar Hydro Projects taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency of Khwar Projects. The loan will be repaid in 15 years including 3 years of grace period.

18.1.1.4 This represents French Development Agency (AFD) loan amounting to Euro 26.500 million under Subsidiary Loan Agreement dated 13 December 2010 for Jabban Power station taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the Jabban project. The loan will be repaid in 18 years including 3 years of grace period.

18.1.2 Development projects loans

Loan name	Note	Rate of interest per annum	Outstanding semi annual installments as on 30 June 2018	Repayment commence-ment / maturity	2018	2017
					---------- PKR '000' ----------	
Golen Gol						
Kuwait Fund Loan No. 742	18.1.2.1	17.00%	14	2014/2025	3,107,704	3,551,662
Saudi Fund Loan No. 10/479	18.1.2.2	17.00%	14	2014/2025	2,514,614	2,584,700
Saudi Fund Loan No. 14/609	18.1.2.3	15.00%	30	2019/2034	4,720,436	3,524,032
OPEC Fund Loan No. 1205-P	18.1.2.4	17.00%	20	2018/2028	1,401,832	1,350,145
OPEC Fund Loan No.1206-PB	18.1.2.4	17.00%	20	2019/2028	837,564	-
					12,582,150	11,010,539
Tarbela 4th Extension						
IDA CREDIT No. 5079-PK	18.1.2.5	15.00%	37	2017/2037	15,918,666	13,444,953
IBRD 8144-PK	18.1.2.6	15.00%	23	2020/2031	40,338,559	29,052,974
					56,257,225	42,497,927
Keyal Khwar						
KFW-320517	18.1.2.7	15.00%	80	2019/2059	523,081	523,081
KFW-3003374	18.1.2.7	15.00%	60	2019/2049	101,923	626,168
					625,004	1,149,249
Dasu Hydro						
IDA CREDIT No. 5498-PK	18.1.2.8	15.00%	40	2020/2039	17,995,372	17,548,249
Warsak Rehabilitation (Phase 2)						
AFD Credit Facility	18.1.2.9	15.00%	28	2022/2036	981,049	981,049
KFW-15568024	18.1.2.10	15.00%	60	2026/2055	40,671	-
					1,021,720	981,049
Mangla Refurbishment Project						
AFD Credit Facility	18.1.2.11	12.00%	30	2023/2037	1,308,570	-
					89,790,041	73,187,013

18.1.2.1 This represents Kuwait Fund loan amounting to Kuwaiti Dinar 11 million under Subsidiary Loan Agreement dated 05 September 2008 for Golen Gol Hydro Power Project taken by the Government of Pakistan (Borrower). The disbursement of loan started in 2011. The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 15 years including 2 years of grace period.

18.1.2.2 This represents Saudi Fund loan amounting to Saudi Riyals 150 million under Subsidiary Loan Agreement dated 05 September 2008 for Golen Gol Hydro Power Project taken by the Government of Pakistan (Borrower).The disbursement of loan started in 2011. The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 15 years including 2 years of grace period.

18.1.2.3 This represents Saudi Fund loan amounting to Saudi Riyals 216.750 million under Subsidiary Loan Agreement dated 28 April 2014 for Golen Gol Hydro Power Project taken by the Government of Pakistan (Borrower). The disbursement of loan started in 2011. The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 20 years including 5 years of grace period.

18.1.2.4 This represents Organization of Petroleum Exporting Country (OPEC) fund loan amounting to USD 15 each million under relending sanction dated 05 June 2017 from Government of Pakistan dated for Golen Gol Hydro Power Project taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 15 years including 5 years of grace period.

18.1.2.5 This represents International Development Association (IDA) loan relating to Special Drawing Rights (SDR) 283.7 million amounting to $ 440 million under Subsidiary Loan Agreement dated 12 April 2012 for Tarbela 4th Extension Hydro Power Project taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 25 years including 5 years of grace period.

Loan utilization	For the year		Cumulative	
	2018	2017	2018	2017
	PKR '000'			
Opening balance	99,295	46,480	-	-
Withdrawal of loan during the year	2,473,713	557,055	15,918,666	13,444,953
	2,573,008	603,535	15,918,666	13,444,953
Less: utilization of funds during the year	(2,198,352)	(504,240)	(15,544,010)	(13,345,658)
Closing balance	374,656	99,295	374,656	99,295

18.1.2.6 This represents International Bank for Reconstruction and Development (IBRD) loan of $ 400 million under Subsidiary Loan Agreement dated 12 April 2012 for Tarbela 4th Extension Hydro Power Project taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 19 years including 7 years of grace period.

Loan Utilization	For the year		Cumulative	
	2018	2017	2018	2017
	PKR '000'			
Opening balance	96,038	32,640	-	-
Withdrawal of loan during the year	11,285,585	16,108,881	40,338,559	29,052,974
	11,381,623	16,141,521	40,338,559	29,052,974
Less: utilization of funds during the year	(10,790,630)	(16,045,483)	(39,747,566)	(28,956,936)
Closing balance	590,993	96,038	590,993	96,038

18.1.2.7 This represents Frankfurt am Main (KfW) loan amounting to Euro 97.080 million in total, to be disbursed in two trenches. Under Trench - 1 (Kfw 320517) - Euro 4.415 million will be disbursed that will be repaid in 48 years including 8 years of grace period. Under trench - 2 (Kfw 3003374), Euro 92.664 million will be disbursed that will be repaid in 34 years including 4 years of grace period. The disbursement of loan for second trench started in 2015. The loan taken by the Government of Pakistan (Borrower) has relent under Subsidiary Loan Agreement dated 27 Dec 2011 for Keyal Khwar Hydro Power Project.

18.1.2.8 This represents relent loan from International Development Association (IDA) of Special Drawing Rights (SDR) 379.7 million amounting to US $ 588.4 million under subsidiary loan agreement dated 13 October 2014 for Dasu Hydro Power Project taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the project. WAPDA Hydroelectric will disburse US$ 15 million on the request of the National Transmission & Dispatch Company (NTDC) for feasibility study and detail design of transmission lines. The NTDC will repay this amount directly to Government of Pakistan with out channeling it to WAPDA. The loan will be repaid in 25 years including 5 of years of grace period.

Loan utilization	For the year		Cumulative	
	2018	2017	2018	2017
	PKR '000'			
Opening balance	2,166,636	3,192,036	-	-
Withdrawal of loan during the year	447,123	7,773,653	17,995,372	17,548,249
	2,613,759	10,965,689	17,995,372	17,548,249
Less: utilization of funds during the year	(777,500)	(8,799,053)	(16,159,113)	(15,381,613)
Closing balance	1,836,259	2,166,636	1,836,259	2,166,636

18.1.2.9 This represents French Development Agency (AFD) loan amounting to Euro 41.5 million under Subsidiary Loan Agreement dated 02 August 2016 for Warsak Rehabilitation Hydropower Project (Phase-2) taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the Warsak Rehabilitation Project. The loan will be repaid in 14 years including 6 years of grace period.

18.1.2.10 This represents Frankfurt am Main (KfW) loan of Euro 40 million in total, to be disbursed in two portions. Under Portion-1, Euro 30 million will be disbursed that will be repaid in 30 years with grace period of 9 years. Under Portion-2, Euro 10 million will be disbursed that will be repaid after 10 years from the availability of Portion-2 over a period of 15 years . The disbursement of loan for Portion-1 started in 2018. The loan taken by the Government of Pakistan (Borrower) has been relent under Subsidiary Loan Agreement dated 09 May 2016 for Rehabilitation of Warsak Hydro Power Plant Project.

18.1.2.11 This represents French Development Agency (AFD) loan amounting to 90 million Euros under Subsidiary Loan Agreement dated 15 March 2018 for Rehabilitation of Mangla Hydro Power Project taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the Mangla project. The loan will be repaid in 20 years including a grace period of 5 years.

		Note	2018	2017
			PKR '000'	
18.2	Foreign direct loans - secured:			
	Operational power station loans	18.2.1	2,994,554	3,876,779
	Development project loans	18.2.2	42,571,795	20,995,760
			45,566,349	24,872,539

18.2.1 Operational project loans - Foreign direct loans - Exim Bank China

This represents supplier's credit facility amounting to US$ 24.618 million (2017: US$ 36.928 million) for the construction of Jinnah Hydro Power Project, a turn key project against the sanctioned limit of US $ 123.097 million. The loan is repayable in fourteen years inclusive of four years grace period, in 20 semi annually installments starting from 18 August 2010. Rate of mark-up is 5% annually with no floor and no cap. The loan is secured through stand by letter of credit to back issuance of 20 promissory notes issued at the time of commencement of the project in 2006.

	2018	2017	2018	2017
	USD '000'		PKR '000'	
Outstanding balance as at 1 July	36,928	49,238	3,876,779	5,162,932
Exchange loss for the year	-	-	447,655	4,028
	36,928	49,238	4,324,434	5,166,960
Less: repayments during the year	(12,310)	(12,310)	(1,329,880)	(1,290,181)
Outstanding balance as at 30 June	24,618	36,928	2,994,554	3,876,779

18.2.2 Development project loans - Foreign direct loans - Credit Suisse AG, Singapore

This represents supplier's credit facility of US$ 350 million (2017: US$ 200 million) for the construction of Dasu Hydro Power Project. The loan is repayable in ten years inclusive of six years grace period, in 8 semi annually installments starting from 30 June 2023. Rate of mark-up is US$ LIBOR Swap Rate plus 3%. The loan is secured through guarantee given by Government of Pakistan and International Development Association (IDA).

	2018	2017	2018	2017
	USD '000'		PKR '000'	
Outstanding balance as at 1 July	200,000	-	20,995,760	-
Exchange loss for the year	-	-	3,330,980	
	200,000	-	24,326,740	-
Add: loan received during the year	150,000	200,000	18,245,055	20,995,760
Outstanding balance as at 30 June	350,000	200,000	42,571,795	20,995,760

18.3 Cash development loans - unsecured:

Operational power station loans	18.3.1	6,861,797	6,876,597
Development project loans	18.3.2	82,337,990	83,314,299
		89,699,787	90,190,896

18.3.1 Operational power station loans

Power station and year of disbursement	Note	Rate of interest per annum	Installments outstanding as on 30 June 2018	Repayment commence-ment / maturity	2018	2017
					--------- PKR '000' --------	
Ghazi Brotha						
2005-06	18.3.1.1	9.79%	13	2012/2031	5,469,086	5,675,069
Tarbela (HPS)						
1997-98	18.3.1.2	17.50%	5	2004/2023	614,812	688,675
1998-99	18.3.1.2	17.50%	6	2005/2024	356,734	389,296
					971,546	1,077,971
Jabban						
2007-08	18.3.1.1	10.14%	15	2014/2033	27,953	28,743
2009-10	18.3.1.1	12.59%	17	2016/2035	93,212	94,814
					121,165	123,557
					6,561,797	6,876,597

18.3.1.1 These loans have been obtained for Ghazi Brotha and Jabban projects from Government of Pakistan for construction of the projects. The loans will be repaid in 25 years including 5 years of grace period.

18.3.1.2 These loans have been obtained for Tarbela hydel power station from Government of Pakistan for payment of net hydel profit to provincial Government of Khyber Pakhtunkhwa. The loans will be repaid in 25 years including 5 years of grace period.

18.3.2 Development projects loans

Project and year of disbursement	Note	Rate of interest per annum	Installments outstanding as on 30 June 2018	Repayment commence-ment / maturity	2018	2017
					--------- PKR '000' --------	
Harpo						
2009-10	18.3.2.1	12.59%	17	2016/2035	37,285	37,926
Bashoo						
2007-08	18.3.2.1	10.14%	15	2014/2033	14,803	15,221
2009-10	18.3.2.1	12.59%	17	2016/2035	24,856	25,284
					39,659	40,505
Diamer Basha						
2007-08	18.3.2.2	10.14%	15	2014/2033	270,766	278,418
2009-10	18.3.2.2	12.59%	17	2016/2035	956,022	972,450
2011-12	18.3.2.2	12.64%	19	2018/2037	11,549,258	11,700,000
2012-13	18.3.2.2	10.65%	20	2019/2038	3,785,000	3,785,000
2013-14	18.3.2.2	11.79%	20	2020/2039	27,500,000	27,500,000
2014-15	18.3.2.2	10.53%	20	2021/2040	15,000,000	15,000,000
2015-16	18.3.2.2	7.37%	20	2022/2041	10,000,000	10,000,000
2016-17	18.3.2.2	6.54%	20	2023/2042	14,000,000	14,000,000
					[illegible]	83,235,868
					[illegible]	83,314,299

These loans have been obtained from Government of Pakistan for feasibility studies of hydel development projects. The loans will be repaid in 25 years including 5 years of grace period.

These loans have been obtained from Government of Pakistan for the land acquisition of Diamer Basha Dam project. The loans will be repaid in 25 years including 5 years of grace period.

18.4 WAPDA Hydroelectric has entered into agreements with Habib Bank Limited lead consortium of seven banks on 29 March 2017 for financing of Dasu Hydropower Project amounting to Rs. 144,000 million for the period of fifteen (15) years including five (5) years grace period. This loan has the following structure of facilities:

	GoP Guarantee Backed Financing (GBF) Facilities		Assets Backed Financing (ABF) Facilities		Total
	Sukuks (musharakah)	TFCs	Diminishing musharakah	Commercial facility	
	PKR '000'				
Total amount of facilities	52,800,000	35,200,000	33,600,000	22,400,000	144,000,000
Availed during the year	(15,000,000)	(10,000,000)	-	-	(25,000,000)
Un-availed balance of facilities at 30 June 2017	37,800,000	25,200,000	33,600,000	22,400,000	119,000,000
Availed during the year	-	-	-	-	-
Un-availed balance of facilities at 30 June 2018	**37,800,000**	**25,200,000**	**33,600,000**	**22,400,000**	**119,000,000**
Face value per certificate (Rs.)	10,000	10,000	-	-	-
Principal repayment will commence	8 November 2022		-	-	-
Profit on rental payments	6 month KIBOR + margin of 1.45% payable semi annually		-	6 month KIBOR + margin of 200 basis points p.a	-
Musharaka assets share	62.75%	-	32.25%	-	100%

18.4.1 The Sukuks and TFCs are secured by way of guarantee of the GoP to the Pak Brunei Investment Company Limited (Trustee) whereas Mangla Dam's land having amounting to Rs. 103,244 million is being used as Musharakah Assets. Further Power Generation Plant Assets of Ghazi Barotha and Tarbela HPP amounting to Rs. 77,106 million have been hypothecated in favour of Security Trustee for securing Islamic and Commercial Asset Backed Facilities.

18.4.2 WAPDA Hydroelectric has injected equity amounting to Rs. 13,673 million till 30 June 2018 for the construction of Dasu Hydropower Project.

18.5 Diminishing Musharaka - secured	Note	2018	2017
		PKR '000'	
Habib Bank Limited	18.5.1	38,120,000	-
United Bank Limited	18.5.2	42,032,000	-
		80,152,000	-

18.5.1 This represents Shirkat ul milk facility amounting to Rs. 38.12 billion obtained from Habib Bank Limited for meeting WAPDA's working capital requirements (payment of net hydel profits of WAPDA). The principal is repayable at the end of two years in the form of a bullet repayment. Profit is payable semi-annually in arrears at the rate of six months KIBOR - 50 bps. The mark-up rate charged during the year on the outstanding balance is 5.71% per annum. The facility is secured by unconditional and irrevocable first demand guarantee covering principal and profit from the Ministry of Finance, Government of Pakistan.

18.5.2 This represents Non Interest Demand Finance (NIDF) and Islamic Structure facility with a conventional share amounting to Rs. 28 billion and Islamic structure portion amounting to Rs. 14.032 billion to meet interim working capital needs of WAPDA. The principal is repayable at the end of two years in the form of a bullet repayment. Profit is payable semi-annually in arrears at the rate of six months KIBOR - 21 bps. The mark-up rate charged during the year on the outstanding balance is 5.99% per annum. The principal amount and profit accrued is secured by unconditional and irrevocable first demand guarantee covering principal and profit from the Ministry of Finance, Government of Pakistan. The Musharaka property relating to the Islamic structure of finance facility includes Generators, Switchgears, Control and protection equipment.

		Note	2018	2017
19	Deferred grants		PKR '000'	
	Balance as on 01 July		3,852,092	4,948,367
	Grants received during the year		4,791,928	774,970
	Transfer to loan and borrowings from Hydropower Training Institute (HPTI)		-	(745,276)
	Grants amortized during the year		(144,065)	(1,125,969)
	Closing balance	19.1	8,499,955	3,852,092
19.1	This relates to:			
	- Gomal Zam	19.1.1	2,314,110	2,407,877
	- Mangla Dam Rehabilitation Project	19.1.2	3,571,251	1,384,940
	- Hydropower Training Institute		101,367	42,440
	- Golen Gol	19.1.3	2,506,839	16,835
	- Glacier Monitoring Network		6,388	-
			8,499,955	3,852,092

19.1.1 The grant was received for the construction of Gomal Zam project and is being amortized over 30 years which is useful life of the plant and equipment of the project.

19.1.2 The grant for Mangla Refurbishment Project is received from USAID to enhance the total capacity of Mangla Power Station by 330 megawatts (MW) from the current 980 MW to 1310 MW. Grant is also being used for refurbishing and upgrading units 5 and 6 of Mangla Power Station along with related plant facility enhancements.

19.1.3 This represents grant received from USAID out of USD 35.6 million for the construction of Golen Gol Hydro Power project with a total capacity of 108 MW.

		Note	2018	2017
20.	Deferred liabilities		PKR '000'	
	Employee retirement benefits	20.1	41,613,347	32,792,195

20.1 The breakup of post employment benefits is given below:

Particulars	2018			
	Free medical facility	Free electricity facility	Pension	Total
	PKR '000'			
Liability recognized in the statement of financial position	3,403,426	2,252,753	35,957,168	41,613,347
Changes in the present value of defined benefit obligation:				
Opening defined benefit obligation	[illegible]	[illegible]	[illegible]	[illegible]
Service cost	[illegible]	[illegible]	[illegible]	[illegible]
Interest cost	[illegible]	[illegible]	[illegible]	[illegible]
Contributions made during the year	[illegible]	[illegible]	[illegible]	[illegible]
Benefits paid	[illegible]	[illegible]	[illegible]	[illegible]
Actuarial (gain) / loss	[illegible]	[illegible]	[illegible]	[illegible]
Closing defined benefit obligation	[illegible]	[illegible]	[illegible]	[illegible]

Reconciliation of fair value of plan assets

	Pension	
	2018	2017
	PKR '000'	
Fair value of plan assets as at 01 July	-	-
Contributions made during the year	4,884,098	1,995,553
Interest income during the year	165,000	-
Benefits paid during the year	(1,884,098)	(1,995,553)
Return on plan assets excluding interest income	(165,000)	-
Fair value of plan assets as at 30 June	3,000,000	-

Particulars	2018			
	Free medical facility	Free electricity facility	Pension	Total
	PKR '000'			
Charge for the year:				
Current service cost	100,034	49,903	853,229	1,003,166
Interest cost	334,977	231,671	2,922,711	3,489,359
	435,011	281,574	3,775,940	4,492,525

Particulars	2017			
	Free medical facility	Free electricity facility	Pension	Total
	PKR '000'			
Liability recognized in the statement of financial position	3,131,821	2,148,227	27,512,147	32,792,195
Changes in the present value of defined benefit obligation:				
Opening defined benefit obligation	3,052,000	2,112,826	26,088,165	31,252,991
Service cost	79,181	65,284	549,837	694,302
Interest cost	335,720	232,411	2,869,698	3,437,829
Benefits paid	(335,080)	(262,294)	(1,995,553)	(2,592,927)
Closing defined benefit obligation	3,131,821	2,148,227	27,512,147	32,792,195
Charge for the year:				
Current service cost	79,181	65,284	549,837	694,302
Interest cost	335,720	232,411	2,869,698	3,437,829
	414,901	297,695	3,419,535	4,132,131

20.1.1 Latest actuarial valuation has been conducted as on 30 June 2018 on the basis of following principal assumptions:

	Free medical benefits	Free electricity benefits	Pension benefits
Expected rate for discounting liabilities	11.75%	11.75%	11.75%
Expected rate for increase in pensionable salary	n/a	n/a	10.75%
Expected rate for increase in cost of pensioners	n/a	n/a	6.75%
Expected rate for increase in medical cost	10.75%	n/a	n/a
Expected rate for increase in electricity cost	n/a	10.75%	n/a
Average expected remaining working life	9 years	9 years	9 years
Average duration of liabilities (actives + pensioners)	26 years	26 years	26 years

The sensitivity of the Present Value of Defined Benefit Obligation (PVDBO) for the benefit plans is as follows:

	Present value of defined benefit obligation		
	Free medical facility	Free electricity facility	Pension
	PKR '000'		
Discount rate + 1%	3,008,395	1,964,243	32,270,627
Discount rate - 1%	3,894,482	2,543,768	38,656,401
Salary increase + 1%	-	-	36,289,690
Salary increase - 1%	-	-	34,189,176
Pension increase rate -1%	-	-	37,480,326
Pension increase rate +1%	-	-	33,195,334
Medical cost increase + 1%	3,783,815	-	-
Medical cost increase - 1%	3,085,318	-	-
Electricity cost increase + 1%	-	2,469,189	-
Electricity cost increase - 1%	-	2,016,330	-

	Note	2018	2017
		PKR '000'	
21. Trade and other payables			
Trade creditors		5,371,984	10,609,661
Security deposits		2,152,653	1,990,309
Due to other wings of WAPDA	21.1	146,786	138,155
Accrued liabilities		930,636	797,104
Taxes payable		551,579	355,945
Other liabilities		345,773	509,039
Payable to Government of Pakistan		24,906,992	580,439
		34,357,400	14,980,652
21.1 Due to other wings of WAPDA			
WAPDA coordination wing			4,590
WAPDA water wing			133,565
			138,155

	Note	2018	2017
		PKR '000'	
22 Payable against hydel levies			
Net Hydel Profit (NHP) payable to Government of Khyber Pakhtunkhwa	22.1	16,906,235	17,224,898
Net Hydel Profit (NHP) payable to Government of Punjab	22.2	265,417	-
Water usage charges (WUC) payable to A.J.K Government		48,700	139,102
Water Management Charges (WMC) payable to IRSA	22.3	45,884	42,523
	22.4	17,266,236	17,406,523

22.1 This represents payable against NHP to Government of Khyber Pakhtunkhwa. WAPDA Hydroelectric charged Rs. 1.155 (2017: 1.10) per kWh on electricity sold to CPPA-G in accordance with Government of Pakistan notification S.R.O. 290 (I)/2018 dated 23 February 2018 (2017: S.R.O.191(I)/2016 dated 07 March 2016).

22.2 This represents payable against NHP to Government of Punjab. The WAPDA Hydroelectric charged Rs. 1.155 (2017: nil) per kWh on electricity sold to CPPA-G in accordance with Government of Pakistan notification S.R.O. 290 (I)/2018 dated 23 February 2018 (2017: S.R.O.191(I)/2016 dated 07 March 2016).

22.3 This represents payable of water management charges to IRSA. These charges are levied by IRSA vide letter no. A-II-6/10/2010-IRSA dated 25 August 2011 i.e. 01 July 2011 and S.R.O. 290 (I)/2018 dated 23 February 2018 at the rate of Rs.0.005/kWh for hydro power generation.

22.4 Movement in payable against hydel levies during the year is as follows:

	NHP payable to KPK	NHP payable to Punjab	WUC payable to A.J.K	WMC payable to IRSA	Total
	PKR '000'				
Balance as at 01 July 2016	5,129,916	-	71,462	46,877	5,248,255
Billed during the year	33,809,764	-	788,584	153,983	34,752,331
Paid during the year	(21,714,782)	-	(720,944)	(158,337)	(22,594,063)
Balance as at 30 June 2017	17,224,898	-	139,102	42,523	17,406,523
Billed during the year	35,204,470	24,582,685	610,925	133,877	60,531,957
Paid during the year	(35,523,133)	(24,317,268)	(701,327)	(130,516)	(60,672,244)
Balance as at 30 June 2018	**16,906,235**	**265,417**	**48,700**	**45,884**	**17,266,236**

	Note	2018	2017
		PKR '000'	
23 Other liabilities			
Payable to provinces	23.1	18,345	18,088
Other liabilities		1,045,668	1,564,345
		1,064,013	1,582,433

23.1 This represents amount payable to Governments of Punjab, KPK and Sindh for 4% return on assets transferred to the WAPDA Hydroelectric from these provinces at the time of unbundling of WAPDA Hydroelectric.

24. Contingencies and commitments

24.1 Contingencies

24.1.1 During the year ended 30 June 2009 WAPDA First SUKUK Company (WFSC) was defrauded by a forged transfer of Sukuk Certificates valuing Rs. 180 million belonging to NFC to a ghost company, Swift Engineering Solutions (SES); the certificates were transacted a number of times and now these are partly held by Meezan Bank Limited (MBL), Soneri Bank Limited (SBL) and Bank Islami Pakistan Limited (BIPL).

WFSC lodged a case of fraud with the Federal Investigation Agency (FIA). On the basis of an inquiry report dated 05 August 2009, FIA registered an FIR bearing No. 28/2009 and recovered from the accomplices of the principal accused a publicly declared absconder who has fled the country:

a) Rs. 13,477,000 in the form of hard cash, and prize bonds of Rs. 1,775,000;
b) a house in Khyber block, Allama Iqbal Town Lahore valuing Rs. 6,500,000;
c) an under construction Floor Mills in the name and style of 'Hussain Floor Mills' at Ferozewala District, Sheikhupura having land measuring 8 Kanals 13 marlas with a value of Rs. 6,300,000 with building constructed thereon of Rs. 6,500,000; and
d) land measuring 1 kanal 1 marla at Ferozewala District, Sheikhupura.

On 08 March 2010, FIA submitted a challan u/s 173 Cr PC in the court of Special Judge (Central) Lahore against twelve (12) accused out of which two including the principal accused are public absconders who are presently outside Pakistan. The case of extradition of the absconders is being pursued with different agencies / courts in and outside Pakistan. The Civil Court appointed WFSC as custodian of cash, prize bonds and Hussain Floor Mills whereas the house in Khyber block, Allama Iqbal Town Lahore was returned to the occupant on the condition that pending the final decision of the case, the house shall not be disposed off in any manner.

On 30 September 2013, the Court gave its verdict and out of the twelve accused, acquitted five and declared the two main accused who have fled the country as public absconders, while the remaining have been sentenced to various periods of imprisonment and fine; the Court has further adjudicated that all the recovered assets as stated above are confiscated in favor of WFSC (the complainant).

WFSC has invested the recovered cash of Rs. 13,477,000 in saving account on the directions of the Civil Court.

24.1.2 On 12 December 2009 WFSC Filed Interpleader suit u/s 88 CPC in the Civil Court of Lahore for deciding the lawful ownership of defrauded Sukuk Certificates and deposited the 8th and 9th Ijarah rental amount with the Civil Court. Meanwhile, WFSC filed an appeal in the Lahore High Court against the order dated 21 May 2010 of the Civil Judge, Lahore and the honorable High Court (LHC) ordered to continue to deposit the Ijarah rental against the defrauded Sukuk Certificates with the Civil Court and further directed the Civil Court to deposit the same in a profit bearing scheme in a scheduled bank. Accordingly, 10th, 11th, 12th, 13th and 14th (final) Ijarah rentals and the principal amount of Rs. 180 million payable against the demised Sukuk Certificates were deposited in the scheduled bank by the Civil Court.

The Honorable Lahore High Court, Lahore on 17 February 2015 had decided the case in favor of WAPDA and set aside the impugned judgment and decree and hold that the suit is maintainable and that the trial court erred is rejecting the plant. Accordingly, WAPDA has filed an application in the Civil Court, Lahore with the pray to revise the original interplodder suit for deciding the true ownership of the defrauded Sukuk Certificates amounting to Rs. 180 million. M/s Al-Meezan investment Management Company, Soneri Bank Ltd and National Fertilizer Corporation Pakistan (Private) Limited have filed appeals in Honorable Supreme Court of Pakistan against the judgment of Lahore High Court, Lahore.

24.1.3 Meanwhile, MBL, SBL, and BIPL being the affectees' / plaintiffs' filed separate suits against the Company (WFSC) asserting the validity of their purchase transactions. However, in the case of MBL the Honorable Sindh High Court, Karachi vide order dated 31 May 2012 decided thatMBL's suit is not maintainable under the Financial Institutions (Recovery of Finance) Ordinance 2001. Accordingly, the suit was to be registered / fixed as a fresh ordinary case and written statement was filed by defendant / WAPDA Hydroelectric. The case is now filed for framing of issues. The Honorable Court has directed the plaintiffs to first satisfy the Honorable Court on the issue of jurisdiction. The Honorable High Court dismissed the appeals on 10 October 2016 and the case was decided in the favour of WAPDA.

24.1.4 The interpleader suit decision dated 14 April 2017, passed by Mr. Khalil Ahmed, Civil Judge 1st Class, Lahore which decreed in favour of National Fertilizer Corporation Pakistan (Private) Limited. National Fertilizer Corporation (NFC) is held entitled to withdraw amount of their 72 physical Sukuk Certificates to Ex.D1-23/1 to Ex.D1-23/72 valuing Rs. 180 million and all Ijarah Rentals 8th to 14th which have been deposited by the WFSC in the Punjab Bank, Mall View Plaza, Bank Square, Account No. PLS.2774-1 by the order of the court. National Fertilizer Corporation may withdraw the same after the expiry of period of appeal by filing an application in the court in this regard. The other MBL, SBL and BIPL have filed an appeal with the Honorable High Court at Lahore on 13 July 2017 against the decision of Civil Court dated 14 April 2017, which is allowed by Honorable High Court at Lahore. The suit will continue before the Honorable High Court at Lahore. WAPDA Hydroelectric's solicitors expects a favorable outcome in this regard.

24.2 Commitments

24.2.1 Capital commitments contracted for but not incurred as at 30 June 2018 (through forward cost) amounted to Rs. 952,890 million (2017: Rs. 1,733 million).

24.2.2 Commitments under letter of credit amounts to Rs. 1,513 million. (2017: Rs.1,395 million).

24.2.3 Commitments under Stand by letter of credit (SBLC) in favor of supplier for construction of Jinnah Hydro Project amounting to US$ 26.158 million (2017: US$ 40.160 million).

24.2.4 The commitments in respect of Ijarah rentals payable to WAPDA Third Sukuk Company Limited are explained below:-

	2018	2017
	PKR '000'	
With in one year	1,875,109	2,746,047
With in one to five years	3,719,809	5,982,228
	5,594,918	8,728,275

24.2.5 The commitments in respect of arrears of net hydel profit payable to the Government of Khyber Pakhtunkhwa are explained below:-

	2018	2017
With in one year	15,000,000	15,000,000
With in one to five years	15,000,000	25,000,000
	30,000,000	40,000,000

24.2.6 The commitments in respect of arrears of net hydel profit payable to the Government of Punjab are explained below:-

	Note	2018	2017
		PKR '000'	
With in one year		14,860,000	-
With in one to five years		12,140,000	-
		27,000,000	-

25. Revenue

Variable charges	25.1	2,348,928	3,174,783
Fixed charges		56,968,506	62,060,282
		59,317,434	65,235,065

25.1 The amount is net of sale tax amounting to Rs. 399 million (2017: 539 million).

26. Cost of electricity

Formations	Salaries, wages and benefits (Note 26.2)	Retirement and other benefits (Note 26.3)	Sukuk Ijarah rentals (Note 26.4)	Repairs and maintenance	Depreciation (Note 5)	Dams inspection and monitoring cost	Power, gas and water	NEPRA fees	Insurance (Note 26.5)	Consultancy charges	Fuel charges	Return on assets to provinces	Sundry expenses	Total
	2018													
	PKR '000'													
Tarbela	1,786,374	1,345,545	2,571,259	314,132	3,136,985	170,161	1,6[illegible]980	49,418	4,577	-	3,580	7,610	-	[illegible]
Ghazi Barotha	724,563	499,576	-	230,093	4,030,617	137,255	17,188	20,605	13,615	-	9,977	3,173	-	[illegible]
Mangla	874,925	792,347	[illegible]	229,783	[illegible]	275,874	76,939	34,299	1,902	[illegible]	1,300	12,188	-	[illegible]
Warsak	307,327	303,196	-	46,626	180,562	23,724	62,374	2,453	1,168	154,455	650	-	-	[illegible]
Chashma	409,926	390,015	-	65,344	973,984	39,749	26,033	2,814	6,687	-	3,246	-	-	[illegible]
Rasul	[illegible]	46,182	-	[illegible]	13,757	-	369	732	23	275	-	-	-	[illegible]
Dargai	37,488	46,538	-	7,287	35,111	-	600	254	-	47	-	-	-	[illegible]
Nandipur	68,962	43,643	-	5,261	2,7[illegible]749	-	133	196	18	-	4	-	-	[illegible]
Shadiwal	35,672	35,792	-	13,227	[illegible]420	-	82	192	6	-	195	-	-	[illegible]
Chichoki	38,945	34,458	-	11,254	5,104	-	741	188	-	-	-	-	-	[illegible]
Kurram Garhi	40,947	26,235	-	4,180	[illegible]	-	[illegible]	17	-	-	-	-	-	[illegible]
Renala	28,112	20,447	-	4,750	718	-	150	59	-	-	-	-	-	[illegible]
Chitral	26,342	18,661	-	[illegible]	[illegible]	-	133	18	9	-	2,604	-	-	[illegible]
Khan Khwar	172,795	10,892	-	6,054	[illegible]	[illegible]	620	[illegible]	[illegible]	-	4	[illegible]	-	[illegible]
Allai Khwar	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6,102	-	39	-	-	[illegible]
Gomal Zam	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	5	2,772	-	-	[illegible]	-	-	[illegible]
Jinnah	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	29	218	[illegible]	-	[illegible]	-	22	[illegible]
Jabban	[illegible]	[illegible]	-	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	-	-	-	-	[illegible]
Dubair Khwar	[illegible]	[illegible]	-	[illegible]	[illegible]	-	[illegible]	[illegible]	-	-	[illegible]	-	-	[illegible]
Others	[illegible]	[illegible]	-	[illegible]	[illegible]	-	[illegible]	-	-	-	-	-	-	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	22	[illegible]

Formations	Salaries, wages and benefits (Note 26.2)	Retirement and other benefits (Note 26.3)	Sukuk Ijarah rentals (Note 26.4)	Repairs and maintenance	Depreciation (Note 5)	Dams inspection and monitoring cost	Power, gas and water	NEPRA fees	Insurance (Note 26.5)	Consultancy charges	Fuel charges	Return on assets to provinces	Sundry expenses	Total
	2017													
	PKR '000'													
Tarbela	1,040,585	1,543,906	3,036,615	231,492	3,301,005	405,881	108,653	49,019	2,409	-	3,474	4,972	-	9,728,011
Ghazi Barotha	519,967	483,192	-	91,597	4,632,926	183,215	17,127	19,824	14,045	-	1,050	4,000	-	5,986,543
Mangla	568,255	717,046	-	150,583	1,837,309	246,836	69,227	13,672	1,069	-	1,167	-	28	3,605,492
Warsak	301,224	414,197	-	78,561	172,958	6,493	66,173	3,322	1,115	2,161	991	4,000	-	1,051,195
Chashma	291,228	371,098	-	143,917	982,637	9,323	21,435	2,516	6,895	-	14,703	-	-	1,843,752
Rasul	45,187	37,595	-	7,699	42,358	-	143	301	35	-	-	-	-	132,316
Dargai	58,863	42,678	-	5,798	19,399	-	683	273	-	-	-	-	-	128,604
Nandipur	50,326	38,619	-	4,485	5,109	-	343	189	11	-	-	-	-	99,082
Shadiwal	39,368	28,706	-	3,463	5,364	-	136	185	3	-	225	-	-	77,450
Chichoki	41,363	25,443	-	5,019	19,523	-	141	140	-	-	-	-	-	91,629
Kurram Garhi	29,129	18,389	-	-	3,317	-	30	55	-	-	-	-	-	50,920
Renala	12,608	9,660	-	5,944	562	-	140	15	-	-	-	-	-	28,929
Chitral	18,522	9,237	-	2,207	10,262	-	302	14	-	-	2,352	-	-	42,896
Khan Khwar	118,659	35,782	-	8,825	344,635	-	701	984	3,626	-	142	-	-	513,352
Allai Khwar	97,689	17,199	-	2,632	403,885	2,113	370	1,634	7,221	-	17	-	-	532,760
Gomal Zam	43,668	14,021	-	904	199,533	-	-	238	2,602	-	-	-	-	260,966
Jinnah	138,054	82,389	-	27,330	403,027	-	877	1,312	12,147	-	-	-	-	665,136
Jabban	39,077	18,499	-	11,441	173,779	-	455	1,449	4,105	500	-	-	-	249,305
Dubair Khwar	104,982	14,087	-	1,140	287,590	2,951	436	1,776	-	-	175	-	-	413,137
Others	33,670	210,748	-	18,529	2,287	-	3,597	-	-	584	-	-	36,983	306,398
Total	3,591,524	4,132,131	3,036,615	803,555	12,858,675	856,712	290,949	96,978	55,281	3,245	24,276	12,972	37,011	25,779,924

26.2 Salaries, wages and benefits

	2018	2017
	PKR '000'	
Pay and allowances	[illegible]	3,398,482
Other benefits	[illegible]	193,042
	[illegible]	3,591,524

26.3 Retirement and other benefits

Pension	[illegible]	3,419,535
Free electricity	[illegible]	297,685
Free medical	[illegible]	414,601
	[illegible]	4,132,131

Sukuk-I	1,128,153
Sukuk-III	1,908,462
	[illegible]

As per the AAPDA (equipment) Notification SRO No. [illegible], AAPDA Lahore [illegible] equipment of power houses have been given insurance coverage based on written down value of equipment.

27. Operating expenses

Formations	Authority overheads	R&D - Survey and Investigation (Note 6 & 27.2)	Vehicle running expenses	Outside services employed	Travelling expenses	Office expenses	Advertis-ement and periodicals	Legal and professional charges	Commu-nication	Rent, rates and taxes	Other	Total
	2018											
	PKR '000'											
Tarbela	607,043	-	62,497	7,556	16,213	10,828	2,768	1,624	2,909	162	712	711,992
Ghazi Barotha	133,245	-	23,317	-	5,062	1,510	1,109	23	982	-	-	165,248
Mangla	129,745	-	38,115	-	14,893	3,250	2,431	1,823	2,486	832	1,835	195,431
Warsak	41,749	-	12,293	-	6,171	1,254	1,684	327	952	-	-	64,430
Chashma	39,109	-	15,975	-	8,643	1,703	1,687	407	1,179	114	215	69,032
Rasul	5,825	-	901	-	1,496	141	177	-	200	-	-	8,738
Dargai	4,657	-	609	8,082	1,246	163	198	-	115	-	31	15,221
Nandipur	4,417	-	1,161	-	1,055	166	162	30	162	-	-	7,154
Shadiwal	3,194	-	1,245	-	692	145	142	-	196	-	-	6,114
Chichoki	3,219	-	2,509	-	1,577	97	299	144	101	-	-	7,947
Kurram Garhi	1,405	-	335	-	806	31	126	32	18	-	149	2,880
Renala	1,086	-	392	-	690	47	80	-	120	-	-	2,421
Chitral	1,119	-	626	-	1,114	76	-	-	61	-	-	2,996
Khan Khwar	12,376	-	4,329	-	4,593	429	66	94	464	-	-	22,122
Allai Khwar	18,454	-	1,556	-	2,258	71	16	-	124	-	-	22,479
Gomal Zam	4,155	-	2,509	-	1,440	244	409	18	207	-	-	9,273
Jinnah	29,703	-	7,735	-	5,175	1,176	560	-	2,575	86	401	47,403
Jabban	6,401	-	1,659	7,458	1,568	282	72	-	36	-	1,016	17,892
Dubair Khwar	16,125	-	1,570	-	1,696	92	444	208	63	-	-	20,201
Others	126,545	1,562,558	19,782	127	11,891	2,510	1,897	13,431	1,815	1,618	225	1,734,777
Total	1,182,353	1,562,558	199,287	23,199	88,171	23,918	13,919	18,231	14,757	2,827	4,576	3,123,793

27.1 Operating expenses

Formations	Authority overheads	R&D - Survey and Investigation (Note 6 & 27.2)	Vehicle running expenses	Outside services employed	Travelling expenses	Office expenses	Advertis-ement and periodicals	Legal and profess-ional charges	Commu-nication	Rent, rates and taxes	Others	Total
	2017											
	PKR '000'											
Tarbela	343,472	-	64,998	76,168	12,941	6,603	5,631	676	2,183	156	187	513,015
Ghazi Barotha	134,036	-	34,210	606	7,088	1,742	4,197	1,082	1,741	-	52	184,754
Mangla	130,114	-	29,081	-	10,621	3,223	3,878	2,732	2,138	1,339	1,668	184,794
Warsak	43,122	-	10,442	-	5,725	1,244	2,203	56	951	-	144	63,887
Chashma	43,737	-	24,979	-	6,909	1,862	3,523	348	1,064	211	394	83,027
Rasul	4,619	-	1,018	-	1,244	118	190	85	162	-	-	7,436
Dargai	5,455	-	608	-	1,115	159	67	-	155	-	-	7,559
Nandipur	4,364	-	1,206	-	854	241	254	24	137	-	-	7,080
Shadiwal	3,660	-	1,214	-	572	73	200	12	90	-	1,514	7,335
Chichoki	3,897	-	2,314	-	1,072	73	172	116	34	-	-	7,678
Kurram Garhi	2,433	-	296	-	518	21	-	22	26	-	271	3,587
Renala	1,194	-	567	-	634	49	122	18	81	-	40	2,705
Chitral	1,354	-	382	-	521	38	-	-	51	-	-	2,346
Khan Khwar	10,630	-	3,434	-	3,781	336	610	29	452	-	-	19,272
Allai Khwar	11,097	-	1,425	-	1,148	61	154	-	116	-	-	14,001
Gomal Zam	3,985	-	1,285	-	891	197	-	-	234	-	853	7,445
Jinnah	15,313	-	3,675	-	2,259	444	760	-	253	1,309	-	24,013
Jabban	5,329	-	2,046	7,414	3,840	583	43	-	129	-	-	19,384
Dubair Khwar	12,215	-	1,262	-	834	97	102	94	81	-	63	14,748
Others	4,017	689,099	3,594	22	2,199	388	531	13,051	13	715	-	713,629
Total	784,043	689,099	188,036	84,210	64,766	17,552	22,637	18,345	10,091	3,730	5,186	1,887,695

27.2 R&D - Survey and investigation includes research and development expenses of projects which cannot be developed due to financial or technical reasons and the projects which are not to be developed by WAPDA Hydroelectric (i.e. the feasibility is either sold to Federal or Provincial Government, any organization or expensed). It also includes the expenses of the office of GM Hydro-planning incurred during the year.

		Note	2018	2017
28.	Other income		PKR '000'	
28.1	Income from financial assets			
	Profit on bank balances		2,120,272	2,348,016
	Interest income - investments		703,713	306,086
			2,823,985	2,654,102
28.2	Income from assets other than financial assets			
	Amortization of grant		144,065	1,125,969
	Income from lease of other property		89,797	82,822
	Miscellaneous income		1,080,594	116,333
	Income from non-utility operation		3,185	3,471
	Interest income - advance to staff		2,159	1,072
	Sale of scrap		32,349	15,587
	Sale of stores		22,042	1,737
			1,374,191	1,346,991
			4,198,176	4,001,093
29.	Finance cost			
	Development hydel projects			
	Interest on foreign relent loans	6.2	12,788,730	7,751,792
	Interest on foreign direct loans	6.2	1,256,911	-
	Dasu syndicated term finance facility	18.4	1,876,362	-
	Interest on cash development loans	6.2	8,506,485	7,696,591
			24,428,508	15,448,383
	Operational hydel stations			
	Interest on foreign relent loans	18.1	2,378,394	2,861,413
	Interest on foreign direct loans	18.2	168,265	220,166
	Interest on cash development loans	18.3	759,086	793,556
	Interest on diminishing Musharakah	29.1	3,298,721	1,442,898
			6,604,466	5,318,033
	Bank charges		1,624	4,932
	Other charges		1,252,100	577,485
			1,253,724	582,417
			32,286,698	21,348,833

29.1 This represents markup accrued on diminishing Musharakah facility, obtained for payment of NHP to the Governments of KPK and Punjab.

30. Financial risk management

30.1 Financial risk factors

WAPDA Hydroelectric financial liabilities comprise of long term financing, trade and other payables, accrued interest, other liabilities and retention money. The main purpose of these financial liabilities is to raise finances for WAPDA Hydroelectric operations. WAPDA Hydroelectric has long term advances and deposits, trade debts, loan and advances, other receivables and cash as financial assets.

WAPDA Hydroelectric activities expose it to a variety of financial risks: market risk (including currency risk, interest rate risk and other price risk), credit risk and liquidity risk. Overall risk management programmed focuses on the liquidity crisis and seeks to minimize potential adverse effects on the financial performance.

Risk management is carried out by management of WAPDA Hydroelectric. The management provides principles for overall risk management, as well as policies covering specific areas such as currency risk, interest rate risk, credit risk and liquidity risk.

30.1.1 Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices will affect WAPDA Hydroelectric's performance or the fair value of its financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return on risk.

30.1.1.1 Foreign currency risk management

Pak Rupee (PKR) is the functional currency and presentational currency of WAPDA Hydroelectric and as a result currency exposure arises from transactions and balances in currencies other than PKR. WAPDA Hydroelectric's potential currency exposure comprises of:

- Transactional exposure in respect of non functional currency monetary items.
- Transactional exposure in respect of non functional currency expenditure and revenues.

The potential currency exposures are discussed below:

Transactional exposure in respect of non functional currency monetary items

Monetary items, including financial assets and liabilities, denominated in currencies other than the functional currency of WAPDA Hydroelectric are periodically restated to PKR equivalent, and the associated gain or loss is taken to the profit or loss. The foreign currency risk related to monetary items is managed as part of the risk management strategy.

Transactional exposure in respect of non functional currency expenditure

Certain operating and capital expenditure is incurred by WAPDA Hydroelectric in currencies other than the functional currency. These currency risks are managed as a part of overall risk management strategy.

Exposure to foreign currency risk

The WAPDA Hydroelectric's exposure to foreign currency risk was as follows based on notional amounts:

	2018	2017
	----------US $ '000'----------	
Long term financing	374,618	236,928

The following significant exchange rates applied during the year:

	Average rate		Reporting date spot rate	
	2018	2017	2018	2017
US Dollar	110	104.8	121.4	104.85

Sensitivity analysis

At the reporting date, if the PKR had strengthen 10% against the foreign currency with all other variables held constant, loss for the year would have been lower by the amount shown below:

Effect on profit or loss	2018	2017
	PKR '000'	PKR '000'
US Dollar	4,370,645	2,485,375

30.1.1.2 Interest rate risk

The interest rate risk is the risk that the value of the financial instrument will fluctuate due to changes in the market interest rates. Sensitivity to interest rate risk arises from mismatches of financial assets and liabilities that mature in a given period.

At the reporting date the interest rate profile of WAPDA Hydroelectric's interest bearing financial instruments is:

	2018	2017	2018	2017
	%		PKR '000'	
Fixed rate instruments				
Financial assets:				
Term Deposit Receipt (TDRs)	6.4% -8.9%	6.46%	28,000,000	2,000,000
Financial liabilities:				
Loans and borrowings	5% to 17.5%	5% to 17.5%	195,465,673	179,292,071

Fair value sensitivity analysis for fixed rate instruments

WAPDA Hydroelectric does not account for any fixed rate financial assets and liabilities at fair value through profit or loss. Therefore, a change in interest rate at the statement of financial position date would not affect profit or loss of WAPDA Hydroelectric.

	2018	2017	2018	2017
	%		PKR '000'	
Floating rate instruments				
Financial assets:				
Bank balances in deposit accounts	4.25% to 6%	4.25% to 6%	25,649,660	35,018,528
Financial liabilities:				
Foreign direct loan - Credit Suisee	Libor + 3%	Libor + 3%	42,571,795	20,995,760
Syndicated term finance facility	KIBOR + 1.45% margin	KIBOR + 1.45%	25,000,000	25,000,000
Diminishing musharakah	6 months KIBOR minus 50 bps	-	80,152,000	-

Fair value sensitivity analysis for floating rate instruments

The following table demonstrates the sensitivity to a reasonably possible change in floating interest rates, with all other variables held constant, of WAPDA Hydroelectric's (loss) / profit.

	%	2018 PKR '000'	2017 PKR '000'
2018			
Financial assets:			
Bank balances	1%	[illegible]	(24,874)
Financial Liability			
Long term financing - floating rate	1%	[illegible]	277,177

Other price risk

Other price risk is a risk that fair value or future cash flows of a financial instruments will fluctuate because of changes in the market prices (other than those arising from currency risk and interest rate risk), whether those changes are caused by specific to the individual financial instruments or its issuer, or factors effecting all similar instruments traded in the market.

As at 30 June 2018, WAPDA Hydroelectric is not exposed to any significant price risk.

30.1.2 Credit risk

Credit risk represents the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge its obligation. The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was as follows:

	2018	2017
	PKR '000'	
Long term advances and deposits	569,652	493,540
Trade debts	101,324,336	53,472,267
Short term investments	28,000,000	2,000,000
Loan and advances	2,262,283	3,394,253
Other receivables	248,582	267,642
Bank balances	69,686,606	58,085,650
	202,091,459	117,713,352

Credit risk related to trade debts is managed by established procedures and controls relating to customer's credit risk management. Outstanding receivables are regularly monitored.

The maximum credit risk exposure at reporting date is carrying value of financial assets stated above.

The credit quality of financial assets that are neither past due nor impaired can be assessed by reference to external credit ratings (if available) or to historical information about counterparty default rate. The table below shows the bank balances held with some major counterparties at the statement of financial position date.

Bank	Rating			2018	2017
	Short term	Long term	Agency		
				PKR '000'	
National Bank of Pakistan	A1+	AAA	PACRA	42,556,123	22,611,328
Allied Bank Limited	A1+	AA+	PACRA	1,505,382	428,978
United Bank Limited	A1+	AAA	JCR-VIS	944,067	353,256
Habib Bank Limited	A1+	AAA	JCR-VIS	7,749,164	11,884,771
MCB Bank Limited	A1+	AAA	PACRA	3,493,752	3,130,580
Standard Chartered Bank	A1+	AAA	PACRA	3	3
Soneri Bank Limited	A1+	AA-	PACRA	2,454,515	4,145,000
Askari Bank Limited	A1+	AA+	PACRA	6,841,395	10,080,824
Bank Alfalah Limited	A1+	AA+	PACRA	1,965,899	1,966,350
Habib Metropolitan Limited	A1+	AA+	PACRA	1,567,577	3,005,170
				69,077,877	57,606,260

At 30 June 2018, WAPDA Hydroelectric has only customer Central Power Purchasing Agency (CPPA-G) that owed Hydroelectric balance of Rs. 101,324 million (2017: Rs. 53,472 million).

Due to WAPDA Hydroelectric's long standing business relationships with CPPA-G and after giving due consideration to their strong financial standing and Government backing therefore the credit risk is considered minimal.

As at 30 June 2018, the exposure of WAPDA Hydroelectric against Government of Pakistan is as follows:

	2018	2017
	PKR '000'	
Gross Receivable from CPPA - G	101,324,336	53,472,267
Gross Payable to Government of Pakistan	(26,806,982)	(580,439)
Net exposure	74,517,354	52,891,828

30.1.3 Liquidity risk

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities.

WAPDA Hydroelectric approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to WAPDA Hydroelectric's reputation.

The table below analyses WAPDA Hydroelectric's financial liabilities into relevant maturity groupings based on the remaining period at the statement of financial position to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows.

	2018				
	Carrying Amount	Contractual cash flows	Less than 1 year	Between 1 and 5 years	Over 5 years
	PKR '000'				
Long term financing - interest bearing	343,189,468	653,519,208	37,797,904	151,191,616	464,529,688
Retention money payable	1,507,919	1,507,919	-	1,507,919	-
Trade and other payables	35,754,822	35,754,822	35,754,822	-	-
Accrued interest	4,195,904	4,195,904	4,195,904	-	-
Other liabilities	1,064,013	1,064,013	1,064,013	-	-
	383,712,126	696,041,866	78,812,643	152,699,535	464,529,688

	2017				
	Carrying Amount	Contractual cash flows	Less than 1 year	Between 1 and 5 years	Over 5 years
	PKR '000'				
Long term financing - interest bearing	229,164,609	457,595,185	26,446,365	105,785,460	325,363,360
Retention money payable	1,458,312	1,458,312	-	1,458,312	-
Trade and other payables	14,624,707	14,624,707	14,624,707	-	-
Accrued interest	2,106,930	2,106,930	2,106,930	-	-
Other liabilities	1,582,433	1,582,433	1,582,433	-	-
	248,936,991	477,367,567	44,760,435	107,243,772	325,363,360

The contractual cash flows relating to the above financial liabilities have been determined on the basis of mark-up rates effective as at 30 June. The rates of mark up have been disclosed in respective notes to the financial statements.

31 Fair value of financial instruments

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Underlying the definition of fair value is the presumption that the company is a going concern and there is no intention or requirement to curtail materially the scale of its operations or to undertake a transaction on adverse terms.

A financial instrument is regarded as quoted in an active market if quoted prices are readily and regularly available from an exchange dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis.

IFRS 13 'Fair Value Measurement' requires the company to classify fair value measurements and fair value hierarchy that reflects the significance of the inputs used in making the measurements of fair value hierarchy has the following levels:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1)
- Inputs other than quoted prices included within level 1 that are observable for the asset either directly (i.e. derived from prices) (Level 2)
- Inputs for the asset or liability that are not based on observable market data (i.e. unadjusted) inputs (Level 3)

Transfer between levels of the fair value hierarchy are recognized at the end of the reporting period during which the changes have occurred.

The following table shows the carrying amounts and fair values of financial assets and financial liabilities, including their levels in the fair value hierarchy. It does not include fair value information for financial assets and financial liabilities not measured at fair value if the carrying amount is a reasonable approximation of fair value.

	Carrying value				Fair value		
	Loans and receivables	Held to maturity investments	Other financial liabilities	Total	Level 1	Level 2	Level 3
30 June 2018			Rupees				
Financial assets - not measured at fair value							
Trade debts	101,324,336	-	-	101,324,336			
Long term advances and deposits	569,652	-	-	569,652	-	-	-
Loan and advances	2,262,283	-	-	2,262,283	-	-	-
Short term investments	-	28,000,000	-	28,000,000	-	-	-
Other receivables	248,582	-	-	248,582	-	-	-
Cash and bank balances	69,686,606	-	-	69,686,606	-	-	-
	174,091,459	28,000,000	-	202,091,459	-	-	-
Financial liabilities not measured at fair values							
Long term financing - interest bearing	-	-	343,189,468	343,189,468	-	-	-
Retention money payable	-	-	1,507,919	1,507,919	-	-	-
Trade and other payables	-	-	35,754,822	35,754,822	-	-	-
Accrued interest	-	-	4,195,904	4,195,904	-	-	-
Other liabilities	-	-	1,064,013	1,064,013	-	-	-
	-		385,712,126	385,712,126	-	-	-

	Carrying value				Fair value		
	Loans and receivables	Held to maturity investments	Other financial liabilities	Total	Level 1	Level 2	Level 3
30 June 2017			Rupees				
Financial assets - not measured at fair value							
Trade debts	53,472,267	-	-	53,472,267	-	-	-
Long term advances and security deposits	493,540	-	-	493,540	-	-	-
Loan and advances	3,394,253	-	-	3,394,253	-	-	-
Short term investments	-	2,000,000	-	2,000,000	-	-	-
Other receivables	267,642	-	-	267,642	-	-	-
Bank balances	58,085,650	-	-	58,085,650	-	-	-
	115,713,352		-	117,713,352	-	-	-
Financial liabilities not measured at fair values							
Long term financing - interest bearing	-	-	229,164,609	229,164,609	-	-	-
Retention money payable	-	-	1,458,312	1,458,312	-	-	-
Trade and other payables	-	-	14,624,707	14,624,707	-	-	-
Accrued interest	-	-	2,106,930	2,106,930	-	-	-
Other liabilities	-	-	1,582,433	1,582,433	-	-	-
	-	-	248,936,991	248,936,991	-	-	-

32 Number of employees

WAPDA Hydroelectric as at 30 June 2018 has 8,527 (2017: 8,672) active employees all of whom are entitled to post employment benefits and 8,342 (2017: 7,864) pensioners to whom post employment benefits payments are disbursed.

	2018	2017
33. Installed capacity and net electric output		
Installed Capacity (MW)	6,902	6,902
Net Electric Output (GWh)	26,775	30,797

34. Transactions with related parties

The related parties comprise of associated undertaking, subsidiary, Government of Pakistan (GoP) and associated departments and entities being commonly controlled and key management personnel. Balances due from and due to related parties are shown in their respective notes. Details of transactions during the period are as follows:

Nature of relationship	Nature of transaction	2018	2017
		PKR '000'	
Associated undertaking	Revenue	59,317,434	65,235,065
Key management personnel	Authority overhead	417,123	409,295
Affiliate	Insurance premium	52,692	55,281
Subsidiary	Ijarah rentals	2,571,260	3,410,310

35. Date of authorization of issue

These financial statements were authorized for issuance on 12th July, 2019.

36. General

36.1 Figures have been rounded off to the nearest thousands of rupees, unless otherwise stated.

Member (Finance)

Member (Power)

General Manager Finance (Power)
WAPDA House, Lahore

SMS Consultants
0300 431 0305

ANNEX-

Pakistan Water and Power Development Authority
(Hydroelectric - NEPRA regulated business)
Statement of Financial Position
As at 30 June 2019

	Note	2019	2018
		PKR '000'	
Assets			
Non-current assets			
Property, plant and equipment	5	1,083,534,828	945,871,656
Capital work in progress	6	174,287,663	223,506,927
Long term advances and deposits	7	615,489	569,652
		1,258,437,980	1,169,948,235
Current assets			
Stores, spares and loose tools	8	7,510,953	5,094,858
Trade debts	9	193,569,512	101,324,336
Unbilled net hydel profits	10	-	37,403,094
Short term investments	11	3,000,000	31,000,000
Loan and advances	12	5,606,176	3,663,741
Prepayments and other receivables	13	3,718,092	4,584,120
Cash and bank balances	14	71,671,623	69,686,606
		285,076,356	252,756,755
Total assets		1,543,514,336	1,422,704,990
Equity and liabilities			
Equity			
Government of Pakistan's investment	15	63,000,716	63,000,716
Reserves for development works	16	135,387,592	132,160,793
		198,388,308	195,161,509
Surplus on revaluation of property, plant and equipment	17	826,763,465	770,894,369
		1,025,151,773	966,055,878
Non current liabilities			
Long term financing - interest bearing	18	270,119,464	336,424,538
Deferred grants	19	32,454,840	8,499,955
Deferred liabilities	20	47,398,402	44,613,347
Retention money payable		3,082,641	1,507,919
		353,055,347	391,045,759
Current liabilities			
Current portion of long term financing		50,893,698	6,764,930
Trade and other payables	21	48,709,542	36,312,270
Payable against hydel levies	22	62,957,267	17,266,236
Accrued interest		1,152,618	4,195,904
Other liabilities	23	1,594,091	1,064,013
		165,307,216	65,603,353
Contingencies and commitments	24		
		1,543,514,336	1,422,704,990

The annexed notes from 1 to 35 form an integral part of these financial statements.

MEMBER (FINANCE)

MEMBER (POWER)

LAHORE

Pakistan Water and Power Development Authority
(Hydroelectric - NEPRA regulated business)
Statement of Profit or Loss
For the year ended 30 June 2019

	Note	2019	2018
		PKR '000'	
Revenue	25	67,229,632	59,317,434
Cost of electricity	26	(38,150,988)	(27,490,413)
Gross profit		29,078,644	31,827,021
Operating expenses	27	(2,212,237)	(3,133,793)
Other income	28	4,100,484	4,198,176
Operating profit		30,966,891	32,891,404
Finance cost	29	(38,690,956)	(32,286,698)
(Loss) / profit for the year		(7,724,065)	604,706

The annexed notes from 1 to 35 form an integral part of these financial statements.

MEMBER (FINANCE)

MEMBER (POWER)

Pakistan Water and Power Development Authority
(Hydroelectric - NEPRA regulated business)
Statement of Comprehensive Income
For the year ended 30 June 2019

	2019	2018
	PKR '000'	
(Loss) / profit for the year	(7,724,065)	604,706
Other comprehensive income:		
Items not to be reclassified to profit or loss in subsequent periods:		
- Revaluation of property, plant and equipment	66,819,960	
- Actuarial loss on defined benefit plans	-	(9,470,118)
Total comprehensive income / (loss) for the year	59,095,895	(8,865,412)

The annexed notes from 1 to 35 form an integral part of these financial statements.

KMG/H

Pakistan Water & Power Development Authority LAHORE

MEMBER (FINANCE)

MEMBER (POWER)

Pakistan Water and Power Development Authority
(Hydroelectric - NEPRA regulated business)
Statement of Cash Flows
For the year ended 30 June 2019

	Note	2019	2018
		PKR '000'	
Cash flows from operating activities			
(Loss) / profit for the year		(7,724,065)	604,706
Adjustments of non-cash items			
Depreciation of property, plant and equipment		16,393,282	12,887,616
Finance cost		38,690,956	32,286,698
Ijarah rental		1,834,072	2,571,259
Provision against employee benefits		5,856,703	4,492,525
Impairment loss on property, plant and equipment		4,575,831	-
Amortization of grants		(279,365)	(144,065)
		69,071,379	52,094,033
		61,347,314	52,698,739
Working capital changes			
(Increase) / decrease in current assets:			
Stores, spare parts and loose tools		(2,416,095)	(400,646)
Trade debts		(106,483,251)	(47,852,069)
Unbilled net-hydel profits		37,403,094	(37,401,647)
Loan and advances		(1,161,355)	2,029,039
Bridge financing extended to water wing		(781,080)	(908,517)
Prepayments		(488,954)	(911,058)
Other receivables		(6,886)	19,060
Increase / (decrease) in current liabilities:			
Other liabilities		530,076	(518,420)
Trade and other payables		(1,752,424)	(4,991,873)
Payable against hydel levies		45,691,031	(140,287)
		(31,465,842)	(90,976,418)
Cash generated from operations		29,881,472	(38,277,679)
Ijarah rental paid		(1,834,072)	(2,571,259)
Employee benefits paid		(3,071,648)	(2,141,491)
		(4,905,720)	(4,712,750)
Net cash flows generated from / (used in) operating activities		24,975,752	(42,990,429)
Cash flows from investing activities			
Capital expenditure incurred on property, plant and equipment		(2,452,018)	(2,447,821)
Capital expenditure incurred on capital work in progress		(42,140,843)	(28,771,444)
Investment made during the year		(46,000,000)	(29,000,000)
Investment matured during the year		74,000,000	-
Long term advances and deposits - net		(45,837)	(84,565)
Retention money payable - net		1,574,722	49,607
Net cash flows used in investing activities		(15,063,976)	(60,254,223)
Cash flows from financing activities			
Proceeds from long term financing		26,742,595	119,778,425
Finance costs paid		(15,252,227)	(6,928,430)
Repayment of long term financing		(43,851,277)	(2,796,315)
Grants received		24,234,150	4,791,928
Net cash flows from financing activities		(7,926,759)	114,845,608
Net increase in cash and cash equivalents during the year		1,985,017	11,600,956
Cash and cash equivalents at the beginning of the year		69,686,606	58,085,650
Cash and cash equivalents at the end of the year	14	71,671,623	69,686,606

MEMBER (FINANCE)

MEMBER (POWER)

Pakistan Water and Power Development Authority
(Hydroelectric - NEPRA regulated business)
Statement of Changes in Equity
For the year ended 30 June 2019

	Note	Reserves			Revaluation surplus (Note 17)	Total
		Government of Pakistan Investment (Note 15)	Reserve for development works (Note 16)	Unappropriated profit / (loss)		
		PKR '000'				
Balance as at 01 July 2017		63,000,716	133,182,636	-	778,737,938	974,921,290
Profit for the year		-	-	604,706	-	604,706
Other comprehensive loss		-	-	(9,470,118)	-	(9,470,118)
Total comprehensive loss for the year		-	-	(8,865,412)	-	(8,865,412)
Incremental depreciation due to revaluation	5.2.2	-	-	7,843,569	(7,843,569)	-
Transfer to reserve for development works		-	(1,021,843)	1,021,843	-	-
Balance as at 30 June 2018		63,000,716	132,160,793	-	770,894,369	966,055,878
Loss for the year		-	-	(7,724,065)	-	(7,724,065)
Other comprehensive income		-	-	-	66,819,960	66,819,960
Total comprehensive (loss) / income for the year		-	-	(7,724,065)	66,819,960	59,095,895
Incremental depreciation due to revaluation	5.2.2	-	-	10,950,864	(10,950,864)	-
Transfer to reserve for development works		-	3,226,799	(3,226,799)	-	-
Balance as at 30 June 2019		63,000,716	135,387,592	-	826,763,465	1,025,151,773

The annexed notes from 1 to 35 form an integral part of these financial statements.

MEMBER (FINANCE)

MEMBER (POWER)

Pakistan Water & Power Development Authority LAHORE

1 Legal status and operations

1.1 Pakistan Water and Power Development Authority (WAPDA) is a body, fully owned by the Government of Pakistan (GoP) through Ministry of Water and Power, created by virtue of the Pakistan Water and Power Development Authority Act, 1958 (West Pakistan Act No. XXXI of 1958), commonly known as WAPDA Act, as amended from time to time. The statutory mandate of WAPDA is to develop and utilize the water and power resources of Pakistan on a unified and multipurpose basis. WAPDA remained empowered among others, to frame schemes for the generation, transmission and distribution of power and the construction, maintenance and operation of power houses and grids. The registered office of WAPDA is situated at WAPDA House, Shahrah-e-Quaid-e-Azam, Lahore.

In line with the Strategic Plan 1992 approved by the Cabinet Committee, WAPDA Power Wing had been restructured comprising of the generations, distribution and transmission activities. Assets and liabilities relating to generation activities (other than hydel generation activities) were transferred to 4 Generation Companies (GENCOs) on 01 March 1999 and distribution activities were transferred to 8 Distribution Companies (DISCOs) on 01 July 1998, while transmission activities were transferred to National Transmission and Dispatch Company (NTDC) on 01 March 1999.

1.2 Special purpose financial statements

These are the special purpose financial statements of Pakistan Water and Power Development Authority (Hydroelectric - NEPRA regulated business) prepared in accordance with the special purpose framework specified in note 2.1 to the financial statements.

1.3 WAPDA Hydroelectric

WAPDA decided to segregate the operation and development of hydel activities (WAPDA Hydroelectric - NEPRA regulated business) from its non core activities (non-regulated business) under NEPRA Rules, 2009. The regulated business comprises activities purely related to the hydel power generation and development.

These financial statements only represent the financial information of WAPDA Hydroelectric - NEPRA regulated business ("WAPDA Hydroelectric" or "the entity").

National Electric Power Regulatory Authority (NEPRA) has issued Generation License no. GL(Hydel) /05 /2004 to WAPDA on 03 November 2004 valid for Thirty (30) years up to 2034 under section 30 of NEPRA Act 1997 for its Hydel power stations. Under modification-IV to the license vide letter no. NEPRA/R/LAG-23/325-30 dated 09 January 2015 issued by NEPRA, WAPDA Hydroelectric is currently generating power from following hydel power stations:

Operational Power Plants

1	Tarbela	8	Nandipur	15	Jinnah Hydel
2	Mangla	9	Shadiwal	16	Allai Khwar
3	Warsak	10	Rasul	17	Dubair Khwar
4	Ghazi Brotha	11	Dargai	18	Khan Khwar
5	Chashma	12	Chitral	19	Jabban
6	Renala	13	Kurram Garhi	20	Tarbela 4th Extension
7	Chichoki	14	Gomal Zam	21	Golan Gol

Following projects are under development as at 30 June 2019:

1. Tarbela, 4th Extension
2. Keyal Khwar
3. Golen Gol
4. Diamer Basha Dam

Pakistan Water & Power Development Authority LAHORE

5 Dasu
6 Mohmand Dam
7 Mangla Refurbishment

1.4 Extracts From "WAPDA ACT 1958"

As laid down in Section 22 of WAPDA Act 1958, WAPDA Hydroelectric funds shall consist of:

a) Grants made by the Governments,

b) Loans obtained from the Governments,

c) Grants made by the local bodies as required by the Governments,

d) Sale proceeds of bonds, debentures, commercial paper or other securities issued by WAPDA Hydroelectric and dividends,

e) Loans obtained by the WAPDA Hydroelectric with special or general sanction of the Government,

f) Foreign aid and loans obtained from the International Bank for Reconstruction and Development or otherwise, with the sanction and, under guarantee of (and such terms and conditions as may be approved by the Government), and

g) All other sums received by WAPDA Hydroelectric.

As provided in Section 24 of WAPDA Act, 1958 the liability of the Government of Pakistan to the creditors of WAPDA Hydroelectric shall be limited to the extent of the grant made by the Government and loans passed by WAPDA Hydroelectric with sanction of the Government.

Regarding fixing rate for sale of power, Section 25 of the WAPDA Act, 1958 provides that WAPDA Hydroelectric shall ordinarily sell power at bulk. The rate at which WAPDA Hydroelectric shall sell power be so fixed as to provide for meeting the operating cost, interest charges and depreciation of assets, the redemption at due time of loans other than those covered by depreciation, the payment of any taxes and a reasonable return on investment.

As provided in Section 26 of the WAPDA Act, 1958 WAPDA Hydroelectric shall maintain complete and accurate books of accounts in such form as may be prescribed by it, provided that separate accounts shall be maintained for all schemes and transactions relating to power.

1.5 Reference From "Constitution of Islamic Republic of Pakistan 1973"

The Article 161 (2) of the Constitution of Islamic Republic of Pakistan provides that the net profits earned by the Federal Government, or any undertaking established or administered by the Federal Government i.e. WAPDA as determined by the Presidential Order no. 3 of June 1991, from the bulk generation of power at a hydroelectric station shall be paid to the province on which the hydroelectric station is situated.

For the purpose of this clause "Net Profits" shall be computed by deducting from the revenues accruing from the bulk supply of power from the bus-bar of a hydroelectric station at a rate to be determined by the Council of Common Interest. Operating expenses of the station shall include any sums payable as taxes, duties, interest or return on investment, depreciations and element of obsolescence, over-heads and provision for reserves.

2. Basis of preparation

2.1 Statement of compliance

These special purpose financial statements have been prepared in accordance with the accounting policies mentioned in note 4 to the financial statements. Except as otherwise stated in respective accounting policies in note 4, the accounting policies are based on:

- International Financial Reporting Standards (IFRSs) issued by the International Accounting Standards Board (IASB) as notified and adopted by the Institute of Chartered Accountants of Pakistan (ICAP), except for various disclosure requirements of IFRS; and

Pakistan Water & Power Development Authority LAHORE

the provisions of and directives issued by NEPRA and WAPDA in respect of accounting and financial reporting of the entity.

Where provisions of and directives issued by NEPRA and WAPDA Hydroelectric differ from IFRSs, the provisions of and directives issued by NEPRA and WAPDA Hydroelectric have been followed.

2.2 Functional and presentation currency

These financial statements are presented in Pak Rupee which is also WAPDA Hydroelectric's functional currency.

2.3 Basis of measurement

These financial statements have been prepared under the historical cost convention except for recognition of certain employee retirement benefits at present value and recognition of land, building and civil works, power generation plant assets and dams and reservoir that have been measured at revalued amount.

2.4 Use of estimates and judgments

The preparation of financial statements in conformity with the accounting framework mentioned in note 2.1 requires management to make judgments, estimates and assumptions that affect the application of accounting policies and reported amounts of assets and liabilities, income and expenses.

The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making judgment about carrying value of assets and liabilities that are not readily available from other sources. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which estimates are revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Judgments made by the management in the application of accounting framework mentioned in note 2.1 that have significant effect on the financial statements and estimates with a significant risk of material adjustment in the next year are detailed in the subsequent paragraphs.

2.5 Useful life, residual values, impairment and method of depreciation of property, plant and equipment

WAPDA Hydroelectric reviews the useful lives of property, plant and equipment on regular basis. The residual value, depreciation method and the useful life of each part of property, plant and equipment that is significant in relation to the total cost of the asset are reviewed, and adjusted if appropriate, at each reporting date.

2.6 Employees' retirement benefits

The cost of employees' defined benefit plans are determined using actuarial valuations. An actuarial valuation involves making various assumptions that may differ from actual developments in the future. These includes the determination of the discount rate, future salary increases, mortality rates, future pension increases, future increase in medical costs and future increase in electricity costs. Due to the complexities involved in the valuation and its long term nature, a defined benefit obligation is highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date. WAPDA Hydroelectric uses the valuation performed by an independent actuary as the present value of its defined benefit obligations. Actuarial valuation is conducted every second year and is based on assumptions as mentioned in notes to these financial statements.

LAHORE

2.7 **Impairment allowance against financial assets**

WAPDA Hydroelectric regularly reviews its financial assets for impairment, if any. The allowances in this regard are made, based on management's best estimate, where the prospects of recovery are doubtful.

2.8 **Allowance against stores and spares**

WAPDA Hydroelectric regularly reviews its stores and spares for impairment. Allowance for obsolete and damaged items are determined based on the management's best estimate.

3. **New standards / amendments to approved accounting standards and interpretations which became effective during the year ended 30 June 2019**

3.1 WAPDA Hydroelectric has adopted IFRS 15 'Revenue from Contracts with Customers' and IFRS 9 'Financial Instruments' from 01 July 2018. The impact of adoption of the new standards and respective accounting policies are explained in note 4 below.

3.2 **Standards, interpretations and amendments to published approved accounting standards that are not yet effective:**

The following International Financial Reporting Standards (IFRS Standards) and the amendments and interpretations thereto will be effective for accounting periods beginning on or after 01 July 2019:

- IFRIC 23 'Uncertainty over Income Tax Treatments' (effective for annual periods beginning on or after

- IFRS 16 'Leases' (effective for annual periods beginning on or after 01 January 2019).

Annual improvements to IFRS standards 2014-2016 cycle. The new cycle of improvements addresses improvements to following approved accounting standards:

- Amendments to IFRS 9 'Financial Instruments' – Prepayment Features with Negative Compensation (effective for annual periods beginning on or after 01 January 2019).

- Amendments to IAS 28 'Investments in Associates and Joint Ventures' - Long Term Interests in Associates and Joint Ventures (effective for annual periods beginning on or after 01 January 2019).

- Amendments to IAS 19 'Employee Benefits'- Plan Amendment, Curtailment or Settlement (effective for annual periods beginning on or after 01 January 2019).

- Amendment to IFRS 3 'Business Combinations' – Definition of a Business (effective for business combinations for which the acquisition date is on or after the beginning of annual period on or after 01 January 2020).
- Amendments to IAS 1 Presentation of Financial Statements and IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors (effective for annual periods beginning on or after 01 January 2020).

Annual Improvements to IFRS Standards 2015–2017 Cycle - the improvements address amendments to following approved accounting standards:

- IFRS 3 Business Combinations and IFRS 11 Joint Arrangement (effective for annual periods beginning on or after 01 January 2019).

- IAS 12 Income Taxes (effective for annual periods beginning on or after 01 January 2019).

- IAS 23 Borrowing Costs (effective for annual periods beginning on or after 01 January 2019).

4. Summary of significant accounting policies

The accounting policies adopted for the preparation of these financial statements are the same as those applied in the preparation of the financial statements of WAPDA Hydroelectric for the year ended 30 June 2018, except for those disclosed in note 4.1 of these financial statements.

4.1 Change in accounting policies

The entity has adopted IFRS 9 'Financial Instruments' and IFRS 15 'Revenue from Contracts with Customers' from 01 July 2018.

Due to the transition method chosen by the entity in applying IFRS 9, comparative information throughout these financial statements has not generally been restated to reflect its requirements. The adoption of IFRS 15 did not impact the timing or amount of revenue from contracts with customers and the related assets and liabilities recognised by the entity.

The details of new significant accounting policies adopted, the nature and effect of the changes from previous accounting policies are set out below:

4.1.1 IFRS 15 'Revenue from Contracts with Customers'

On 28 May 2014, the International Accounting Standards Board ("IASB") issued International Financial Reporting Standards ("IFRS") 15 "Revenue From Contracts with Customers" which provides a unified five-step model for determining the timing, measurement and recognition of revenue. The focus of the new standard is to recognize revenue as performance obligations are satisfied rather than based on the transfer of risk and rewards. IFRS 15 includes a comprehensive set of disclosure requirements including qualitative and quantitative information about contracts with customers to understand the nature, amount, timing and uncertainty of revenue. The standard supersedes IAS 18 "Revenue", IAS 11 "Construction Contracts" and a number of revenue related interpretations. Under IFRS 15, revenue is recognized when a customer obtains control of the goods or services. Determining the timing of the transfer of control at a point in time or over time requires judgement.

The entity is engaged in production and sale of electricity to Central Power Purchasing Agency (CPPA-G). The contract with CPPA-G for the sale of electricity includes single performance obligation. As per IFRS- 15 the revenue from sale of electricity is to be recognized over time since CPPA-G simultaneously receives and consumes the benefits of electricity provided by WAPDA Hydroelectric. Invoices are generated on a monthly basis based on the output delivered to CPPA-G. However, in accordance with WAPDA directive dated 28 February 2018 revenue is recognised in the statement of profit or loss in the period in which it is invoiced to CPPA-G irrespective of timing of transfer of electricity. Therefore, adoption of IFRS 15 did not have an impact on timing and amount of recognition of revenue in the financial statements of the entity. The entity has adopted IFRS 15 retrospectively without practical expedients for all reporting periods presented before the date of application i.e., 01 July 2018.

4.1.2 IFRS 9 'Financial Instruments'

IFRS 9 replaced the provisions of IAS 39 ' Financial Instruments: Recognition and Measurement' that relates to the recognition, classification and measurement of financial assets and financial liabilities, derecognition of financial instruments, impairment of financial assets and hedge accounting. The details of new significant accounting policies adopted and the nature and the effect of the changes to the previous accounting policies are set out below:

4.1.2.1 Classification and measurement of financial assets and financial liabilities

IFRS 9 largely retains the existing requirements in IAS 39 for the classification and measurement of financial liabilities. However, it eliminates the previous IAS 39 categories for the financial assets of held to maturity, loans and receivables and available for sale. Under IFRS 9, on initial recognition, the entity classifies its financial assets in the following measurement categories:

- Those to be measured subsequently at fair value either through other comprehensive income ("FVOCI"), or through profit or loss ("FVTPL"); and
- Those to be measured at amortized cost.

The classification depends upon entity's business model for managing the financial assets and the contractual terms of the cash flows.

The following assessments have been made on the basis of the facts and circumstances that existed at the date of initial application:

- The determination of business model within which a financial asset is held; and
- The designation of certain financial assets with respect to subsequent measurement either through profit or loss or other comprehensive income.

A financial asset is measured at amortised cost if it meets both of the following conditions:

- it is held within business model whose objective is to hold assets to collect contractual cash flows; and

- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on principal amount outstanding.

A debt investment is measured at FVOCI if it meets both of the following conditions:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

On initial recognition of an equity investment that is not held for trading, the entity may irrevocably elect to present subsequent changes in the investment's fair value in OCI. This election is made on an investment-by-investment basis.

All financial assets not classified as measured at amortized cost or FVOCI as described above are measured at FVTPL. On initial recognition, the entity may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortized cost or at FVOCI as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

A financial asset is initially measured at fair value plus, for an item not at FVTPL, transaction costs that are directly attributable to its acquisition.

The following accounting policies apply to the subsequent measurement of financial assets:

Financial assets at FVTPL	These assets are subsequently measured at fair value. Net gains and losses, including an interest / markup or dividend income, are recognised in statement of profit or loss.
Financial assets at amortised cost	These assets are subsequently measured at amortised cost using effective interest method. The amortised cost is reduced by impairment losses, if any. Interest / markup income, foreign exchange gains, losses and impairment are recognised in statement of profit or loss.
Debt investment at FVOCI	These assets are subsequently measured at fair value. Interest / markup income calculated using the effective interest method, foreign exchange gains and losses and impairment are recognised in statement of profit or loss. Other net gains and losses are recognised in statement of comprehensive income. On derecognition, gains and losses accumulated in OCI are reclassified to statement of profit or loss.

KDMC,TH

Pakistan Water & Power Development Authority LAHORE.

Equity investments at FVOCI	These assets are subsequently measured at fair value. Dividends are recognised in statement of profit or loss unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses are recognised in OCI and are never reclassified to statement of profit or loss.

The following table explains the original measurement categories under IAS 39 and the new measurement categories under IFRS 9 for each class of the entity's financial assets as at 01 July 2018.

	Original Classification under IAS 39	New classification under IFRS 9	Original carrying amount IAS 39	New carrying amount under IFRS 9
			----------Rupees----------	
Long term deposits, loans and advances	Loans and receivables	Amortized cost	2,831,935	2,831,935
Trade debts	Loans and receivables	Amortized cost	101,324,336	101,324,336
Short term investments	Loans and receivables	Amortized cost	31,000,000	31,000,000
Other receivables	Loans and receivables	Amortized cost	248,582	248,582
Cash and bank balances	Loans and receivables	Amortized cost	69,686,606	69,686,606

4.1.2.2 Impairment

IFRS 9 replaces the 'incurred loss' model in IAS 39 with an 'expected credit loss' ("ECL") model. IFRS 9 introduces a forward looking expected credit loss model, rather than the current incurred loss model, when assessing the impairment of financial assets in the scope of IFRS 9. The new impairment model applies to the financial assets measured at amortized cost, and debt investments at FVOCI, but not to investments in equity instruments.

WAPDA Hydroelectric has not adopted the ECL model introduced by IFRS 9 on the grounds that the major portion of financial assets of the entity comprises of receiveable from GoP against sale of electricity which does not warrant an assessment of impairment. As for other financial assets the impairment allowance would be determined, if required, based on the management's assessment at the reporting date.

4.2 Property, plant and equipment

Property, plant and equipment are stated at cost or revalued amount less accumulated depreciation and any identified impairment loss.

Property, plant and equipment are measured at cost except for land, building and civil works, dams and reservoir and power generation plant assets. Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to WAPDA Hydroelectric and the cost of the item can be measured reliably. All other repair and maintenance costs are charged to profit or loss during the period in which they are incurred.

Land, building and civil works, dams and reservoir and power generation plant assets are subsequently measured at revalued amount. The revalued amount is determined by the independent valuer based on a methodology adopted by the valuer and explained in valuation report. Surplus arising on revaluation of land, building and civil works, dams and reservoir and power generation plant assets is credited to surplus on revaluation of property, plant and equipment in equity. Deficit arising on subsequent revaluation of property, plant and equipment is adjusted against the respective revaluation surplus in equity, if any and the balance amount of deficit is charged to profit or loss. The surplus on revaluation of property, plant and equipment to the extent of incremental depreciation charged on the related assets, is transferred directly to reserves for development works.

The frequency of revaluations depends upon the changes in fair values of the items of property, plant and equipment being revalued. When the management assesses that the fair value of a revalued asset differs materially from its carrying amount, a further revaluation is carried out.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and carrying amount of the asset) is included in the profit or loss in the year the asset is derecognized.

Depreciation is charged to profit or loss on straight-line method so as to write off the cost of property, plant and equipment, excluding the residual value, over their estimated remaining useful lives at the rates specified below. However, depreciation charged on assets that directly relates to construction and acquisition of other assets is included in the cost of such assets. Depreciation on addition to property, plant and equipment is charged from the month in which the asset is available for use and continued till the month of disposal. The revalued assets are depreciated over the remaining useful lives of the assets from the date of revaluation.

Depreciation for the year is based on economic useful life of individual assets. Depreciation is not charged to fully depreciated assets.

Following depreciation and residual value rates are generally applied for new and revalued assets:

Sr. no		Description of assets	Depreciation rate	Residual value
1		Building and civil works	2%	10%
2		Dams and reservoir	1-1.25%	2%
3		Power generation plant assets and equipments		
	a.	Turbines	0.35-2.45%	5-20%
	b.	Generators (Class - F insulation)	2.41-2.86%	1%
	c.	Generators (Class - B insulation)	3.30%	1%
	d.	Gas Insulated Switch (GIS) Gear	1.32-3.59%	0.50%
	e.	Switchyard equipment	3.96%	1%
	f.	Medium and Low Voltage (MV/LV) Switch gear Control and Protection Equipment	3.96%	1%
	g.	Telecommunication and SCADA Equipment	4.99%	0.25%
	h.	Cranes	3.30%	1%

Sr. no		Description of assets	Depreciation rate	Residual value
3	i.	Trash Rack and Cleaning Machines	3.30%	1%
	j.	Truck Trailer	4.95%	1%
	k.	High Voltage (HV) Circuit Breaker Air Blast Type	3.96%	1%
	l.	High Voltage (HV) Circuit Breaker SF-6 Type	3.30%	1%
	m.	Transmission line equipment	3.96%	1%
	n.	Rehabilitation assets	7.00%	-
4		Mobile plant and equipments	20%	1%
5		Other equipment's (All others except computer accessories)	10%	1%
6		Computer accessories	25%	1%
7		Vehicles	20%	5%
8		Assets subject to sukuks	7%	2%

4.3 Capital work-in-progress

Capital work in progress is stated at cost less accumulated impairment losses, if any. Projects of capital work in progress are transferred to operational formations of WAPDA Hydroelectric when 100% progress is certified by the consultants and verified by WAPDA Hydroelectric's own engineers. Capital work in progress mainly includes direct cost incurred on the development projects and mobilization advances given to designated contractors and consultants.

4.4 Financial instruments

WAPDA Hydroelectric has initially applied IFRS 9 from 01 July 2018. Information about the entity's accounting policies regarding classification, subsequent measurement and impairment relating to financial assets is provided in note 4.1.2.

4.4.1 Financial liabilities

Financial liabilities are recognised initially when the entity becomes a party to the contractual provisions of the instrument and are subsequently measured at amortised cost. Interest expense and foreign exchange losses are recognised in profit or loss.

4.4.2 Derecognition

4.4.2.1 Financial assets

WAPDA Hydroelectric derecognises a financial asset when the contractual rights to the cash flows from the financial asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which the entity neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

In case WAPDA Hydroelectric enters into transactions whereby it transfers assets recognised in its statement of financial position, but retains either all or substantially all of the risks and rewards of the transferred assets, the transferred assets are not derecognised.

4.4.2.2 Financial liabilities

WAPDA Hydroelectric derecognises a financial liability when its contractual obligations are discharged or cancelled, or expire. The entity also derecognises a financial liability when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognised at fair value.

On derecognition of a financial liability, the difference between the carrying amount extinguished and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognised in profit or loss.

4.4.2.3 *Offsetting*

Financial assets and financial liabilities are offset and the net amount presented in the statement of financial position when, and only when, the entity currently has a legally enforceable right to set off the amounts and it intends either to settle them on a net basis or to realise the asset and settle the liability simultaneously.

4.5 Impairment of non-financial assets

The carrying amounts of non-financial assets other than stores, spares and loose tools and unbilled net hydel profits, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. The recoverable amount of an asset or cash-generating unit is the higher of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a discount rate that reflects current market assessment of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the "cash-generating unit, or CGU").

WAPDA Hydroelectric's corporate assets do not generate separate cash inflows. If there is an indication that a corporate asset may be impaired, then the recoverable amount is determined for the CGU to which the corporate asset belongs. An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in profit or loss.

Impairment loss recognized in prior periods is assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

4.6 Borrowing cost

Interest on lending from GoP is recorded in profit or loss till the date of scheduled repayment sepcified as per the lending agreement. No interest is recorded on lending from GoP from the date of scheduled payment till the date of actual payment / adjustment of outstanding borrowing to GoP. Interest during construction directly attributable to the construction of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, is not capitalised and instead charged to profit or loss in accordance with the WAPDA directive dated 29 March 2017. Correspondingly investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is credited to profit or loss.

4.7 Stores, spare parts and loose tools

These are valued at lower of cost or net realisable value. The cost is calculated according to moving average, items in transit are value stated at cost comprising invoice value plus incidental charges thereon.

4.8 Reserves for development works

Reserve for development works is recognized in accordance with the provisions available in the Constitution of the Islamic Republic of Pakistan. This reserve would be used for the construction of new / ongoing hydel power development projects through Annual Development Plans of the Government of Pakistan. Such reserves are created from retained earnings. Payment on behalf of non-core business, if any, are also charged against such reserves.

KPMG, YH

Pakistan Water & Power Development Authority LAHORE

4.9 Grants

WAPDA Hydroelectric receives two type of grants: against specific expenses or for specific assets. When the grant relates to an expense item, it is recognized as income over the period necessary to match the costs that it is intended to compensate. Where the grant relates to an asset, it is recognized as deferred income and charged to profit or loss over the expected useful life of the related asset.

Where WAPDA Hydroelectric receives non-monetary grants, the asset and the grant are recorded at market value and released to the statement of profit or loss over the expected useful life of the relevant asset by equal annual installments.

4.10 Employees' retirement benefits

4.10.1 Defined benefit plans

WAPDA Hydroelectric operates its own unfunded defined benefit plan for medical, free electricity and pension benefits schemes for its active and former employees. Due to materially different risks associated with each benefit plan the entity has disaggregated the plan for disclosure purposes. The entity underwrites the actuarial risk associated with the plan and determines the net defined benefit liability by consulting a qualified independent actuary.

The entity recognizes the net defined benefit liability in the statement of financial position. The cost of providing benefits under the defined benefit plan is determined by a independent qualify actuary using the projected unit credit method. Actuarial valuation is conducted every second year. Re-measurements, comprising of actuarial gains and losses from changes in actuarial and experience assumptions are recognized immediately in the statements of financial position with a corresponding debit or credit to retained earnings through other comprehensive income in the period in which they occur. Re-measurement of net defined benefit liability recognized in other comprehensive income shall not be reclassified to profit or loss in subsequent periods.

Past service costs are recognized in the profit or loss on earlier of; the date of the plan amendment or curtailment, and the date when entity recognizes related restructuring cost. Net interest is calculated by applying the discount rate to the net defined benefit liability. The entity recognizes the current service cost, past service cost, gains and losses on curtailments, non-routine settlements and net interest expense or income changes in the net defined benefit obligation in the statement of financial position.

4.10.2 Leave encashment

Employees of WAPDA Hydroelectric are entitled to accumulate the unutilized privilege leaves up to 365 days which are encashable only at the time of retirement or leaving the service. Accordingly accruals are made annually to cover the obligation for accumulating compensated absences on the basis of accumulated leaves of each employee.

4.10.3 General provident fund and WAPDA welfare fund

WAPDA Hydroelectric operates self contributed general provident fund and WAPDA Welfare fund for its employees. Wapda Hydroelectric and the employees' equal contributions which are remitted to the funds and afterwards utilized as per standard operating procedures approved by WAPDA. The contribution by the employees is deducted from the salaries whereas contribution by WAPDA Hydroelectric is charged to profit or loss.

LAHORE

4.11 Foreign currencies

Foreign currency transactions are recorded using the rate of conversion applicable on the date of transaction. All monetary assets and liabilities in foreign currencies are translated at exchange rates prevailing at the reporting date except in the case of foreign currency loans covered by the State Bank of Pakistan's Exchange Risk Coverage Scheme which are translated at the rates provided under the scheme. Exchange differences for the period up to the date of commissioning of assets procured out of foreign currency liabilities are capitalized to the extent they are eligible for capitalization. All other exchange differences are charged to profit or loss.

4.12 Revenue

Revenue from contract with customers

WAPDA Hydroelectric has initially applied IFRS 15 from 01 July 2018. Information about the entity's accounting policies relating to contracts with customers is provided in note 4.1.1.

Revenue is recognised in the statement of profit or loss in the period in which it is invoiced to CPPA-G irrespective of timing of transfer of electricity to the power infrastructure (transmission system) of the National Transmission and Dispatch Company Limited (NTDCL), net of hydel levies.

Grant income

- Grant related to fixed assets are taken to income over the useful life of the operating assets in order to match with the corresponding depreciation expense.

- Grant for operating expenditures are amortized on the basis of expenditure incurred in accordance with the terms attached to the respective grants.

Profit on bank deposits and investment income

- Profit on deposit accounts and investments is recognized using effective interest rate.

Sale of scrap and store

- Revenue from sale of scrap and store items is recognized when title of items passes to buyers which is generally on dispatch of goods.

4.13 Hydel levies

Hydel levies include net hydel profit payable (NHP) to the provinces as per instructions of the Government of Pakistan; water usage charges payable to the Government of Azad Jammu & Kashmir; and water management charges payable to the Indus River System Authority (IRSA), levied by the GoP. These levies are billed to the Central Power Purchasing Agency (CPPA-G) and recognized in the statement of financial position as receivable and unpaid amount of levies is recognized as payable against hydel levies.

4.14 Taxation

Income of WAPDA Hydroelectric is exempt from income tax as per provisions of Clause 66 (xvi) Part-I of Second Schedule to the Income Tax Ordinance, 2001. Interest income u/s 151, property income u/s 155 and cash withdrawals from bank u/s 231A of the Income Tax Ordinance, 2001 are also exempt. Exemption certificates in these regards are issued by Commissioner Income Tax on yearly basis.

Pakistan Water & Power Development Authority LAHORE

5 Property, plant and equipment - owned

Asset class	2018													
	Cost / Revalued amount							Accumulated depreciation						
	Opening balance as at 01 July 2018	Revaluation adjustment	Additions during the year	Disposals during the year / adjustments	Transfers	Closing balance as at 30 June 2019	Depreciation rates (%)	Opening balance as at 01 July 2018	Revaluation adjustment	Charge for the year	Disposals during the year / adjustments	Transfers	Closing balance as at 30 June 2019	Written down value as at 30 June 2019
	(Rupees in thousands)													
Land	442,166,123	-	206,980	-	-	442,375,503	-	-	-	-	-		-	442,375,503
Building and civil works	202,017,207	-	22,511,563	(9,780)	555,976	225,074,966	2	87,576,174	-	3,965,016	(9,528)	111,918	91,564,480	133,510,486
Power generation plant assets	184,781,677	302,104,289	44,942,732	(123,988)	3,302,780	535,007,490	3.35-7	121,766,400	239,859,960	9,925,233	(9,000)	1,295,996	371,908,556	163,098,934
Transmission line equipment	8,317,981	-	9,184,478	-	(2,673,865)	14,828,589	3.96	1,483,140	-	578,410	(19)	(605,553)	1,455,982	13,382,587
Dams and reservoir	427,987,675	-	17,006,291	-	276,197	445,272,163	1-1.25	110,452,119	-	4,724,320	106	56,202	115,232,747	330,039,416
General / plant assets	2,644,341	-	55,476	(2,933)	(1,404,068)	1,292,755	10	1,438,517	-	101,189	9,529	(858,505)	685,661	543,094
Office equipment	186,900	-	33,629	-	-	220,529	10-25	107,615	-	13,687	12,478	-	133,760	86,749
Furniture and fixtures	982,208	-	9,088	-	-	991,294	10	564,934	-	8,563	2,470	-	573,967	97,327
Transportation equipment	2,318,617	-	71,612	(6,941)	-	2,383,288	20	1,832,172	-	87,668	32,476	-	1,952,516	430,772
Total	1,271,112,727	302,104,289	93,982,243	(142,703)	-	1,967,056,557		326,241,071	239,859,960	18,393,292	37,416	-	583,531,725	1,383,524,832

Asset class	2018													
	Cost / Revalued amount							Accumulated depreciation						
	Opening balance as at 01 July 2017	Additions during the year	Disposals during the year	Transfers	Closing balance as at 30 June 2018	Depreciation rates (%)	Opening balance as at 01 July 2017	Charge for the year	Disposals during the year	Transfers	Closing balance as at 30 June 2018	Written down value as at 30 June 2018
	(Rupees in thousands)											
Land	442,198,189	2,118	-	(32,184)	442,166,123	-	-	-	-	-	-	442,166,123
Building and civil works	201,327,388	659,178	(1,540)	32,184	202,017,207	2	83,897,872	3,659,236	4	-	87,576,174	114,441,033
Power generation plant assets	183,519,944	1,313,709	(51,976)	-	184,781,677	1.99-7	117,402,448	4,364,148	(196)	-	121,766,400	63,015,277
Transmission line equipment	8,317,981	-	-	-	8,317,981	3.96	1,229,890	253,250	-	-	1,483,140	6,834,841
Dams and reservoir	427,920,845	66,830	-	-	427,987,675	1-1.25	105,068,258	4,383,861	-	-	110,452,119	317,535,556
General / plant assets	2,432,287	212,210	(156)	-	2,644,341	10	1,312,302	117,139	9,076	-	1,438,517	1,205,824
Office equipment	152,692	34,376	(168)	-	186,900	10-25	93,549	11,816	12,158	-	107,615	79,285
Furniture and furniture	956,822	25,344	(80)	-	982,206	10	578,212	4,804	2,118	-	584,934	97,272
Transportation equipment	2,092,961	239,650	(3,994)	-	2,318,617	20	1,742,640	54,700	24,832	-	1,832,172	486,445
Total	1,208,616,016	2,553,715	(57,904)	-	1,271,112,727		312,305,485	12,867,516	47,990	-	325,241,071	945,871,656

07-16,701

5.1 Property, plant and equipment by power station

Power stations	2019										
	Cost / Revalued amount					Accumulated depreciation					Written down value as at 30 June 2019 (based on revaluation)
	Opening balance as at 01 July 2019	Revaluation adjustment	Additions during the year	Disposals during the year / adjustments	Closing balance as at 30 June 2019	Opening balance as at 01 July 2019	Revaluation adjustment	Charge for the year	Disposals / adjustments	Closing balance as at 30 June 2019	
	(Rupees in thousands)										
Tarbela	291,473,551	139,901,261	742,819	-	432,117,631	156,102,491	122,283,041	5,081,445	5,257	283,473,234	148,644,397
Ghazi Barotha	574,540,447	44,764,328	150,862	(1,457)	619,454,180	66,285,954	24,076,613	5,975,377	(652)	96,337,292	523,116,888
Mangla	248,257,262	57,516,292	1,153,443	(1,326)	306,925,671	57,005,633	53,449,992	1,799,800	(1,260)	112,254,165	194,671,506
Warsak	13,217,992	20,337,265	19,407	(776)	33,573,888	8,860,757	19,129,856	243,955	(5,137)	28,229,461	5,344,427
Chashma	50,979,261	5,815,354	94,467	(922)	56,888,160	17,830,335	3,541,797	783,500	(603)	22,155,029	34,733,131
Rasul	4,661,664	3,554,430	13,137	-	8,249,251	2,430,379	3,533,330	45,615	-	6,009,324	2,239,927
Dargai	2,532,976	3,005,535	2,382	(9,760)	5,531,113	1,329,264	2,979,337	21,087	(15,682)	4,314,006	1,217,107
Nandipur	3,911,986	2,055,045	6,296	-	5,973,327	2,598,617	2,031,824	5,836	-	4,636,277	1,337,050
Shadiwal	2,210,837	1,936,862	7,914	(189)	4,155,424	1,502,571	1,925,107	7,017	(180)	3,434,515	720,909
Chichoki	1,653,864	1,760,962	27,629	(525)	3,441,930	1,079,660	1,757,711	20,092	(759)	2,856,724	585,206
Kurram Garhi	713,129	979,477	608	-	1,693,214	462,222	969,786	3,459	-	1,435,467	257,747
Renala Khurd	454,860	243,620	4,800	-	703,280	152,100	243,559	643	-	396,302	306,978
Chitral	661,871	256,254	189	-	918,314	274,555	249,158	10,080	-	533,793	384,521
Khan Khwar	9,660,957	3,912,991	8,734	-	13,582,682	2,031,507	891,927	295,997	-	3,219,431	10,363,251
Allai Khwar	15,185,845	5,660,138	2,309	(799)	20,847,493	2,548,730	634,077	531,674	850	3,715,531	17,131,962
Gomal Zam	8,075,465	826,967	659	-	8,903,091	980,629	313,635	118,182	-	1,412,446	7,490,645
Jinnah Hydel	17,343,213	2,561,592	297,318	-	20,202,123	2,280,420	416,486	437,663	4,400	3,138,969	17,063,154
Jabban	4,154,252	(11,440)	9,055	(126,981)	4,024,886	629,149	(18,678)	127,699	(6,569)	729,601	3,295,285
Dubair Khwar	20,823,675	7,027,356	1,273	-	27,852,304	598,195	1,451,372	521,400	-	2,530,967	25,321,337
Tarbela 4th	-	-	64,626,572	-	64,626,572	-	-	1,757,419	-	1,757,419	62,869,153
Golen Gol	-	-	26,752,691	-	26,752,691	-	-	599,854	-	599,854	26,152,837
Others	579,600	-	70,679	(947)	649,332	297,893	-	5,288	58,751	361,922	287,410
Total	1,271,112,727	302,104,283	93,993,243	(143,702)	1,667,066,557	325,241,871	239,950,960	18,393,282	37,416	583,531,729	1,083,534,828

KMUTH

5.2 The land, buildings and civil works and dams and reservoir were revalued at 30 June 2015 by an independent well reputed valuer, M/s National Engineering Services Pakistan Private Limited (NESPAK) resulting in a surplus of Rs. 758,430 million over the written down value.

The power generation plant assets have been revalued on 01 July 2018 by an independent valuer M/s Iqbal A. Nanjee and Company Private Limited and resulted in a surplus of Rs. 66,820 million over the written down value.

5.2.1 Had the assets been carried under the cost model the carrying amounts would be as follows:

	Note	2019	2018
		PKR '000'	
Land	5.2.3	5,908,094	5,728,780
Buildings and civil works	5.2.4	59,172,937	37,611,540
Power generation plant assets	5.2.5	76,264,808	33,297,805
Dams and reservoir	5.2.6	105,490,626	89,655,561
		246,836,465	166,293,686

5.2.2 Revaluation surplus on the revalued class of assets are as follows:

	Land (Note 5.2.3)	Building and civil works (Note 5.2.4)	Power generation plant assets (Note 5.2.5)	Dams and reservoir (Note 5.2.6)	Total
2019	PKR '000'				
Revalued WDV	442,375,503	133,510,486	163,098,884	330,039,416	1,069,024,289
Historical cost WDV	(5,908,094)	(59,172,937)	(76,264,808)	(105,490,626)	(246,836,465)
Impairment loss charged to profit or loss	-	-	4,575,631	-	4,575,631
Revaluation surplus	436,467,409	74,337,549	91,409,717	224,548,790	826,763,465
2018					
Revalued WDV	442,196,189	114,441,033	63,015,277	317,535,556	937,188,055
Historical cost WDV	(5,728,780)	(37,611,540)	(33,297,805)	(89,655,561)	(166,293,686)
Revaluation surplus	436,467,409	76,829,493	29,717,472	227,879,995	770,894,369

5.2.3 **Land at revalued amount**

Power stations	Cost as at 01 July	Addition / (disposals) / adjustments	Cost as at 30 June 2018	WDV as at 30 June 2019 (based on revaluation)
	PKR '000'			
Tarbela	406,654	-	406,654	23,447,870
Mangla	162,703	-	162,703	115,774,000
Ghazi Barotha	4,468,091	10,328	4,478,419	296,589,897
Warsak	1,306	-	1,306	685,000
Chashma	2,256	-	2,256	980,000
Rasul	917	-	917	654,790
Dargai	250	-	250	832,400
Nandipur	477	-	477	1,159,544
Shadiwal	228	-	228	452,000
Chichoki	120	-	120	414,000
Kurram Garhi	23	-	23	163,000
Renala Khurd	110	-	110	270,900
Chitral	5,895	-	5,895	103,366
Allai Khwar	49,715	-	49,715	49,715
Khan Khwar	102,028	-	102,028	102,028
Dubair Khwar	394,031	-	394,031	394,031
Gomal Zam	18,990	-	18,990	18,990
Jabban	161	-	161	161
Jinnah Hydel	84,759	-	84,759	84,759
* Golen Gol	-	199,052	199,052	199,052
Total	5,698,714	209,380	5,908,094	442,375,503

* This formation has not been revalued, as this was procured after the latest revaluation.

5.2.6 Dams and reservoir

Power stations	Cost				Accumulated depreciation				WDV as at 30 June 2019 (based on cost)	WDV as at 30 June 2019 (based on revaluation)
	As at 01 July 2018	Additions during the year	Disposals / adjustments / transfers	As at 30 June 2019	As at 01 July 2018	Charge for the year	Disposals / adjustments	As at 30 June 2019		
	PKR '000'									
Tarbela	5,407,471	-	-	5,407,471	3,875,616	52,993	-	3,928,609	1,478,862	77,011,865
Mangla	20,991,662	998,125	-	21,989,787	2,656,655	213,625	-	2,870,280	19,119,507	69,253,333
Ghazi Brotha	48,988,622	15,180	-	49,003,802	12,805,635	600,435	-	13,406,070	35,597,732	125,202,396
Chashma	3,691,996	-	-	3,691,996	1,163,012	36,182	-	1,199,194	2,492,802	10,969,584
Rasul	47,070	-	-	47,070	5,741	445	-	6,186	40,884	841,687
Gomal Zam	6,055,377	-	279,197	6,334,574	572,749	62,079	56,308	691,136	5,643,438	5,643,450
Allai Khwar	7,239,278	-	-	7,239,278	934,719	70,945	-	1,005,664	6,233,614	6,233,614
Khan Khwar	4,264,451	-	-	4,264,451	131,680	41,792	-	173,472	4,090,979	4,090,980
Dubair Khwar	13,854,404	-	-	13,854,404	733,944	135,773	-	869,717	12,984,687	12,984,686
Jinnah Hydel	2,257,586	-	-	2,257,586	262,705	22,124	-	284,829	1,972,757	1,972,757
Tarbela 4th	-	3,886,261	-	3,886,261	-	38,085	-	38,085	3,848,176	3,848,176
Golen Gol	-	12,105,725	-	12,105,725	-	118,637	-	118,637	11,987,088	11,987,088
	112,797,917	17,005,291	279,197	130,082,405	23,142,356	1,393,115	56,308	24,591,779	105,490,626	330,039,418

5.2.4 Building and civil works asset

Power stations	Cost				Accumulated depreciation				WDV as at 30 June 2019 (based on cost)	WDV as at 30 June 2019 (based on revaluation)
	As at 01 July 2018	Additions during the year	Disposals / adjustments / transfers	As at 30 June 2019	As at 01 July 2018	Charge for the year	Disposals / adjustments / trasnfers	As at 30 June 2019		
	PKR '000'									
Tarbela	4,959,391	24,120	-	4,983,511	3,291,188	92,427	-	3,383,615	1,599,896	16,848,138
Mangla	1,467,792	145,794	-	1,613,586	542,164	28,318	-	570,482	1,043,104	4,104,195
Ghazi Barotha	25,508,889	111,742	-	25,620,631	7,323,816	483,951	-	7,807,667	17,813,064	60,307,456
Warsak	546,497	17,164	-	563,661	292,056	7,269	-	299,325	264,336	2,380,341
Chashma	6,965,031	3,253	-	6,968,284	2,333,601	132,139	-	2,465,740	4,502,544	14,379,190
Rasul	170,222	10,509	-	180,731	42,861	3,117	-	45,978	134,753	695,161
Dargai	101,054	2,231	(320)	102,965	26,556	1,776	(124)	28,208	74,757	337,722
Nandipur	88,387	1,217	-	89,604	42,486	1,020	-	43,506	46,098	141,731
Shadiwal	76,482	1,100	-	77,582	25,658	1,087	-	26,745	50,837	253,988
Chichoki	37,146	26,934	-	64,080	20,596	1,127	-	21,723	42,357	141,524
Kurram Garhi	19,697	438	-	20,135	7,870	324	-	8,194	11,941	64,970
Renala Khurd	23,064	-	-	23,064	6,488	438	-	6,926	16,138	27,309
Chitral	40,940	-	-	40,940	24,338	792	-	25,130	15,810	271,466
Allai Khwar	2,039,659	-	-	2,039,659	186,680	36,702	-	225,382	1,814,277	1,814,276
Dubair Khwar	1,082,903	494	-	1,083,397	52,869	19,446	-	72,315	1,011,082	1,011,082
Khan Khwar	2,002,726	8,734	-	2,011,460	259,658	36,109	-	295,767	1,715,693	1,715,688
Jubban	979,848	454	-	980,302	87,501	17,686	-	105,187	875,115	875,115
Jinnah Hydel	6,753,140	3,005	-	6,756,145	690,326	121,557	-	811,883	5,944,262	5,944,261
Golan Gol	-	2,739,599	-	2,739,599	-	49,313	-	49,313	2,690,286	2,690,286
Tarbela 4th	-	19,414,598	-	19,414,598	-	349,463	-	349,463	19,065,135	19,065,135
Gomal zam	-	140	555,976	556,116	-	10,008	111,918	121,926	434,190	434,190
Others	10,023	37	-	10,060	2,939	3	(44)	2,798	7,262	7,262
	52,872,891	22,511,563	555,656	75,940,110	15,261,351	1,394,072	111,750	16,767,173	59,172,937	133,510,486

10/06/20

Pakistan Water & Power Development Authority LAHORE

5.2.5 **Power generation plant assets**

Power stations	Cost				Accumulated depreciation				WDV as at 30 June 2019 (based on cost)	WDV as at 30 June 2019 (based on revaluation)
	As at 01 July 2018	Additions during the year	Disposals / adjustments / transfers	As at 30 June 2019	As at 01 July 2018	Charge for the year	Disposals / adjustments	As at 30 June 2019		
	PKR '000'									
Tarbela	10,299,427	702,150	8,923	11,010,500	7,253,811	341,123	(51,863)	7,543,071	3,467,429	31,183,198
Ghazi Barotha	16,266,750	-	59	16,266,809	8,773,145	298,798	285	9,072,218	7,194,591	40,870,369
Warsak	2,435,459	-		2,435,459	923,765	67,280	-	991,045	1,444,414	2,155,746
Chashma	9,412,939	85,442	162,228	9,660,609	5,344,428	312,978	178,944	5,836,360	3,824,259	8,273,162
Rasul	34,027	2,399	-	36,426	16,640	-	-	16,640	19,786	39,523
Dargai	9,742	-	-	9,742	9,191	-	-	9,191	551	32,685
Nandi Pur	18,600	480	-	20,080	13,046	-	-	13,046	7,034	25,852
Shadiwal	16,846	3,669	-	20,515	13,284	-	-	13,284	7,231	23,893
Chichoki	17,462	-	-	17,462	7,862	-	-	7,862	9,600	19,474
Kurram Garhi	32,950	-	-	32,950	14,294	-	-	14,294	18,656	28,712
Renala Kurd	902	-	-	902	810	-	-	810	92	2,587
Chitral	29,938	-	-	29,939	24,488	-	-	24,488	5,450	7,567
Mangla	8,477,071	-	50,313	8,527,384	6,787,526	460,876	20,339	7,288,741	1,238,643	5,374,603
Jabban	2,496,032	8,505	524,236	3,028,773	357,837	124,325	193,389	675,551	2,353,222	2,377,122
Dubair Khwar	2,390,726	-	825,503	3,216,229	115,619	190,432	95,952	402,003	2,814,226	8,304,949
Khan Khwar	1,149,356	-	611,025	1,760,381	353,249	115,303	290,115	758,667	1,001,714	4,000,465
Jinnah Hydel	8,095,096	289,754	59,674	8,444,524	1,262,984	250,610	26,577	1,540,171	6,904,353	9,015,045
Allai Khwar	2,385,063	-	1,489,212	3,874,275	577,960	206,783	419,017	1,203,780	2,670,495	7576097
Gomal Zam	1,976,181	-	(835,175)	1,141,006	397,803	33,713	(168,549)	262,967	878,039	1,382,523
Golen Gol	-	5,099,902	-	5,099,902	-	173,062	-	173,062	4,926,840	4,926,840
Tarbela 4th	-	38,750,431	-	38,750,431	-	1,272,248	-	1,272,248	37,478,183	37,478,183
	65,545,557	44,942,732	2,895,998	113,384,287	32,247,782	3,867,521	1,004,206	37,119,489	76,264,798	163,098,884

5.2.5.1 During the year WAPDA Hydroelectric conducted as assessment of useful lives of its Power Generation Plant Assets through an independent valuer M/s Iqbal Nanjee & Co. which resulted in a change in the remaining useful lives of certain Power Generation Plant Assets. The change in remaining / useful life of these assets has been accounted for as a change in estimate with an impact on current and future years. The effect of these changes on actual and expected depreciation depreciation expense are as follows:

	2019	2020
	PKR '000'	
Decrease in depreciation charge	475,790	475,790

KMGTH

Pakistan Water & Power Development Authority LAHORE

6. Capital work in progress

	Note	2019	2018
		PKR '000'	
Opening balance as at 01 July:		223,506,927	194,735,493
Addition in direct cost during the year		44,461,089	30,663,610
Transfers to property, plant and equipment and stores		(93,350,429)	
Charged to profit or loss during the year:			
R&D - Survey and investigation / adjustments	27	(329,924)	(1,892,366)
Closing balance as at 30 June	6.1	174,287,663	223,506,927

6.1 Projects breakup movement

	2019									
	Diamer Bhasha Dam (Note 6.2)	Tarbela 4th Extension	Golen Gol	Dasu Hydropower Project	Kayal Khwar	Mangla Upgradation	Mohmand Dam	Warsak 2nd Rehabilitation	Other Projects	Total
	PKR '000'									
Opening balance as at 1 July 2018										
Direct cost incurred	77,201,695	66,606,173	26,924,253	38,848,272	2,801,428	4,425,880	-	1,021,346	5,677,879	223,506,927
Movement in direct cost during the year:										
Direct cost incurred	9,187,185	3,147,627	4,111,115	8,562,374	396,354	2,467,551	16,709,234	13,377	(133,729)	44,461,089
Transfers to property plant and equipment	-	(66,426,175)	(26,924,254)	-	-	-	-	-	-	(93,350,429)
R&D - Survey and investigation charged to profit or loss	-	-	-	-	-	-	-	-	(329,924)	(329,924)
	9,187,185	(63,278,548)	(22,813,139)	8,562,374	396,354	2,467,551	16,709,234	13,377	(463,653)	(49,219,264)
Closing balance as at 30 June 2019										
Direct cost incurred	86,388,880	3,327,625	4,111,115	47,410,646	3,197,783	6,893,431	16,709,234	1,034,723	5,214,226	174,287,663

	2018								
	Diamer Bhasha Dam (Note 6.2)	Tarbela 4th Extension	Golen Gol	Dasu Hydropower Project	Keyal Khwar	Mangla Upgradation	Warsak 2nd Rehabilitation	Other Projects	Total
	PKR '000'								
Opening balance as at 1 July 2017									
Direct cost incurred	73,297,363	54,959,617	19,600,687	34,612,535	2,984,096	1,788,767	962,732	6,529,685	194,735,483
Movement in direct cost during the year:									
Direct cost incurred	3,904,332	11,646,556	7,323,566	4,235,737	415,956	2,637,113	58,614	441,936	30,663,810
R&D - Survey and investigation charged to profit or loss	-	-	-	-	(598,623)	-	-	(1,293,743)	(1,892,366)
	3,904,332	11,646,556	7,323,566	4,235,737	(182,667)	2,637,113	58,614	(851,807)	28,771,444
Closing balance as at 30 June 2018									
Direct cost incurred	77,201,695	66,606,173	26,924,253	38,848,272	2,801,429	4,425,880	1,021,346	5,677,879	223,506,927
The project-wise break up of interest during construction (IDC) charged to profit or loss is as follows.									
IDC till 1 July 2017	24,415,200	11,481,852	4,227,505	3,368,671	528,532	-	142,572	-	44,164,332
IDC for the year	8,506,485	7,798,779	2,000,861	5,815,415	125,952	33,557	147,459	-	24,428,508
IDC till 30 June 2018	32,921,685	19,280,631	6,228,366	9,184,086	654,484	33,557	290,031	-	68,592,840
IDC for the year	8,485,098	8,896,598	2,096,314	8,254,115	96,829	193,498	153,258	120,326	28,296,036
IDC till 30 June 2019	**41,406,783**	**28,177,229**	**8,324,680**	**17,438,201**	**751,313**	**227,055**	**443,289**	**120,326**	**96,888,876**

6.2 This includes advance amounting to Rs. 51,884 million (2018: Rs. 51,884 million) given to DC / LAC Chillas for acquistion of land for Diamer Basha Dam.

Pakistan Water & Power Development Authority LAHORE

7. Long term advances and deposits - unsecured	Note	2019	2018
		PKR '000'	
Advances	7.1	613,533	567,982
Security deposits		1,956	1,670
		615,489	569,652

7.1 Long term advances to employees against purchase of:			
House buildings		220,554	181,428
Plots		456,614	446,754
Vehicles		4,962	2,603
Others		139	670
	7.1.1	682,269	631,455
Less: current portion shown under current assets			
House buildings		22,055	18,143
Plots		45,661	44,675
Vehicles		992	521
Others		28	134
		68,736	63,473
		613,533	567,982

7.1.1 These represent loans provided to the permanent employees of WAPDA Hydroelectric at mark up rate of 14.35% (2018: 11.70%) per annum. These loans are recovered in 120 installments in respect of purchase of plot and house and in 60 installments for purchase of car, motorcycle etc.

8. Stores, spares and loose tools	Note	2019	2018
		PKR '000'	
Stores and spares		7,175,036	4,742,237
Loose tools		332,229	351,088
Scrap / unserviceable materials		3,688	1,533
		7,510,953	5,094,858

9. Trade debts unsecured, considered good		
Receivable from CPPA - related party	193,569,512	101,324,336

9.1 Aging of trade debts	2019	2018
	PKR '000'	
Not past due:	22,166,815	15,782,808
Past due:		
- 0 - 30 days	21,121,691	14,475,795
- More than 60 days	150,281,006	71,065,733
	193,569,512	101,324,336

10. Unbilled net hydel profits

This represented unbilled portion of net hydel profits receivable from Central Power Purchase Agency (CPPA) against the amount paid to the Government of Khyber Pakhtunkhwa and the Government of Punjab.

KPMG

10.1 In pursuant to Memorandum of Understanding (MoU) signed on 25th February 2016, between the Government of Pakistan (GoP) and the Government of Khyber Pakhtunkhwa (GoKPK), regarding the settlement of past arrears of NHP, the Council of Common Interest (CCI) gave concurrence to the MoU during its 28th meeting held on 29th February 2016. Under the MoU a total amount of Rs. 70,000 million was agreed to be paid by WAPDA Hydroelectric on account of arrears of NHP to GoKPK as full and final settlement. The settlement was decided to be paid in four installments as follows:

	Installment PKR '000'
Financial Year - 2016	25,000,000
Financial Year - 2017	15,000,000
Financial Year - 2018	15,000,000
Financial Year - 2019	15,000,000
	70,000,000

In compliance with the directions of the CCI, WAPDA Hydroelectric has paid sum amounting to of Rs. 58,093 million out of Rs. 70,000 million to GoKPK as at 30 June 2019. The CCI has allowed WAPDA Hydroelectric to recover the total arrears payable as above through its tariff petition. WAPDA Hydroelectric has been allowed by NEPRA to charge Rs. 181.0964 per kW/month from 07 March 2016 to 22 February 2018 and Rs. 305.549 per kW/month of the installed capacity of all power stations located in Khyber Pakhtunkhwa for the electricity sold to CPPA-G in accordance with the Government of Pakistan notification S.R.O.290(I)/2018 dated 23 February 2018 from the date of notification till the next tariff determination by NEPRA.

10.2 In the light of Council of Common Interest (CCI) decision dated 16 December 2016, the Federal Government through WAPDA Hydroelectric was directed to pay arrears of Rs. 82.70 billion against NHP to the Government of Punjab (GoPb) in 4 installments which are as follows:

	Installment PKR '000'
Financial Year - 2016	38,120,000
Financial Year - 2017	14,860,000
Financial Year - 2018	14,860,000
Financial Year - 2019	14,860,000
	82,700,000

For the first installment WAPDA Hydroelectric was directed to issue irrevocable Promissory Note of one year duration to GoPb by 31 December 2016. In this regard, WAPDA Hydroelectric has already issued the requisite Promissory Note in favour of GoPb on 10 January 2017. WAPDA Hydroelectric has disbursed an amount of Rs. 55,688 million against the installments due for the financial year 2017 and 2018. No payment has been made during the financial year ended 30 June 2019.

The CCI has allowed WAPDA Hydroelectric to recover the total arrears payable as above through its tariff petition. NEPRA has allowed to charge Rs. 2,878.344 per kW/month of the installed capacity of all power stations located in Punjab for the electricity sold to CPPA-G in accordance with the Government of Pakistan notification S.R.O.290(I)/2018 dated 23 February 2018 from the date of notification till the next tariff determination by NEPRA.

11. **Short term investments**	Note	2019	2018
		---------- PKR '000' ----------	
Ammortized cost - Unquoted:			
Investment in Term Deposit Receipt (TDR)	11.1	**3,000,000**	31,000,000
Innovative Investment Bank Limited	11.2	**261,000**	261,000
		3,261,000	31,261,000
Less: Impairment charged		**(261,000)**	(261,000)
		3,000,000	31,000,000

11.1 These are term deposit receipts from commercial banks having maturity latest by six months. These carry mark-up at the rate of 11% to 13.5% (2018: 6.4% - 8.9%) per annum.

KPMG

Pakistan Water & Power Development Authority LAHORE.

11.2 This represents investment made in the Innovative Investment Bank (Formerly Crescent Standard Investment Bank). On maturity, the balance remained unpaid, hence the case was lodged with the Judicial Department of Lahore High Court for the recovery of the said amount. The Honorable Lahore High Court decided the case in favor of WAPDA Hydroelectric and attached the property with forced sale value of Rs. 220 million and appointed Court Auctioneers for recovery of this amount. There has been no further development in the case.

12. Loan and advances	Note	2019	2018
		PKR '000'	
Advance, considered good			
- current portion of long term advances		68,736	63,473
- employees against expense		568,666	795,961
- suppliers and others		1,992,706	605,497
		2,630,108	1,464,931
Bridge financing extended to water wing	12.1	2,976,068	2,194,988
Receivable from non-core business (PSI)	12.2	-	3,822
		5,606,176	3,663,741

12.1 This represents interest free unsecured bridge financing repayable within one year extended to water wing for Kurram Tangi Dam and Kachhi Canal Project and includes mobilization advance of Rs. 1,028 million given to designated contractor for Kurram Tangi Dam.

12.2 This represented receivable against debt service liability (DSL) related to foreign relent loans paid to Government of Pakistan for financial years 2014-15, 2015-16 and 2016-17 on behalf of Kot Addu Power Company Limited (KAPCO) and Neelum Jhelum Hydropower Company (Private) Limited.

13. Prepayments and other receivables	Note	2019	2018
		PKR '000'	
Prepayments	13.1	3,462,624	4,335,538
Other receivables		255,468	248,582
		3,718,092	4,584,120

13.1 This includes prepayments of Rs. 3,425 million (2018: Rs. 2,955 million) to Chief Resident Representative Karachi against import of material.

14. Cash and bank balances	Note	2019	2018
		PKR '000'	
Direct working capital balances			
Cash in transit		118,644	565,173
Cash in hand		-	43,555
Balance with the banks:			
- current accounts			
authority own balance		2,766,627	2,330,243
		2,885,271	2,938,971
Balances held for specific utilizations:			
Balance with the banks:			
- current accounts			
un-utilized balance of loans and grants	14.1	53,524,761	41,097,974
		53,524,761	41,097,974
- deposit accounts			
un-utilized balance of loans	14.2	5,364,488	12,346,871
redemption sinking fund	14.3	2,472,994	4,435,650
authority own balance	14.4	7,424,109	8,867,139
		15,261,591	25,649,660
		68,786,352	66,742,[illegible]
		71,671,623	69,[illegible]

	2019	2018
	PKR '000'	
14.1 Un-utilized balance of loans and grants		
Held in current accounts:		
IDA relent loan for Dasu Hydro project	1,836,259	1,836,259
Foreign direct loan for Dasu Hydro project	49,065,464	37,025,648
IDA relent loan for 4th Extension of Tarbela project	803,924	374,656
IBRD relent loan for 4th Extension of Tarbela project	488,769	590,993
USAID grant for Mangla refurbishment project	1,330,345	1,270,418
	53,524,761	41,097,974
14.2 Held in deposit accounts:		
Un-utilized balance of long term financing for Dasu Hydro project	5,364,488	12,346,870

14.3 This includes Redemption Sinking Fund which was created in March 2013 with HBL WAPDA House branch for the payment of supplier credit of Jinnah Hydel Power station due in February and August each year till August 2020. The profit is accrued on daily product basis for monthly credit of the same at one month KIBOR+15bps.

14.4 Deposit accounts carry interest at the rate ranging from 9.8% to 11.75% (2018: 4.25% to 6.30%) per annum.

	2019	2018
	PKR '000'	
15. Government of Pakistan's investment		
Government of Pakistan investment	63,000,716	63,000,716

This represents investment funds provided by the GoP mainly for Diamer Basha and Mangla Dam Raising Hydel Power projects from time to time.

	Note	2019	2018
		PKR '000'	
16. Reserves for development works			
Reserve for development works	16.1	135,387,592	132,160,793

16.1 Provision for reserve for development works has been created in accordance with policy stated in note 4.8. The WAPDA Hydroelectric has allowed to plough back / invest these reserves in the construction of new/ongoing Hydel power development projects through Annual Development Plans of GOP.

17. Surplus on revaluation of property, plant and equipment

	2019	2018
	PKR '000'	
Opening surplus on revaluation	770,894,369	937,150,805
Add: Surplus on revaluation during the year	66,819,960	(166,256,436)
Less: Incremental depreciation charged during the year	(10,950,864)	-
	826,763,465	770,894,369

KMUTH

Pakistan Water & Power Development Authority LAHORE

		Note	2019	2018
			PKR '000'	
18	**Long term financing - interest bearing**			
	Foreign loans:			
	- relent - unsecured	18.1	109,662,906	102,771,332
	- direct - secured	18.2	59,144,[illegible]	45,566,348
	Local loans:			
	- cash development loans - unsecured	18.3	89,086,166	89,699,780
	- syndicated term finance facility - secured	18.4	25,000,000	25,000,000
	- diminishing musharakah - secured	18.5	38,120,000	80,152,000
			321,013,162	343,189,462
	Less: current portion shown under current liabilities			
	foreign relent loans		9,683,839	4,653,982
	foreign direct loans		2,009,460	1,497,311
	cash development loans		1,080,399	613,621
	diminishing musharka		38,120,000	-
			50,893,698	6,764,930
			270,119,464	336,424,532

18.1 Foreign relent loans - unsecured:

Operational power station loans	18.1.1	10,048,427	12,981,291
Development project loans	18.1.2	99,614,479	89,790,041
		109,662,906	102,771,332

18.1.1 Operational power stations loans

Loan no.	Note	Rate of interest per annum	Outstanding semi annual installments as on 30 June 2019	Repayment commence-ment / maturity	2019	2018
					PKR '000'	
Ghazi Brotha						
ADB-1424-PAK		14.00%	4	2001/2021	941,629	1,412,443
KFW-9566316		14.00%	8	2003/2023	1,189,390	1,486,738
Pk-P-47	18.1.1.1	17.00%	2	2005/2020	569,427	1,138,851
					2,700,446	4,038,032
Chashma Hydel						
French Credit Bank		11.00%	-	1999/2019	-	30,223
French State Bank		11.00%	-	1999/2019	-	27,647
CITI Bank of Japan	18.1.1.2	11.00%	12	2005/2025	635,329	741,218
					635,329	799,088
Allai, Dubair and Khan Khwar projects						
IDB-PAK-0117	18.1.1.3	17.00%	8	2014/2023	4,936,817	6,171,021
Jabban Power station						
AFD Credit Facility	18.1.1.4	15.00%	18	2014/2028	1,775,835	1,973,150
					10,048,427	12,981,291

18.1.1.1 These loans have been obtained for Ghazi Brotha hydel power station from foreign financial institutions by the Government of Pakistan (Borrower) and further re-lent to WAPDA Hydroelectric. These loans are secured through Government Guarantee in favor of those institutions and WAPDA Hydroelectric is responsible for repayment to Government of Pakistan.

18.1.1.2 These loans have been obtained for Chashma hydel power station from foreign financial institutions by the Government of Pakistan (Borrower) and further re-lent to WAPDA Hydroelectric. These loans are secured through Government Guarantee in favor of those institutions and WAPDA Hydroelectric is responsible for repayment to Government of Pakistan.

18.1.1.3 This represents Islamic Development Bank loan amounting to US$ 150.200 million under Istisna's Financing Agreement dated 01 December 2008 for Khan, Allai and Dubair Khwar Hydro Projects obtained by the Government of Pakistan (Borrower). borrower has relent the loan to WAPDA Hydroelectric being executing agency of Khwar Projects. The loan will be repaid in 15 years including 3 years of grace period.

18.1.1.4 This represents French Development Agency (AFD) loan amounting to Euro 26.500 million under Subsidiary Loan Agreement dated 13 December 2010 for Jabban Power station taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the Jabban project. The loan will be repaid in 18 years including 3 years of grace period.

18.1.2 **Development projects loans**

Loan name	Note	Rate of interest per annum	Outstanding semi annual installments as on 30 June 2019	Repayment commence-ment / maturity	2019	2018
					---------- PKR '000' ----------	
Golen Gol						
Kuwait Fund Loan No. 742	18.1.2.1	17.00%	12	2014/2025	2,683,745	3,107,704
Saudi Fund Loan No. 10/479	18.1.2.2	17.00%	12	2014/2025	2,155,384	2,514,614
Saudi Fund Loan No. 14/609	18.1.2.3	15.00%	29	2019/2034	5,349,047	4,720,436
OPEC Fund Loan No. 1205-P	18.1.2.4	17.00%	18	2018/2028	1,261,649	1,401,832
OPEC Fund Loan No.1206-PB	18.1.2.4	17.00%	18	2018/2028	937,211	837,564
					12,387,037	12,582,150
Tarbela 4th Extension						
IDA CREDIT No. 5079-PK	18.1.2.5	15.00%	35	2017/2037	18,059,104	15,918,666
IBRD 8144-PK	18.1.2.6	15.00%	23	2020/2031	41,712,554	40,338,559
					59,771,658	56,257,225
Kayal Khwar						
KFW-320517	18.1.2.7	15.00%	79	2019/2059	516,543	523,081
KFW-3003374	18.1.2.7	15.00%	59	2019/2049	132,839	101,923
					649,382	625,004
Dasu Hydro						
IDA CREDIT No. 5498-PK	18.1.2.8	15.00%	40	2020/2039	22,823,983	17,995,372
Warsak Rehabilitation (Phase 2)						
AFD Credit Facility	18.1.2.9	15.00%	28	2022/2036	981,049	981,049
KFW-15568024	18.1.2.10	15.00%	60	2026/2055	40,671	40,671
					1,021,720	1,021,720
Mangla Refurbishment Project						
AFD Credit Facility	18.1.2.11	12.00%	30	2023/2037	1,914,289	1,308,570
Tarbela 5th Extension						
IBRD Loan No.8646-PK	18.1.2.12	12.00%	28	2023/2036	755,949	-
AIIB Loan No.LN 0005-PAK	18.1.2.13	12.00%	28	2023/2036	310,461	-
					1,066,410	-
					99,614,479	89,790,041

18.1.2.1 This represents Kuwait Fund loan amounting to Kuwaiti Dinar 11 million under Subsidiary Loan Agreement dated 05 September 2008 for Golen Gol Hydro Power Project taken by the Government of Pakistan (Borrower). The disbursement of loan started in 2011. The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 15 years including 2 years of grace period.

18.1.2.2 This represents Saudi Fund loan amounting to Saudi Riyals 150 million under Subsidiary Loan Agreement dated 05 September 2008 for Golen Gol Hydro Power Project taken by the Government of Pakistan (Borrower).The disbursement of loan started in 2011. The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 15 years including 2 years of grace period.

18.1.2.3 This represents Saudi Fund loan amounting to Saudi Riyals 216.750 million under Subsidiary Loan Agreement dated 28 April 2014 for Golen Gol Hydro Power Project taken by the Government of Pakistan (Borrower). The disbursement of loan started in 2011. The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 20 years including 5 years of grace period.

18.1.2.4 This represents Organization of Petroleum Exporting Country (OPEC) fund loan amounting to USD 15 each million under relending arrangement dated 05 June 2017 for Golen Gol Hydro Power Project taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 15 years including 5 years of grace period.

Pakistan Water & Power Development Authority LAHORE

18.1.2.5 This represents International Development Association (IDA) loan relating to Special Drawing Rights (SDR) 283.7 million amounting to $ 440 million under Subsidiary Loan Agreement dated 12 April 2012 for Tarbela 4th Extension Hydro Power Project taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 25 years including 5 years of grace period.

Loan utilization	For the year		Cumulative	
	2019	2018	2019	2018
	PKR '000'			
Opening balance	374,656	99,295	-	-
Withdrawal of loan during the year	2,668,857	2,473,713	18,587,523	15,918,666
	3,043,513	2,573,008	18,587,523	15,918,666
Less: utilization of funds during the year	(2,239,589)	(2,198,352)	(17,783,599)	(15,544,010)
Closing balance	803,924	374,656	803,924	374,656

18.1.2.6 This represents International Bank for Reconstruction and Development (IBRD) loan of $ 400 million under Subsidiary Loan Agreement dated 12 April 2012 for Tarbela 4th Extension Hydro Power Project taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the project. The loan will be repaid in 19 years including 7 years of grace period.

Loan Utilization	For the year		Cumulative	
	2019	2018	2019	2018
	PKR '000'			
Opening balance	590,993	96,038	-	-
Withdrawal of loan during the year	1,373,995	11,285,585	41,712,554	40,338,559
	1,964,988	11,381,623	41,712,554	40,338,559
Less: utilization of funds during the year	(1,476,219)	(10,790,630)	(41,223,785)	(39,747,566)
Closing balance	488,769	590,993	488,769	590,993

18.1.2.7 This represents Frankfurt am Main (KfW) loan amounting to Euro 97.080 million, to be disbursed in two trenches. Under Trench - 1 (Kfw 320517) - Euro 4.416 million will be disbursed that will be repaid in 48 years including 8 years of grace period. Under trench - 2 (Kfw 3003374), Euro 92.664 million will be disbursed that will be repaid in 34 years including 4 years of grace period. The disbursement of loan for second trench started in 2015. The loan taken by the Government of Pakistan (Borrower) has been relent under Subsidiary Loan Agreement dated 27 Dec 2011 for Keyal Khwar Hydro Power Project.

18.1.2.8 This represents relent loan from International Development Association (IDA) of Special Drawing Rights (SDR) 379.7 million amounting to US $ 588.4 million under subsidiary loan agreement dated 13 October 2014 for Dasu Hydro Power Project taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the project. WAPDA Hydroelectric will disburse US$ 15 million on the request of the National Transmission & Dispatch Company (NTDC) for feasibility study and detail design of transmission lines. The loan will be repaid in 25 years including 5 of years of grace period.

Loan utilization	For the year		Cumulative	
	2019	2018	2019	2018
	PKR '000'			
Opening balance	1,836,259	2,166,636	-	-
Withdrawal of loan during the year	4,828,611	447,123	22,823,883	17,995,372
	6,664,870	2,613,759	22,823,883	17,995,372
Less: utilization of funds during the year	(4,828,611)	(777,500)	(20,987,724)	(16,159,113)
Closing balance	1,836,259	1,836,259	1,836,259	1,836,259

18.1.2.9 This represents French Development Agency (AFD) loan amounting to Euro 41.5 million under Subsidiary Loan Agreement dated 02 August 2016 for Warsak Rehabilitation Hydropower Project (Phase-2) taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the Warsak Rehabilitation Project. The loan will be repaid in 14 years including 6 years of grace period.

18.1.2.10 This represents Frankfurt am Main (KfW) loan of Euro 40 million, to be disbursed in two portions. Under Portion-1, Euro 30 million will be disbursed that will be repaid in 30 years with grace period of 9 years. Under Portion-2, Euro 10 million will be disbursed that will be repaid after 10 years from the availability of Portion-2 over a period of 15 years . The disbursement of loan for Portion-1 started in 2018. The loan taken by the Government of Pakistan (Borrower) has been relent under Subsidiary Loan Agreement dated 09 May 2016 for Rehabilitation of Warsak Hydro Power Plant Project.

18.1.2.11 This represents French Development Agency (AFD) loan amounting to 90 million Euros under Subsidiary Loan Agreement dated 15 March 2018 for Rehabilitation of Mangla Hydro Power Project taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the Mangla project. The loan will be repaid in 20 years including a grace period of 5 years.

18.1.2.12 This represents International Bank for Reconstruction (IBRD) loan amounting to USD 390 million under Subsidiary Loan Agreement dated 18 January 2017 for additional financing of Tarbela 4th extension taken by the Government of Pakistan (Borrower). The loan is also being utilised for Tarbela 5th extension. The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the Tarbela project. The loan will be repaid in 19 years including a grace period of 5 years.

18.1.2.13 This represents International Bank for Reconstruction (IBRD) loan amounting to USD 300 million under Subsidiary Loan Agreement dated 18 January 2017 for Tarbela 5th extension project taken by the Government of Pakistan (Borrower). The borrower has relent the loan to WAPDA Hydroelectric being executing agency for the Tarbela project. The loan will be repaid in 19 years including a grace period of 5 years.

		Note	2019	2018
			--------- PKR '000' --------	
18.2	**Foreign direct loans - secured:**			
	Operational power station loans	18.2.1	2,009,460	2,994,554
	Development project loans	18.2.2	57,134,630	42,571,795
			59,144,090	45,566,349

18.2.1 **Operational project loans - Foreign direct loans - Exim Bank China**

This represents supplier's credit facility amounting to US$ 12.308 million (2018: US$ 24.618 million) for the construction of Jinnah Hydro Power Project, a turn key project against the sanctioned limit of US $ 123.097 million. The loan is repayable in fourteen years inclusive of four years grace period, in 20 semi annually installments starting from 18 August 2010. Rate of mark-up is 5% annually with no floor and no cap. The loan is secured through stand by letter of credit to back issuance of 20 promissory notes issued at the time of commencement of the project in 2006.

	2019	2018	2019	2018
	------- USD '000' -------		--------- PKR '000' --------	
Outstanding balance as at 1 July	24,618	36,928	2,994,554	3,876,779
Exchange loss for the year	-	-	634,189	447,655
	24,618	36,928	3,628,743	4,324,434
Less: repayments during the year	(12,310)	(12,310)	(1,619,283)	(1,329,880)
Outstanding balance as at 30 June	12,308	24,618	2,009,460	2,994,554

18.2.2 **Development project loans - Foreign direct loans - Credit Suisse AG, Singapore**

This represents supplier's credit facility of US$ 350 million (2018: US$ 350 million) for the construction of Dasu Hydro Power Project. The loan is repayable in ten years inclusive of six years grace period, in 8 semi annual installments starting from 30 June 2023. Rate of mark-up is US$ LIBOR Swap Rate plus 3%. The loan is secured through guarantee given by Government of Pakistan and International Development Association (IDA).

	2019	2018	2019	2018
	------- USD '000' -------		--------- PKR '000' --------	
Outstanding balance as at 1 July	350,000	200,000	42,571,795	20,995,760
Exchange loss for the year	-	-	14,562,835	3,330,980
	350,000	200,000	57,134,630	24,326,740
Add: loan received during the year	-	150,000	-	18,245,055
Outstanding balance as at 30 June	350,000	350,000	57,134,630	42,571,795

18.3	**Cash development loans - unsecured:**			
	Operational power station loans	18.3.1	6,207,924	6,561,798
	Development project loans	18.3.2	82,878,242	83,137,990
			89,086,166	89,699,788

18.3.1 Operational power station loans

Power station and year of disbursement	Note	Rate of interest per annum	Installments outstanding as on 30 June 2019	Repayment commence-ment / maturity	2019	2018
					---------- PKR '000' ----------	
Ghazi Brotha						
2005-06	18.3.1.1	9.79%	12	2012/2031	5,242,936	5,469,066
Jabban						
2007-08	18.3.1.1	10.14%	14	2014/2033	27,083	27,953
2009-10	18.3.1.1	12.59%	16	2016/2035	91,409	93,213
					118,492	121,166
Tarbela (HPS)						
1997-98	18.3.1.2	17.50%	4	2004/2023	528,023	614,813
1998-99	18.3.1.2	17.50%	5	2005/2024	318,473	356,734
					846,496	971,546
					6,207,924	6,561,780

18.3.1.1 These loans have been obtained for Ghazi Brotha and Jabban projects from Government of Pakistan for construction of the projects. The loans will be repaid in 25 years including 5 years of grace period.

18.3.1.2 These loans have been obtained for Tarbela hydel power station from Government of Pakistan for payment of net hydel profit to provincial Government of Khyber Pakhtunkhwa. The loans will be repaid in 25 years including 5 years of grace period.

18.3.2 Development projects loans

Project and year of disbursement	Note	Rate of interest per annum	Installments outstanding as on 30 June 2019	Repayment commence-ment / maturity	2019	2018
					---------- PKR '000' ----------	
Harpo						
2009-10	18.3.2.1	12.59%	16	2016/2035	36,564	37,285
Bashoo						
2007-08	18.3.2.1	10.14%	14	2014/2033	14,342	14,803
2009-10	18.3.2.1	12.59%	16	2016/2035	24,376	24,856
					38,718	39,659
Diamer Basha						
2007-08	18.3.2.2	10.14%	14	2014/2033	262,338	270,766
2009-10	18.3.2.2	12.59%	16	2016/2035	937,526	956,022
2011-12	18.3.2.2	12.64%	18	2018/2037	11,379,462	11,549,258
2012-13	18.3.2.2	10.65%	19	2019/2038	3,723,634	3,785,000
2013-14	18.3.2.2	11.78%	20	2020/2039	27,500,000	27,500,000
2014-15	18.3.2.2	10.53%	20	2021/2040	15,000,000	15,000,000
2015-16	18.3.2.2	7.37%	20	2022/2041	10,000,000	10,000,000
2016-17	18.3.2.2	6.54%	20	2023/2042	14,000,000	14,000,000
					82,802,960	83,061,046
					82,878,242	83,137,890

18.3.2.1 These loans have been obtained from Government of Pakistan for feasibility studies of hydel development projects. The loans will be repaid in 25 years including 5 years of grace period.

18.3.2.2 These loans have been obtained from Government of Pakistan for the land acquisition of Diamer Basha Dam project. The loans will be repaid in 25 years including 5 years of grace period.

Pakistan Water & Power Development Authority LAHORE

18.4 WAPDA Hydroelectric has entered into agreements with Habib Bank Limited lead consortium of seven banks on 29 March 2017 for financing of Dasu Hydropower Project amounting to Rs. 144,000 million for the period of fifteen (15) years including five (5) years grace period. This loan has the following structure of facilities:

	GoP Guarantee Backed Financing (GBF) Facilities		Assets Backed Financing (ABF) Facilities		Total
	Sukuks (musharakah)	TFCs	Diminishing musharakah	Commercial facility	
	PKR '000'				
Total amount of facilities	52,800,000	35,200,000	33,600,000	22,400,000	144,000,000
Un-availed balance of facilities at 01 July 2017	37,800,000	25,200,000	33,600,000	22,400,000	119,000,000
Availed during the year	-	-	-	-	-
Un-availed balance of facilities at 30 June 2018	37,800,000	25,200,000	33,600,000	22,400,000	119,000,000
Availed during the year	-	-	-	-	-
Un-availed balance of facilities at 30 June 2019	**37,800,000**	**25,200,000**	**33,600,000**	**22,400,000**	**119,000,000**
Face value per certificate (Rs.)	10,000	10,000	-	-	-
Principal repayment will commence	8 November 2022		-	-	-
Profit on rental payments	6 month KIBOR + margin of 1.45% payable semi annually		-	6 month KIBOR + margin of 200 basis points p.a	-
Musharaka assets share	62.75%	-	32.25%	-	100%

18.4.1 The Sukuks and TFCs are secured by way of guarantee of the GoP to the Pak Brunei Investment Company Limited (Trustee) whereas Mangla Dam's land amounting to Rs. 103,244 million is being used as Musharakah Assets. Further Power Generation Plant Assets of Ghazi Barotha and Tarbela HPP amounting to Rs. 77,106 million have been hypothecated in favour of Security Trustee for securing Islamic and Commercial Asset Backed Facilities. WAPDA Hydroelectric has injected equity amounting to Rs. 19,682 million till 30 June 2019 for the construction of Dasu Hydropower Project.

18.5 **Diminishing Musharaka - secured**	Note	2019	2018
		PKR '000'	
Habib Bank Limited	18.5.1	**38,120,000**	38,120,000
United Bank Limited	18.5.2	-	42,032,000
		38,120,000	80,152,000

18.5.1 This represents Shirkat ul milk facility amounting to Rs. 38,120 million obtained from Habib Bank Limited for meeting WAPDA's working capital requirements (payment of net hydel profits of WAPDA). The principal is repayable at the end of two years in the form of a bullet repayment. Profit is payable semi-annually in arrears at the rate of six months KIBOR - 50 bps. The mark-up rate charged during the year on the outstanding balance is 5.71% per annum. The facility is secured by unconditional and irrevocable first demand guarantee covering principal and profit from the Ministry of Finance, Government of Pakistan.

18.5.2 This represented Non Interest Demand Finance (NIDF) and Islamic Structure facility to meet interim working capital needs of WAPDA. The principal was repayable at the end of two years in the form of a bullet repayment. Profit was payable semi-annually in arrears at the rate of six months KIBOR - 21 bps. The principal amount and profit accrued was secured by unconditional and irrevocable first demand guarantee covering principal and profit from the Ministry of Finance, Government of Pakistan. The Musharaka property relating to the Islamic structure of finance facility included Generators, Switchgears, Control and protection equipment.

Pakistan Water & Power Development Authority LAHORE

19	Deferred grants	Note	2019	2018
			PKR '000'	
	Balance as on 01 July		8,499,955	3,852,092
	Grants received during the year		24,234,150	4,791,929
	Grants amortized during the year		(279,265)	(144,066)
	Balance as on 30 June	19.1	32,454,840	8,499,955
19.1	This relates to:			
	- Gomal Zam	19.1.1	2,220,243	2,314,110
	- Mangla Dam Rehabilitation Project	19.1.2	4,726,143	3,571,251
	- Hydropower Training Institute		164,505	101,367
	- Golen Gol	19.1.3	3,581,220	2,506,839
	- Glacier Monitoring Network		26,559	6,388
	- Diamer Bhasha Dam	19.1.4	4,736,070	-
	- Mohmand Dam	19.1.5	17,000,000	-
			32,454,840	8,499,955

19.1.1 The grant was received for the construction of Gomal Zam project and is being amortized over 30 years which is useful life of the plant and equipment of the project.

19.1.2 The grant for Mangla Refurbishment Project is received from USAID to enhance the total capacity of Mangla Power Station by 310 megawatts (MW) from the current 1000 MW to 1310 MW. The grant is also being used for refurbishing and upgrading units 5 and 6 of Mangla Power Station along with related plant facility enhancements.

19.1.3 This represents grant received from USAID for the construction of Golen Gol Hydro Power project with a total capacity of 108 MW. Consequential to capitalization of Golan Gol Hydropower Project during the year it is now being amortized over 30 years which is the useful life of the plant and equipment of the project.

19.1.4 The grant is received under Public sector Development Program (PSDP) 2018-19 for the construction of Diamer Bhasha Dam having total capacity of 4500 MW.

19.1.5 The grant is received under Public sector Development Program (PSDP) 2018-19 for the construction Mohmand Dam having total capacity of 800 MW.

20.	Deferred liabilities	Note	2019	2018
			PKR '000'	
	Employee retirement benefits	20.1	47,398,402	44,613,347

20.1 The breakup of post employment benefits is given below:

Particulars	2019			
	Free medical facility	Free electricity facility	Pension	Total
	PKR '000'			
Liability recognized in the statement of financial position	3,587,008	2,532,414	41,278,980	47,398,402
Changes in the present value of defined benefit obligation:				
Opening defined benefit obligation	3,403,426	2,222,753	38,987,168	44,613,347
Service cost	107,196	52,556	918,074	1,077,826
Interest cost	399,903	261,173	4,117,801	4,778,877
Benefits paid	(323,517)	(4,068)	(2,744,063)	(3,071,648)
Closing defined benefit obligation	3,587,008	2,532,414	41,278,980	47,398,402

Particulars	2018			
	Free medical facility	Free electricity facility	Pension	Total
	PKR '000'			
Liability recognized in the statement of financial position	3,403,426	2,222,753	38,987,168	44,613,347
Changes in the present value of defined benefit obligation:				
Opening defined benefit obligation	3,131,821	2,148,227	27,512,147	32,792,195
Service cost	100,034	49,903	853,229	1,003,166
Interest cost	334,977	231,671	2,922,711	3,489,359
Benefits paid	(173,145)	(84,248)	(1,884,098)	(2,141,491)
Actuarial (gain) / loss	9,739	(122,800)	9,583,179	9,470,118
Closing defined benefit obligation	3,403,426	2,222,753	38,987,168	44,613,347

20.1.1 Charge for the year

Particulars	2019			
	Free medical facility	Free electricity facility	Pension	Total
	PKR '000'			
Current service cost	107,196	52,556	918,074	1,077,826
Interest cost	399,903	261,173	4,117,801	4,778,877
	507,099	313,729	5,035,875	5,856,703

	2018			
	Free medical facility	Free electricity facility	Pension	Total
	PKR '000'			
Current service cost	100,034	49,903	853,229	1,003,166
Interest cost	334,977	231,671	2,922,711	3,489,359
	435,011	281,574	3,775,940	4,492,525

21. Trade and other payables	Note	2019	2018
		PKR '000'	
Trade creditors		4,206,060	5,371,984
Security deposits		854,081	2,152,653
Due to other wings of WAPDA	21.1	151,491	146,786
Accrued liabilities		1,506,492	930,646
Due to statutory authorities		505,138	557,448
Other liabilities		529,602	345,771
Payable to Government of Pakistan		40,956,678	26,806,982
		48,709,542	36,312,270

Pakistan Water & Power Development Authority LAHORE

		Note	2019	2018
			PKR '000'	
21.1	**Due to other wings of WAPDA**			
	WAPDA coordination wing		20,647	12,620
	WAPDA water wing		130,844	134,160
			151,491	146,780

22	**Payable against hydel levies**			
	Net Hydel Profit (NHP) payable to Government of Khyber Pakhtunkhwa	22.1	30,088,008	16,906,235
	Net Hydel Profit (NHP) payable to Government of Punjab	22.2	32,758,962	265,417
	Water usage charges (WUC) payable to A.J.K Government		74,509	48,700
	Water Management Charges (WMC) payable to IRSA	22.3	35,788	45,884
		22.4	62,957,267	17,266,236

22.1 This represents payable against NHP to Government of Khyber Pakhtunkhwa on electricity sold to CPPA-G by WAPDA Hydroelectric in accordance with Government of Pakistan notification S.R.O. 290 (I)/2018 dated 23 February 2018.

22.2 This represents payable against NHP to Government of Punjab on electricity sold to CPPA-G by WAPDA Hydroelectric charged in accordance with Government of Pakistan notification S.R.O. 290 (I)/2018 dated 23 February 2018.

22.3 This represents payable against water management charges to IRSA. These charges are levied by IRSA vide letter no. A-II-6/10/2010-IRSA dated 25 August 2011 i.e. 01 July 2011 and S.R.O. 290 (I)/2018 dated 23 February 2018 for hydro power generation.

22.4 Movement in payable against hydel levies during the year is as follows:

	NHP payable to KPK	NHP payable to Punjab	WUC payable to AJ&K	WMC payable to IRSA	Total
	PKR '000'				
Balance as at 01 July 2017	17,224,898	-	139,102	42,523	17,406,523
Billed during the year	35,204,470	24,582,685	610,925	133,877	60,531,957
Paid during the year	(35,523,133)	(24,317,268)	(701,327)	(130,516)	(60,672,244)
Balance as at 30 June 2018	16,906,235	265,417	48,700	45,884	17,266,236
Billed during the year	39,214,104	63,864,308	570,417	135,980	103,784,809
Adjusted with unbilled NHP	(6,032,331)	(31,370,763)	-	-	(37,403,094)
Paid during the year	(20,000,000)	-	(544,608)	(146,076)	(20,690,684)
Balance as at 30 June 2019	**30,088,008**	**32,758,962**	**74,509**	**35,788**	**62,957,267**

		Note	2019	2018
			PKR '000'	
23	**Other liabilities**			
	Payable to provinces	23.1	18,603	18,345
	Other liabilities		1,575,488	1,045,668
			1,594,091	1,064,013

23.1 This represents amount payable to Governments of Punjab, KPK and Sindh for 4% return on assets transferred to the WAPDA Hydroelectric from these provinces at the time of unbundling of WAPDA Hydroelectric.

24. Contingencies and commitments

24.1 Contingencies

24.1.1 During the year ended 30 June 2009 WAPDA First SUKUK Company (WFSC) was defrauded by a forged transfer of Sukuk Certificates valuing Rs. 180 million belonging to NFC to a ghost company, Swift Engineering Solutions (SES); the certificates were transacted a number of times and now these are partly held by Meezan Bank Limited (MBL), Soneri Bank Limited (SBL) and Bank Islami Pakistan Limited (BIPL).

WFSC lodged a case of fraud with the Federal Investigation Agency (FIA). On the basis of an inquiry report dated 05 August 2009, FIA registered an FIR bearing No. 28/2009 and recovered from the accomplices of the principal accused a publicly declared absconder who has fled the country:

a) Rs. 13,477,000 in the form of hard cash, and prize bonds of Rs. 1,775,000;
b) a house in Khyber block, Allama Iqbal Town Lahore valuing Rs. 6,500,000;
c) an under construction Floor Mills in the name and style of 'Hussain Floor Mills' at Ferozewala District, Sheikhupura having land measuring 8 Kanals 13 marlas with a value of Rs. 6,300,000 with building constructed thereon of Rs. 6,500,000; and
d) land measuring 1 kanal 1 marla at Ferozewala District, Sheikhupura.

On 08 March 2010, FIA submitted a challan u/s 173 Cr PC in the court of Special Judge (Central) Lahore against twelve (12) accused out of which two including the principal accused are public absconders who are presently outside Pakistan. The case of extradition of the absconders is being pursued with different agencies / courts in and outside Pakistan. The Civil Court appointed WFSC as custodian of cash, prize bonds and Hussain Floor Mills whereas the house in Khyber block, Allama Iqbal Town Lahore was returned to the occupant on the condition that pending the final decision of the case, the house shall not be disposed off in any manner.

On 30 September 2013, the Court gave its verdict and out of the twelve accused, acquitted five and declared the two main accused who have fled the country as public absconders, while the remaining have been sentenced to various periods of imprisonment and fine; the Court has further adjudicated that all the recovered assets as stated above are confiscated in favor of WFSC (the complainant).

WFSC has invested the recovered cash of Rs. 13,477,000 in saving account on the directions of the Civil Court.

24.1.2 On 12 December 2009 WFSC Filed Interpleader suit u/s 88 CPC in the Civil Court of Lahore for deciding the lawful ownership of defrauded Sukuk Certificates and deposited the 8th and 9th Ijarah rental amount with the Civil Court. Meanwhile, WFSC filed an appeal in the Lahore High Court against the order dated 21 May 2010 of the Civil Judge, Lahore and the honorable High Court (LHC) ordered to continue to deposit the Ijarah rental against the defrauded Sukuk Certificates with the Civil Court and further directed the Civil Court to deposit the same in a profit bearing scheme in a scheduled bank. Accordingly, 10th, 11th, 12th, 13th and 14th (final) Ijarah rentals and the principal amount of Rs. 180 million payable against the demised Sukuk Certificates were deposited in the scheduled bank by the Civil Court.

The Honorable Lahore High Court, Lahore on 17 February 2015 had decided the case in favor of WAPDA and set aside the impugned judgment and decree and held that the suit is maintainable and that the trial court erred is rejecting the plantiff. Accordingly, WAPDA has filed an application in the Civil Court, Lahore with the pray to revise the original inter-plodder suit for deciding the true ownership of the defrauded Sukuk Certificates amounting to Rs. 180 million. M/s Al-Meezan investment Management Company, Soneri Bank Ltd and National Fertilizer Corporation Pakistan (Private) Limited have filed appeals in Honorable Supreme Court of Pakistan against the judgment of Lahore High Court, Lahore.

24.1.3 Meanwhile, MBL, SBL, and BIPL being the affectees' / plaintiffs' filed separate suits against the Company (WFSC) asserting the validity of their purchase transactions. However, in the case of MBL the Honorable Sindh High Court, Karachi vide order dated 31 May 2012 decided that MBL's suit is not maintainable under the Financial Institutions (Recovery of Finance) Ordinance 2001. Accordingly, the suit was to be registered / fixed as a fresh ordinary case and written statement was filed by defendant / WAPDA Hydroelectric. The case is now filed for framing of issues. The Honorable Court has directed the plaintiffs to first satisfy the Honorable Court on the issue of jurisdiction. The Honorable High Court dismissed the appeals on 10 October 2016 and the case was decided in the favour of WAPDA.

24.1.4 The interpleader suit decision dated 14 April 2017, passed by Mr. Khalil Ahmed, Civil Judge 1st Class, Lahore which decreed in favour of National Fertilizer Corporation Pakistan (Private) Limited. National Fertilizer Corporation (NFC) is held entitled to withdraw amount of their 72 physical Sukuk Certificates to Ex.D1-23/1 to Ex.D1-23/72 valuing Rs. 180 million and all Ijarah Rentals 8th to 14th which have been deposited by the WFSC in the Punjab Bank, Mall View Plaza, Bank Square, Account No. PLS.2774-1 by the order of the court. National Fertilizer Corporation may withdraw the same after the expiry of period of appeal by filing an application in the court in this regard. The other MBL, SBL and BIPL have filed an appeal with the Honorable High Court at Lahore on 13 July 2017 against the decision of Civil Court dated 14 April 2017, which is allowed by Honorable High Court at Lahore. The suit will continue before the Honorable High Court at Lahore. WAPDA Hydroelectric's solicitors expects a favorable outcome in this regard.

24.2 **Commitments**

24.2.1 Capital commitments contracted for but not incurred as at 30 June 2019 (through forward cost) amounted to Rs. 851,750 million (2018: Rs. 952,890 million).

24.2.2 Commitments under letter of credit amounts to Rs. 2,653 million. (2018: Rs.1,513 million).

24.2.3 Commitments under Stand by letter of credit (SBLC) in favor of supplier for construction of Jinnah Hydro Project amounting to US$ 12.771 million (2018: US $ 26.158 million).

24.2.4 The commitments in respect of Ijarah rentals payable to WAPDA Third Sukuk Company Limited are explained below:-

	2019	2018
	PKR '000'	
With in one year	1,800,318	1,875,109
With in one to five years	1,994,516	3,719,809
	3,794,834	5,594,918

24.2.5 The commitments in respect of arrears of net hydel profit payable to the Government of Khyber Pakhtunkhwa are explained below:

	2019	2018
With in one year	11,907,000	15,000,000
With in one to five years	-	15,000,000
	11,907,000	30,000,000

24.2.6 The commitments in respect of arrears of net hydel profit payable to the Government of Punjab are explained below:

	Note	2019	2018
		PKR '000'	
With in one year		27,012,000	14,860,000
With in one to five years		-	12,140,000
		27,012,000	27,000,000

25. **Revenue**

Variable charges	25.1	2,282,186	2,348,928
Fixed charges		64,947,446	56,968,50[illegible]
		67,229,632	59,317,4[illegible]

25.1 The amount is net of sale tax amounting to Rs. 382.561 million (2018: 399.317 million).

26. Cost of electricity

Formations	Salaries, wages and benefits (Note 26.2)	Retirement and other benefits (Note 26.3)	Sukuk Ijarah rentals (Note 26.4)	Repairs and maintenance	Depreciation (Note 5)	Impairment loss	Dams inspection and monitoring cost	Power, gas and water	NEPRA fees	Insurance (Note 26.5)	Consultancy charges	Fuel charges	Return on assets to provinces	Sundry expenses	Total
	2019														
	PKR '000'														
Tarbela	1,569,014	1,811,541	1,834,072	237,804	5,081,445	2,944,479	448,846	119,030	73,073	4,503	-	4,706	7,611	-	14,136,124
Ghazi Barotha	750,425	658,816	-	152,345	5,975,377	735,955	121,692	23,634	21,677	12,693	-	12,190	3,173	-	8,467,977
Mangla	817,957	1,091,495	-	151,420	1,799,800	433,134	294,543	123,338	14,950	2,534	5	330	2,188	4,500	4,735,197
Warsak	421,802	516,969	-	61,645	243,955	93,569	13,428	46,808	3,632	2,293	10,339	1,070	-	-	1,415,495
Chashma	394,714	491,610	-	92,833	783,500	78,857	65,206	39,349	2,751	6,103	-	8,049	-	4,000	1,966,977
Rasul	62,251	47,811	-	7,235	45,615	-	-	89	329	26	-	-	-	-	163,356
Dargai	72,923	62,857	-	4,509	21,087	-	-	1,108	299	1	-	-	-	500	163,254
Nandipur	65,707	61,848	-	7,918	5,836	-	-	673	216	-	-	-	-	-	142,198
Shadiwal	56,256	45,632	-	6,652	7,017	-	-	193	202	5	-	262	-	-	116,219
Chichoki	46,011	44,479	-	15,963	20,092	-	-	156	182	15	-	-	-	1,000	127,898
Kurram Garhi	37,424	35,242	-	5,897	3,459	-	-	33	84	20	-	-	-	-	82,159
Renala	15,952	15,585	-	4,596	643	-	-	174	16	-	-	-	-	-	36,968
Chitral	21,161	19,535	-	1,183	10,080	-	-	473	15	8	-	1,415	-	-	53,870
Khan Khwar	118,794	25,720	-	11,500	295,997	-	-	851	1,076	1,194	-	-	-	-	455,132
Allai Khwar	88,413	31,226	-	16,148	531,874	-	-	551	1,509	3,991	-	25	-	-	674,037
Gomal Zam	80,710	37,406	-	4,495	118,182	7,060	-	-	260	2,369	-	266	-	-	250,747
Jinnah	157,253	136,920	-	27,751	437,663	-	-	482	1,435	10,545	-	1,283	-	2,000	775,632
Jabban	43,579	36,840	-	10,989	127,699	282,577	-	441	329	3,207	-	-	-	500	506,161
Dubair Khwar	79,730	24,459	-	7,606	521,400	-	-	534	1,943	4,875	-	44	-	-	640,591
Tarbela 4th	105,892	31,575	-	3,593	1,757,419	-	-	-	-	-	-	-	-	-	1,898,479
Golen Gol	31,964	9,374	-	48	599,854	-	-	475	-	-	-	-	-	-	641,715
Others	72,693	619,763	-	-	5,288	-	-	-	1,585	390	63	-	-	-	699,782
Total	5,110,625	5,856,793	1,834,072	832,137	18,393,282	4,575,631	943,715	356,392	125,883	55,846	10,410	29,640	12,972	12,500	38,150,000

KAMUTH

Pakistan Water & Power Development Authority LAHORE

26.1 Cost of electricity

Formations	Salaries, wages and benefits (Note 26.2)	Retirement and other benefits (Note 26.3)	Sukuk ijarah rentals (Note 26.4)	Repairs and maintenance	Depreciation (Note 5)	Dams inspection and monitoring cost	Power, gas and water	NEPRA fees	Insurance (Note 26.5)	Consultancy charges	Fuel charges	Return on assets to provinces	Sundry expenses	Total
	2019													
	PKR '000'													
Tarbela	1,704,374	1,395,545	2,571,259	314,132	3,136,985	170,161	110,980	49,419	4,577	-	3,860	7,611	-	9,468,922
Ghazi Barotha	728,563	499,676	-	230,693	4,630,612	147,256	17,188	20,603	13,916	-	9,937	3,173	-	6,301,516
Mangla	874,925	792,347	-	229,733	1,846,840	275,574	76,939	14,209	992	-	589	2,188	-	4,114,336
Warsak	407,727	403,190	-	86,626	186,542	23,724	62,374	3,452	1,168	154,455	680	-	-	1,329,938
Chashma	409,856	380,015	-	65,344	973,594	59,749	26,033	2,614	6,487	-	3,240	-	-	1,926,932
Rasul	66,959	46,182	-	11,193	44,357	-	108	313	25	275	-	-	-	169,412
Dargai	77,886	49,534	-	7,303	23,311	-	690	284	-	877	-	-	-	159,885
Nandipur	68,962	43,643	-	5,361	217,749	-	433	196	10	-	4	-	-	336,358
Shadiwal	57,572	35,704	-	13,237	6,920	-	83	192	8	-	195	-	-	113,909
Chichoki	48,945	34,818	-	11,364	5,494	-	141	188	-	-	-	-	-	100,940
Kurram Garhi	40,947	26,593	-	4,589	3,606	-	69	57	-	-	-	-	-	75,861
Renala	18,112	12,445	-	4,750	718	-	150	16	-	-	-	-	-	36,191
Chitral	26,542	14,661	-	3,409	1,873	-	315	14	9	-	2,904	-	-	49,727
Khan Khwar	112,786	19,092	-	6,958	279,326	979	621	1,023	3,424	-	9	-	-	424,197
Allai Khwar	78,639	22,274	-	16,431	678,663	8,310	578	1,719	6,922	-	180	-	-	813,716
Gomal Zam	72,946	35,061	-	2,169	197,626	-	50	2,732	-	-	4,680	-	-	315,264
Jinnah	146,522	110,163	-	31,757	426,023	3,560	49	1,364	10,743	-	1,212	-	22	731,415
Jubbar	48,759	27,597	-	12,544	169,837	-	368	1,506	4,412	-	-	-	-	265,023
Dubair Khwar	80,195	18,088	-	377	52,422	-	433	1,847	-	-	81	-	-	153,443
Others	24,427	526,997	-	23,328	5,118	19,669	4,497	-	-	181	-	-	-	603,426
Total	5,095,623	4,492,525	2,571,259	1,081,288	12,887,616	709,193	302,099	101,747	52,690	155,768	27,591	12,972	22	27,490,413

26.2 Salaries, wages and benefits

	2019	2018
	PKR '000'	
Pay and allowances	4,312,254	3,974,487
Other benefits	798,371	1,121,136
	5,110,625	5,095,623

26.3 Retirement and other benefits

Pension	5,035,875	3,775,940
Free electricity	313,729	281,574
Free medical	507,099	435,011
	5,856,703	4,492,525

26.4 Sukuk Ijarah rentals

Sukuk II	-	686,106
Sukuk-III	1,834,072	1,885,153
	1,834,072	2,571,259

26.5 As per the WAPDA Equipment Protection Scheme (WEPS), WAPDA Hydroelectric's equipment of power houses has been provided insurance coverage based on written down value of equipment.

KPMG

27. Operating expenses

	2019											
Formations	Management service charges	R&D - Survey and investigation (Note 6 & 27.2)	Vehicle running expenses	Outside services employed	Travelling expenses	Office expenses	Advertis-ement and periodicals	Legal and professional charges	Commu-nication	Rent, rates and taxes	Other	Total
	PKR '000'											
Tarbela	514,101	-	69,883	32,621	17,790	8,058	6,273	1,333	3,120	127	312	653,618
Ghazi Barotha	147,363	-	42,654	-	7,738	2,454	3,148	579	2,038	214	12	206,200
Mangla	119,318	-	40,781	-	17,783	3,202	1,852	2,303	2,540	2,392	451	190,622
Warsak	45,266	-	11,468	-	3,969	1,346	2,090	182	805	-	-	65,126
Chashma	39,080	-	21,953	-	9,709	1,813	3,565	246	1,147	13	435	77,961
Rasul	4,945	-	1,455	-	1,301	110	118	110	201	-	-	8,240
Dargai	5,018	-	556	8,252	1,142	98	186	-	150	-	78	15,480
Nandipur	3,892	-	1,610	-	1,367	328	297	38	210	-	-	7,742
Shadiwal	3,878	-	1,671	-	636	154	144	-	190	-	242	6,915
Chichoki	3,492	-	2,690	-	1,500	90	231	144	93	16	30	8,286
Kurram Garhi	2,267	-	615	-	855	26	-	67	45	-	-	3,875
Renala	1,060	-	529	-	717	37	100	33	128	-	-	2,604
Chitral	1,353	-	454	-	1,058	121	-	-	65	-	-	3,051
Khan Khwar	11,341	-	3,701	-	3,979	434	305	225	493	-	-	20,478
Allai Khwar	14,852	-	1,717	-	1,641	75	209	84	98	-	-	18,676
Gomal Zam	5,195	-	3,183	-	841	224	68	13	230	-	-	9,754
Jinnah	17,433	-	7,073	-	4,480	963	1,043	-	353	-	-	31,345
Jabban	6,100	-	1,226	7,232	1,579	177	117	-	33	-	-	16,464
Dubair Khwar	15,056	-	1,289	-	1,453	24	-	156	104	-	-	18,082
Others	47,419	329,924	2,590	-	1,549	444	-	7,204	153	-	458,435	847,718
Total	1,008,429	329,924	217,098	48,105	81,087	20,178	19,746	12,717	12,196	2,762	459,995	2,212,237

Pakistan Water & Power Development Authority LAHORE

27.1 Operating expenses

Formations	Authority overheads	R&D - Survey and investigation (Note 6 & 27.2)	Vehicle running expenses	Outside services employed	Travelling expenses	Office expenses	Advertis-ement and periodicals	Legal and profess-ional charges	Commu-nication	Rent, rates and taxes	Others	Total
	2018											
	PKR '000'											
Tarbela	607,043	-	62,497	7,536	16,213	10,528	2,768	1,624	2,809	162	712	711,992
Ghazi Barotha	133,245	-	23,317	-	5,062	1,510	1,109	23	982	-	-	165,248
Mangla	129,745	-	38,115	-	14,893	3,250	2,431	1,823	2,486	853	1,635	195,431
Warsak	41,749	-	12,293	-	6,171	1,254	1,684	327	952	-	-	64,430
Chashma	39,109	-	15,975	-	8,643	1,703	1,687	407	1,179	114	215	69,032
Rasul	5,823	-	901	-	1,496	141	177	-	200	-	-	8,738
Dargai	4,657	-	609	8,082	1,346	183	198	-	115	-	31	15,221
Nandipur	4,417	-	1,161	-	1,055	166	163	30	162	-	-	7,154
Shadiwal	3,194	-	1,745	-	692	145	142	-	196	-	-	6,114
Chichoki	3,219	-	2,500	-	1,577	77	299	144	101	-	-	7,917
Kurram Garhi	1,405	-	335	-	800	31	120	32	18	-	149	2,890
Renala	1,086	-	392	-	690	47	86	-	120	-	-	2,421
Chitral	1,119	-	626	-	1,114	76	-	-	61	-	-	2,996
Khan Khwar	12,376	-	4,330	-	4,393	429	66	64	464	-	-	22,122
Allai Khwar	18,434	-	1,556	-	2,258	71	16	-	124	-	-	22,459
Gomal Zam	4,155	-	2,809	-	1,440	244	400	18	207	-	-	9,273
Jinnah	29,703	-	7,735	-	5,173	1,178	560	-	2,573	80	401	47,401
Jabban	6,401	-	1,059	7,454	1,569	282	72	-	30	-	1,010	17,876
Dubair Khwar	16,128	-	1,570	-	1,686	92	444	308	63	-	-	20,301
Others	119,345	1,562,558	19,762	127	11,891	2,510	1,497	13,431	1,815	1,618	223	1,734,777
Total	1,182,353	1,562,558	199,287	23,199	88,171	23,915	13,919	18,231	14,757	2,827	4,576	3,133,793

Pakistan Water & Power Development Authority LAHORE

27.2 R&D - Survey and investigation includes research and development expenses of projects which cannot be developed due to financial or technical reasons and the projects which are not to be developed by WAPDA Hydroelectric (i.e. the feasibility is either sold to Federal or Provincial Government, any organization or expensed). It also includes the expenses of the office of GM Hydro-planning incurred during the year.

		Note	2019	2018
			PKR '000'	
28.	**Other income**			
28.1	**Income from financial assets**			
	Profit on bank balances		1,963,200	2,120,272
	Interest income - investments		1,440,450	703,713
			3,403,650	2,823,985
28.2	**Income from assets other than financial assets**			
	Amortization of grant		279,265	144,065
	Income from lease of other property		93,863	89,797
	Income from non-utility operation		7,654	3,185
	Interest income - advance to staff		835	2,159
	Sale of scrap		29,270	32,349
	Sale of stores		1,972	22,042
	Miscellaneous income		283,975	1,080,594
			696,834	1,374,191
			4,100,484	4,198,176
29.	**Finance cost**			
	Development hydel projects			
	Interest on foreign relent loans		14,371,510	12,788,730
	Interest on foreign direct loans		2,861,535	1,256,911
	Dasu syndicated term finance facility		2,568,568	1,876,382
	Interest on cash development loans	6.1	8,494,423	8,506,485
			28,296,036	24,428,508
	Operational hydel stations			
	Interest on foreign relent loans	18.1	1,916,993	2,378,394
	Interest on foreign direct loans	18.2	124,777	168,265
	Interest on cash development loans	18.3	720,013	759,086
	Interest on diminishing musharakah	29.1	3,887,300	3,298,721
			6,649,083	6,604,466
	Bank charges		15,954	1,624
	Other charges		3,729,883	1,252,100
			3,745,837	1,253,724
			38,690,956	32,286,698

29.1 This represents markup accrued on diminishing Musharakah facility, obtained for payment of NHP to the Governments of KPK and Punjab.

30. Financial Instruments

30.1 Fair value measurement of financial instruments

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Underlying the definition of fair value is the presumption that the company is a going concern and there is no intention or requirement to curtail materially the scale of its operations or to undertake a transaction on adverse terms.

A financial instrument is regarded as quoted in an active market if quoted prices are readily and regularly available from an exchange dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis.

IFRS 13 'Fair Value Measurement' requires the company to classify fair value measurements and fair value hierarchy that reflects the significance of the inputs used in making the measurements of fair value hierarchy has the following levels:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1)
- Inputs other than quoted prices included within level 1 that are observable for the asset either directly (i.e. derived from prices) (Level 2)
- Inputs for the asset or liability that are not based on observable market data (i.e. unadjusted) inputs (Level 3)

Transfer between levels of the fair value hierarchy are recognized at the end of the reporting period during which the changes have occurred.

The following table shows the carrying amounts and fair values of financial assets and financial liabilities, including their levels in the fair value hierarchy. It does not include fair value information for financial assets and financial liabilities not measured at fair value if the carrying amount is a reasonable approximation of fair

	Carrying value			Fair value		
	Amortised Cost	Other financial liabilities	Total	Level 1	Level 2	Level 3
30 June 2019						
Financial assets - not measured at fair value						
Trade debts	103,569,512	-	103,569,512	-	-	-
Long term advances and deposits	615,439	-	615,439	-	-	-
Loan and advances	3,044,884	-	3,044,884	-	-	-
Short term investments	3,000,000	-	3,000,000	-	-	-
Other receivables	255,468	-	255,468	-	-	-
Cash and bank balances	71,671,623	-	71,671,623	-	-	-
	272,156,886	-	272,156,886	-	-	-
Financial liabilities not measured at fair values						
Long term financing - interest bearing	-	321,013,162	321,013,162	-	-	-
Retention money payable	-	3,082,641	3,082,641	-	-	-
Trade and other payables	-	48,204,404	48,204,404	-	-	-
Accrued interest	-	1,152,618	1,152,618	-	-	-
Other liabilities	-	1,594,091	1,594,091	-	-	-
	-	375,046,916	375,046,916	-	-	-

	Carrying value				Fair value		
	Loans and receivables	Held to maturity investments	Other financial liabilities	Total	Level 1	Level 2	Level 3
30 June 2018	Rupees						
Financial assets - not measured at fair value							
Trade debts	101,324,336	-	-	101,324,336			
Long term advances and deposits	569,662	-	-	569,662	-	-	-
Loan and advances	2,262,283	-	-	2,262,283	-	-	-
Short term investments	-	31,000,000	-	31,000,000	-	-	-
Other receivables	248,582	-	-	248,582	-	-	-
Cash and bank balances	69,686,606	-	-	69,686,606	-	-	-
	174,091,469	31,000,000	-	205,091,469	-	-	-
Financial liabilities not measured at fair values							
Long term financing - interest bearing	-	-	343,189,468	343,189,468	-	-	-
Retention money payable	-	-	1,507,919	1,507,919	-	-	-
Trade and other payables	-	-	36,754,822	36,754,822	-	-	-
Accrued interest	-	-	4,195,904	4,195,904	-	-	-
Other liabilities	-	-	1,064,013	1,064,013	-	-	-
	-		385,712,126	385,712,126	-	-	-

31 Number of employees

WAPDA Hydroelectric as at 30 June 2019 has 8,888 (2018: 8,527) active employees all of whom are entitled to post employment benefits and 8,918 (2018: 8,342) pensioners to whom post employment benefits payments are disbursed.

	2019	2018
32. Installed capacity and net electric output		
Installed Capacity (MW)	8,348	6,902
Net Electric Output (GWh)	27,196	26,775

33. Transactions with related parties

The related parties comprise of associated undertaking, subsidiary, Government of Pakistan (GoP) and associated departments and entities being commonly controlled by GoP and key management personnel. Balances due from and due to related parties are shown in their respective notes. Details of transactions during the period are as follows:

Nature of relationship	Nature of transaction	2019	2018
		PKR '000'	
Associated undertaking	Revenue	67,229,632	59,317,434
Key management personnel	Authority overhead	348,654	417,123
Associated undertaking	Insurance premium	63,405	52,692
Subsidiary	Ijarah rentals	1,842,933	2,571,260

34. Date of authorization of issue

These financial statements were authorized for issuance on _____.

35. General

35.1 Figures have been rounded off to the nearest thousands of rupees, unless otherwise stated.

Pakistan Water & Power Development Authority LAHORE

MEMBER (FINANCE)

MEMBER (POWER)

Annex-12

WAPDA HYDROELECTRIC

Sr. No.	STATION	WATER WAY (River/Canal)	LOCATION	INSTALLED CAPACITY (MW)			DATE OF COMMISSIONING
				UNITS NO.	CAPACITY OF EACH UNIT (MW)	INSTALLED CAPACITY (MW)	
1.	TARBELA	INDUS (Reservoir)	Swabi/ Haripur	1~4	175	700	Jul. 1977
				5~8	175	700	Dec. 1982
				9~10	175	350	Apr. 1985
				11~14	432	1728	Feb. 1993
					TOTAL	3478	
2.	GHAZI BAROTHA	INDUS (D/S Tarbela)	Distt. Attock	1	290	290	Jul. 2003
				2	290	290	Aug. 2003
				3	290	290	Oct. 2003
				4	290	290	Dec. 2003
				5	290	290	Mar. 2004
					TOTAL	1450	
3.	MANGLA	JHELUM (Reservoir)	Mirpur/AJK	1~4	100	400	1967/1969
				5~6	100	200	Mar. 1974
				7~8	100	200	Jul. 1981
				9~10	100	200	1993-1994
					TOTAL	1000	
4.	WARSAK	KABUL (Reservoir)	Warsak	1~4	40	160	Jul. 1960
				5~6	41.48	82.96	Mar. 1981
					TOTAL	242.96	
5.	CHASHMA	INDUS (Chashma Barrage)	Distt. Mianwali	1	23	23	May. 2001
				2	23	23	Apr. 2001
				3	23	23	Apr. 2001
				4	23	23	Mar. 2001
				5	23	23	Mar. 2001
				6	23	23	Feb. 2001
				7	23	23	Dec. 2000
				8	23	23	Dec. 2000
					TOTAL	184	
6	DUBER KHWAR	INDUS TRIBUTARY	District Kohistan	1	65	65	Mar-14
				2	65	65	
					TOTAL	130	
7	Allai Khwar	Ranyal	District Battagram	1	60.5	60.5	Mar. 2013
				2	60.5	60.5	Mar. 2013
					TOTAL	121	
8	Jinnah	INDUS Jinnah Barrage	District. Mianwali	1	12	12	Jan.2012
				2	12	12	Aug. 2012
				3	12	12	Jun.2012
				4	12	12	Mar. 2013
				5	12	12	Mar. 2013
				6	12	12	Aug-13
				7	12	12	Sep-13
				8	12	12	May-13
					TOTAL	96	
9	KHAN KHWAR	Ranyal	District Shangla	1	34	34	Nov. 2010
				2	34	34	Nov. 2010
				3	4	4	Jul. 2012
					TOTAL	72	
10	RASUL	UJC*	Distt. Mandi Baha-ud-Din	1~2	11	22	Jul. 1952
					TOTAL	22	
11	DARGAI	Swat**	Distt. Malakand	1~4	5	20	Dec. 1952
					TOTAL	20	
12	NANDIPUR	UCC***	Distt. Gujranwala	1~3	4.6	13.8	Mar. 1963
					TOTAL	13.8	
13	SHADIWAL	UJC*	Distt. Gujrat	1~2	6.75	13.5	Jan. 1961
					TOTAL	13.5	
14	CHICHOKI	UCC***	Distt. Sheikhupura	1~3	4.4	13.2	Aug. 1959
					TOTAL	13.2	
15	K/GARHI	KUCHKOT****	Distt. Bannu	1~4	1	4	Feb. 1958
					TOTAL	4	
16	RENALA	LBDC*****	Distt. Okara	1~5	0.22	1.1	Mar. 1925
					TOTAL	1.1	
17	CHITRAL	LUTKO	Chitral City	1~2	0.3	0.6	1975
				3~4	0.2	0.4	1982
					TOTAL	1.0	
18	Jabban	Barkit Tunnel	Malakand	1	5.5	22.0	Jul-13
				2	5.5		Oct.13
				3	5.5		Nov-13
				4	5.5		Dec-13
					TOTAL	22.0	
19	Gomal Zam Dam	Gomal River	South Waziristan	1~2	8.7	17.4	Jun-13
					Total	17.4	
20	Golen Gol	Golen River	Chitral KPK	1	36	108.0	Jan-18
				2&3	72		Oct-19
21	T4	Tunnel 4, Tarbela, Indus	Swabi/Haripur	15	470	1410.0	Oct-18
				19			Jun-18
				17			Feb-18
TOTAL HYDEL INSTALLED CAPACITY						8420	

(R) : Run-of-River (Canal) Projects

* : Upper Jhelum Canal from River Jhelum

** : Swat Canal from River Swat

*** : Upper Chenab Canal from River Chenab

**** : Kachkot Canal from River Kurram

***** : Lower Bari Doab Canal from Balloki Headworks on River Ravi

Pakistan Water & Power Development Authority LAHORE