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## **INTRODUCTION:**

### **Brief History:**

The Project site of 2<sup>nd</sup> Rehabilitation of Warsak Hydroelectric Power Station is situated at Warsak on Kabul River, 20 KM East of the Afghan Border and 30 KM North of the City of Peshawar in Khyber Pakhtunkhwa having Longitude and Latitudes of North -34° 9'49.11" East – 71° 21'36.11".

Warsak Hydroelectric Power Station was completed under Colombo Plan in two phases through CIDA (Canadian International Development Agency), financed by Canadian Government. The 1<sup>st</sup> Phase consisted of Construction of Dam, Irrigation Tunnels and installation of four Power Generating Units, each of 40 MW capacity with 132 KV Transmission system. This was completed in 1960. Two additional generating units each of 41.48 MW capacity were added in 1980-81 in the 2<sup>nd</sup> phase thus raising the total capacity to 242.96 MW (say 243 MW).

### **1st Phase Rehabilitation of HEPS Warsak – Brief:**

In the late Eighties, the Power Generating capacity of Warsak Power Station reduced to 150 MW. The following main causes/problems were identified for the accelerated deterioration / reduction in output.

- i. Structural deformation movement of the Power House. due to Alkali Aggregate Reaction (AAR).
- ii. Rapid erosion in the Hydraulic equipment due to quantity and abrasive nature of the silt carried in the Kabul River.

In order to resolve these issues, the Government of Pakistan and Canada again joined hands and Rehabilitation Phase-I of the project was carried out from 1996 to 2006.

### **2<sup>nd</sup> Rehabilitation of HEPS Warsak:**

Warsak Dam has almost lost 83% of its initial storage capacity (Hydrographic Survey -2004) and the Power Station is now practically operating run-of-river. Under the present operating conditions, the maximum load shared by Warsak Power Station is around 193 MW against the total installed capacity of 243 MW. It is extremely beneficial to regain the capacity loss of about 50 MW as the cost involved in this regard would be much less than the capital cost of a new Power Station of 50 MW capacity and time required for its completion.

Warsak Power Station commissioned in 1961 belongs to the technology of late fifties (50s). The installed equipment have now become obsolete as well as more vulnerable to defects / break down and hence requires up-gradation and modernization with state-of-the-art technology.

2<sup>nd</sup> Phase of Rehabilitation including up-gradation and modernization of Warsak Hydroelectric Power Station has been necessitated due to aging of Power Plant and to mitigate inherent defects. For this purpose, WAPDA conducted a Feasibility Study through Consultancy Agreement with M/s RSWI (Canada) – DCE (Pakistan) JV to ensure that the six (06) generating units of Warsak Power Station, having spent life of about 50 Years (Units 1 – 4) and 30 years (Unit 5-6) are made capable to operate efficiently and reliably at the total installed capacity of 243 MW for another 40 to 50 years.

### **Objective of 2<sup>nd</sup> Rehabilitation of HEPS Warsak:**

The following are the major objectives to be achieved in executing 2<sup>nd</sup> Rehabilitation Project:

- i. Rehabilitation, Up-gradation and Modernization of the existing generating units and auxiliary systems of Warsak Hydroelectric Power Station to maintain the utilization of low-cost Hydropower and to provide reliable and consistent power to the National Grid for another 40 years life.
- ii. Regaining the installed capacity of 243 MW, presently reduced to 193 MW (50 MW) at very less cost and completion time.
- iii. Modernization of Balance of Plant (BOP), Switchyard and peripheral equipment by replacements and refurbishments as proposed in the Feasibility Study to overcome the existing problems due to aging of equipment.

### **ECNEC & MoWR's ADMIN APPROVAL AND CAPITAL COST OF THE PROJECT:**

Approval of PC-1 was accorded by the ECNEC (competent forum) on 09.07.2015 and Administrative Approval of Ministry of Water Resources was given on 27.10.2015 having following Capital Cost of the Project:

Capital Cost of the Project		
Local Component	Foreign Component	Total
10,970.110	11,283.519	22,254.235

Million/PKR

### **COMPONENTS OF PROJECT:**

Project work activities is divided in components in a systematic manner in accordance of work scope and interconnection among them to complete the project in a prudent and economical manner.

Initially, Package V & IV were made separate packages, but later on, the same had been merged in the bidding documents in a single Package in order to avoid any ambiguity or delay between two separate contracts, as these are interconnected.

In due course of time, a new separate Package-V in the name of Sediment Flushing System has been made which basically envisaged in PC-I.

Likewise, the title of Package-VII has been corrected as Climate Change Adoption Strategy instead of accompanying measures which include all the four activities which are being financed under EU – Grant.

The old and new Packages with relevant No. will now be as followed.

### **Old Order of Packages:**

Packages	Scope of Work
I	Supply, erection, testing and commissioning of Trash Rack Cleaning and Handling Machine.
II	Supply, erection, testing and commissioning of Spillway Gates wire rope hoist system.
III	Supply of complete stator winding and T&P for Unit # 3
IV	Rehabilitation of Civil work
V	Rehabilitation/Upgradation/modernization of existing Electro-mechanical equipment of Unit 1-6.
VI	Replacement of existing single phase Power Transformer (11 KV to 132 KV) with 3-Phase Power Transformer of Unit # 1 to 4.
VII	Accompanying measures including Environmental & Social (E&S) measures as part of ESMP, community development activities, flood management action, sediment management action and enhancement/Upgradation of existing WAPDA Warsak Workshop.

### New Order of Packages:

Packages	Scope of Work
I	Supply, erection, testing and commissioning of Trash Rack Cleaning and Handling Machine.
II	Supply, erection, testing and commissioning of Spillway Gates wire rope hoist system.
III	Supply of complete stator winding and T&P for Unit # 3
IV	Rehabilitation of Civil work of Power House and Main Dam
V	Construction of new Sediment Flushing System.
VI	Rehabilitation / Upgradation / Modernization of existing Electro-mechanical equipment of Unit 1-6 and replacement of existing single phase Power Transformer (11 KV to 132 KV) with new 3-Phase Power Transformer of Unit # 1 to 4.
VII	Climate change adoption strategy which includes, Community Development activities, Flood Management activity, Sediment Management activity and enhancement / Upgradation of existing WAPDA Warsak Workshop.

### **CONSULTANCY SERVICES:**

#### Main Consultant - WRC:

For execution of Packages IV to VI, the main consultancy services agreement was awarded to M/s Warsak Rehabilitation Consultant (WRC), a Joint Venture consisting of four firms (1) M/s Dolsar, Turkey, (2) M/s Coba, Portugal, (3) M/s DMC and (4) M/s BAK on 10<sup>th</sup> April, 2017 through international competitive bidding.

**Technical Detail:** The Consultancy services for the project have been commenced since April 2017 for an estimated duration of at least 84 Months, including a period of twelve (12) Months Defect Liability Period and Issuance of the Final Acceptance Certificate.

As per consultancy agreement, the estimated durations, and schedules of the various activities against each package are as given as under:

Activity No.	Description	Estimated Period	Duration (Calendar Months)
Activity 1	<b>1A:</b> For sediment management structure: support final decision of WAPDA and carry out detailed studies if necessary	01.04.2017 to 31-07-2017	4
	<b>1B:</b> For other component: Review of the procurement plan and review as well as splitting of bidding documents and reviewing of detail design.		
Activity 2	Assistance with Bidding Process to award of Contracts	1.6.2017 to 31.01.2018	8
Activity 3	Project Management and Contract Administration, Engineering and Construction Supervision of the Works Contracts including Testing, Commissioning.	01.02.2017 to 30.03.2023	62
Activity 4	Defect Liability Period and Project Close out	01.04.2023 to 31.03.2024	12
Activity 5	Implementation of Workshop enhancement	As per suitability	2
Activity 6	Specific Training – Performed during Works Phase	As per suitability	2
<b>Total</b>			<b>84</b>

**Financial Detail:** As per consultancy agreement, the Contract is composed of Lump-sum activities and one time-based activities as per Scope of work and break-up is given as below:

Activity No.		Cost		Remarks
		Euro	PKR	
Activity 1	1A	188,884.00	968,0651.00	Lump-sum
	1B	187,378.00	8,350,478.00	
Activity 2		340,309.00	8,891,774.00	
Activity 3		2,489,387.00	268,643,843.00	Unit Price (Time based activity) The ceiling is Euro 3728028.00 and PKR 320884114.00 exclusive of local indirect taxes.
Activity 4		396,002.00	20,540,474.00	
Activity 5		2,5020.00	1,989,644.00	
Activity 6		101,048.00	2,787,250.00	
<b>Total</b>				

### **Other Consultants:**

In addition to above Main Consultant, the other consultants for other packages duly financed by EU Grant have also been hired for efficient and timely completion of each package as give below:

Package No.	Scope of Package	Consultant	Contract Sign Date	Cost		Remarks
				Euro	PKR	
VII	a. Sustainable Sediment Management	M/s GLM, NESPAK & Hagler Bailly JV	14.01.2021	208,196.00	46,855,500.00	
	b. Sustainable Sediment Management – Supervision	M/s WRC Amendment 2.2	27.06.2022	261,505.00	3,241,378	Amendment has been signed
	c. Community Development	M/s Mott MacDonald Pakistan (MMP)	16.07.2020		59,582,500.00	
	d. *Flood Management	M/s WRC (through Amendment No. 2.1)	09.01.2020	89,000.20	12,237,836.00	Activity-1: Time-Based Activity
	(Supervising the installation of flood management equipment)			23,594.19	3,953,547.00	Activity-2: Lump-sum basis
	e. Enhancement of Workshop Equipment	M/s WRC through Activity 5 in main consultancy agreement		As above in WRC		

\*The ceiling for Amendment-2.1 is Euro 112,594.00- and PKR 16,191,382.00 exclusive of local indirect taxes. The amount of such taxes is Euro 16,889.10- and PKR 2,428,707.30-

### **PROJECT COMMENCEMENT AND COMPLETION DATE AS PER PC-1:**

The date of commencement of work as per PC-1 is 27.10.2015 as per actual Administrative Approval of Ministry of Water Resources.

The date of completion of Project as per PC-1 is 27.10.2022. However, due to the complexities of the Project, the expected date of completion is now February 2026.

## **PHYSICAL PROGRESS (PACKAGE-WISE)**

### **Package I - Trash Rack Cleaning and Handling Machine (A Fast Track Package as per PC-1)**

For supply, erection, testing and commissioning and design drawing and fabrication of Trash Rack Cleaning and Handling Machine (TRCHM), the P.Os were awarded to M/s Muhr, Germany in 2013 on Fast Track basis.

- a. Supply, erection, testing and commissioning of TRCHM is 100% completed and currently under operation of O&M staff of Warsak Power Station by Taking Over Certificate (TOC) was issued on 09.11.2016.
- b. Trash Rack Cleaning with the help of TRCHM with Power Tunnel Intake Gates in open condition is being carried out. Generation of 133.695 MKWh from Warsak Power Station has been recorded in the month of May 2021.
- c. The TRCHM is presently working satisfactorily since replacement of two main cylinders of main boom by the technical experts of M/s Muhr Germany during their visit to Warsak in the third week of October 2018.
- d. The Defect Liability Period (DLP) of TRCHM expired on 19.06.2017.

### **Package II - Wire Rope Spillway Hoist (A Fast-Track Package as per PC-1):**

The Purchase Orders on the Fast-Track Basis for design, supply of Spillway Gate Hoisting System was issued to M/s Zirva-ISIK, Pak-Turkey JV.

- a. Spillway Gates # 1 to 9 commissioned with new Hoisting System are available for operation to the O&M staff of Warsak Power Station.
- b. The new Spillway Gates Hoisting System have completed their Defect Liability Periods successfully for one year since their respective commissioning/TOC dates.
- c. After successful completion of Defect Liability Period (DLP) of the last Spillway Gate New Hoisting System on 24-04-2018, Defect Liability Certificate (DLC) has been issued on 02-07-2019 after approval from Authority.

### **Package III - Stator Winding for Unit # 3 – (A Fast-Track Package as per PC-1):**

The Purchase Orders were issued to M/s Andritz Hydro Austria for supply of Complete Stator Winding for unit 3 and supply of T&P for replacement of winding for Unit 3.

Unit # 3 is running satisfactorily with the new Stator winding since commissioning of Stator winding on 02-05-2015.

The Defect Liability Period (DLP) of Stator Winding expired on 27.06.2015.

#### **Package IV - Civil Works (GMHD/C-01):**

The following activities were carried out in the month of June 2023:

##### **Crack Repair Works in Southern Staircases of Inspection Gallery**

- Concrete cutting, installation of anchor rods and wire mesh for type-2b cracks are in progress.
- Crack sealant application and micro cement injection in type 2A and 2B are in progress.

##### **Crack Repair Works in Northern Staircase of Inspection Gallery**

- Cutting, cleaning and micro cement injection in type 2A and installation of anchor rods along with grouting in type 2B cracks is in progress.

##### **Wave Wall**

- Cracks survey report submitted by the contractor to WRC.

##### **Oil Water Separator Tank**

- Shop drawing for oil / water separator tank steel roof cover approved by the Engineer.

##### **Switchyard**

- Drilling of anchor pins and fixing of flexible wire mesh is in progress.

#### **Package V - Sediment Flushing Structure:**

- Detailed design of Hopper structure along with Bidding documents have been approved by Wapda vide letter No. CE/PD/2<sup>nd</sup> Rehab:/WSK/96/2876-78 dated 16-11-2021, and activity 1A of WRC is completed.

#### **Package VI - E&M Works:**

After signing of Consultancy Service Agreement with Warsak Rehabilitation Consultant (WRC), bidding documents review phase of E&M works package was commenced. The Consultant (WRC) carried out review of bidding documents for E&M works.

Tender was published in the Daily Newspapers, PPRA and WAPDA websites on 20<sup>th</sup> March 2019 with Tender opening date of 20-05-2019. Tender opening date revised and extended up to 26-09-2019 on the request of Bidders. Tender for E&M works was opened on 26-09-2019 in presence of tender opening committee in WAPDA House Lahore. Five bidders participated in the tender on due date and time. Technical bids of all the participated firms were forwarded to WRC for evaluation. WRC carried out technical bid evaluation and submitted their report on 31-10-2019.

Review committee was constituted to review the report of WRC. Some observations were raised by review committee which were conveyed to WRC for consideration on 15-11-2019. WRC after addressing the observations, re-submitted the Technical Bid Evaluation Report (Rev-A) to office of General Manager (Hydel) Development on 12-12-2019. The committee of WAPDA reviewed Technical Bid Evaluation Report (Rev-A) and found deficient in responding to observations raised by the review committee and informed WRC on 03-01-2020 to attend the observation. WRC submitted revised Technical Bid Evaluation Report (Rev-B) on 21-01-2020 to WAPDA. Meeting of WAPDA and WRC was held in order to finalize the Technical Bid Evaluation Report. Final version of Technical Bid Evaluation Report (Rev-C) dated 07-02-2020 was submitted to CCC WAPDA for review. The case was vetted by CCC WAPDA with some observations. The observations of CCC WAPDA were forwarded to the bidders. The response of bidders has been received and the case was submitted to Central Contract Cell WAPDA for final review on 30-04-



2020 in light of bidder's observations. CCC WAPDA concurred the Technical Bid Evaluation Report (Rev-C) which was submitted to Donor Agency AFD on 06-05-2020 for review and no-objection.

AFD reviewed the report and asked for some additional details on 28-05-2020 which were submitted to them on 29-05-2020. AFD issued Non-Objection Letter (NOL) on July 21, 2020 pertaining to BD-02 (Electro-Mechanical Works) Technical Bid Evaluation Report. Consequent upon approval of Technical Bid Evaluation Report by Member (Power) in consultation with Member (Finance), financial proposals / bids of the following technically qualified firms were opened on 26-08-2020.

- 1) M/s Andritz Hydro Germany
- 2) M/s GE Hydro Germany and M/s Sinohydro China JV
- 3) M/s NORINCO International China and M/s IMPSA Argentina JV

Copy of financial proposals / bids of the technically responsive firms were submitted to Consultant (WRC) on 27-08-2020 for evaluation. The Consultant WRC vide letter dated 16-10-2020 submitted financial bid evaluation report to the office of General Manager (Hydel) Development for review.

General Manager (Hydel) Development vide office order dated 20-10-2020 constituted a review committee for financial bid evaluation report. The review committee through consultant WRC sought clarifications 1 & 2 from bidder M/s GE-Sinohydro which were responded on 12-11-2020 and 27-11-2020. 3<sup>rd</sup> post bid clarification was sought from bidder M/s GE-Sinohydro JV on 01-12-2020 which were responded on 04-12-2020. Some additional clarification was sought from bidder M/s Andritz Hydro on 02-12-2020 and 11-12-2020 which were responded on 08-12-2020 & 22-12-2020.

WAPDA evaluation committee completed review of financial bids evaluation report and forwarded comments on 13-01-2021 to the Consultant WRC to revise the Financial Bid Evaluation Report. WRC submitted Financial Bid Evaluation Report (Rev-1) to Wapda on 22-01-2021. General Manager (Hydel) Development submitted Financial Bid Evaluation Report to Central Contract Cell (CCC) on 25-02-2021. The Case was vetted by CCC on 02-03-2021 and forwarded the same to Donor Agency (AFD) on 03-03-2021 for issuance of NOL.

AFD vide email dated 23-03-2021 requisitioned some additional information which was submitted to them on 30-03-2021. AFD issued No Objection vide letter No. CD-31/21 dated 06-04-2021 on Financial Bids Evaluation Report (Rev-2). WAPDA Authority in meeting dated 04-05-2021 approved Financial Bid Evaluation Report (Rev-2) and pre-award clarifications meeting with the successful bidder M/s GE Sinohydro notified by Secretary WAPDA vide No. S/AD(Coord)03003/MTG/305-07 dated 21-05-2021. Technical and Commercial agenda for pre-award clarifications meeting was discussed and finalized among WRC, AFD and WAPDA in meeting dated 27-05-2021.

Pre-award clarification meetings commenced from June 02, 2021 and concluded on June 25, 2021 with the decision that the pending submittals from any party will be completed up to July 02, 2021. A virtual meeting among WRC, Lowest Evaluated Bidder (LEB) and WAPDA held on July 15, 2021 to finalize the price schedule. WRC issued minutes of Pre-award clarification meetings on July 28, 2021. WAPDA Authority in meeting dated 17.08.2021 accorded approved for acceptance of bid of M/s GE-Sinohydro JV notified on 31.08.2021. Letter of Acceptance (LOA) has been issued on 31.08.2021. M/s GE-Sinohydro JV submitted performance BG & advance payment BG to General Manager (Hydel) Dev. on 27-09-2021. GM(Hydel) requested the concerned banks on 27 & 28-09-2021 for verification of authenticity. The banks verified performance BG & advance payment BG on 11.10.2021. Draft contract agreement submitted on 07.10.2021 to AFD for No objection AFD issued NOL on draft contract on 27.10.2021. Contract agreement signed with M/s

GE-Sinohydro JV on 05.11.2021. M/s GE-Sinohydro JV submitted advance payment Invoice employer on 15.11.2021.

The lender released advance payment to the Contractor on 27-12-2021. WRC vide letter dated 05-01-2022 notified contract effectiveness date as 27-12-2021. The Contractor performed Turbine Model Test of Units 5&6 from 8-13 December 2021. The Contractor performed Turbine Model Test (Unit 1 ~ 4) from 17-21 January, 2022 duly witnessed by Consultant & Employer representatives. The Contractor foreign and local experts visited site from 14-18 February, 2022 for technical assessment of Units. Site for camp establishment was handed-over to the Contractor on 17-02-2022. The Contractor performed asbestos survey in the Power House commenced from 28.03.2022. The Contractor M/s GE-SH JV commenced site camp construction in June 2022 with completion up to February 2023.

Mr. Mehmet Ozer replaced Faruk Yilmaz and appointed as Contractor representative with the approval of GM (Hydel) Dev. vide letter No. 22639-41/GMHD/PR-13-11 dated 05-10-2022. Mr. Erhan Yamakalioglu appointed as Construction Manager with the approval of GM (Hydel) Development vide letter No. GM(Hydel) Dev. WAPDA/ Dairy No. 1045 dated 02.03.2023.

#### **Generator Assessment tests of Unit 6**

On 02-06-2023 PTW # 01 220/23 was obtained for Generator Assessment Test on unit No. 06 up till now following works has been carried out by M/s GE & Sino hydro:-

Total 08 Nos. sensors, 02 Nos. micro phones, 01 No. phase sequence meter are installed.

Startup and shutdown sequence has been checked.

Mechanical heat run test has been performed.

Stator Winding insulation test, Rotor Winding Insulation Test, Rotor & Stator resistance test carried out.

Open Circuit & Short Circuit test performed

Short Circuit Test also carried out.

Other Generator Assessments tests are in progress.

As per latest Monthly Progress Report of E&M Contractor, progress of different components is given below: -

**Note;** (Monthly Progress Report of June has not been received yet from E&M Contractor so table is attached as per May Progress Report).

Activity ID	Activity Name	Start	Finish	End of May 2023 % Progress	Remarks
SH-22109	Manufacture DC Auxiliary System	27-Jan-23	25-Jun-23	0%	
A8330	Unit 5 Manufacturing Main Transformer	26-Dec-22	23-July-23	48%	
MNF-BRING -55120	Unit-6 Manufacturing Head Cover	15-Sep-22	01-Jun-23	90%	
A7120	Unit-6 Manufacturing Bottom Ring	20-Sep-22	06-Jun-23	80%	
A6340	Unit-6 Manufacturing Servomotor	04-Nov-22	16-Jun-23	45%	
MNF-RUNNER	Unit 4 Manufacturing Runner (Including long lead items Procurement)	12-Jan-23	07-Dec-23	10%	
MNF-SHAFT	Unit 4 Manufacturing Shaft (Including Long lead items Procurement)	8-Mar-23	22-Dec-23	4%	
MNF-BARS-4	Unit 4 Manufacturing Stator Bars	05-Aug-22	03-Sep-23	38%	
MNF-SFRAM-4	Unit 4 Manufacturing Stator Frame	2-Jan-23	29-Aug-23	20%	
MNF-SCORE-4	Unit 4 Manufacturing Stator core Lamination	18-Dec-22	23-Sep-23	32%	
MNF-GPOLE-4	Unit 4 Manufacturing Poles	19-Oct-22	13-Sep-23	33%	
A5290	Unit 4 Governing System Manufacturing	1-Apr-23	27-Oct-23	8%	
MNF-RUNNER-4000	Unit 4 Manufacturing Runner	12-Jan-23	7-Dec-23	18%	
MNF-BARS-3	Unit 3 Manufacturing Stator Bars	04-Oct-22	02-Nov-23	15%	
MNF-GPOLE	Unit 3 Manufacturing Poles	18-Dec-22	12-Nov-23	15%	

## **Package VII – EU Grant:**

### **a) Sustainable Sediment Management**

#### **Procurement of Sediment Measurement Equipment (Package-1 & 02)**

- Finishing works of laboratory are in progress.
- Procurement of sediment measurement equipment under package 1 & 2 is in progress. Delivery of equipment is expected soon.

### **b) Community Development Program**

#### **Package-1 to 6 under Community Development Program**

- Evaluation reports for package 1&2 are being submitted by MMP and forwarded to AFD accordingly, for seeking NOL.
- Evaluation reports of package 3, 5&6 are pending with MMP.
- Package 4 pertaining to solar system is in progress.

### **c) Flood Management**

- All the stations have been successfully installed.

### **d) Enhancement of Workshop Equipment**

- Contract signed for Lot – 01 with M/s K.T.D (Pvt.) Limited, Karachi on 3<sup>rd</sup> February 2021.
- Lot – 02 with M/s K.T.D (Pvt.) Limited, Karachi on 3<sup>rd</sup> February 2021. Purchase
- Contract signed for Lot – 03 with M/s Gardner Denver FZE, UAE on 15<sup>th</sup> July 2020.
- Contract signed for Lot -04 & Lot – 05 with M/s Qinhuangdao Peak Energy Electric Equipment Co. Limited, China on 18<sup>th</sup> November 2021.

Sr. No.	LOT No.	Status
1	LOT - 01	<p><b>Lot – 01 Consists of</b></p> <ul style="list-style-type: none"><li>i. Two (02) Meter Vertical Lathe Machine (Make: CHESTER UK, Model: VB2650)</li><li>ii. Plano Milling Machine (Make: CHYMI UK, Model: CH-4015)</li></ul> <p><b>Contract No:</b> GMHD/HMWE-03 (Lot-01)</p> <p><b>Delivery Date:</b> 22-06-2022 (Plano Milling m/c) &amp; 17-04-2023 (Vertical Lath m/c).</p> <p><b>Warranty Period:</b> 27 Months from date of shipment or 24 Months from date of Installation/Acceptance of machine at site whichever comes first.</p> <p><b>LD details (if any):</b> N/A</p> <p><b>Current Status: -</b></p> <ul style="list-style-type: none"><li>• Vertical Lathe Machine has been received at site on 17.04. 2023.</li><li>• Foundation works are in progress by M/S Technicon (Pvt) Ltd.</li><li>• Installation / Commissioning &amp; Local Training of Plano Milling Machine has been carried out.</li></ul>

2	LOT - 02	<p><b>Lot – 02 Consists of</b></p> <p>i. Radial Drilling Machine (Make: CHESTER UK, Model: Kitchen &amp; Walker G80 x 2500)</p> <p>ii. Magnetic Base Drilling Machines (Make: FE Power Germany, Model: MAB 1300)</p> <p><b>Contract No:</b> GMHD/HMWE-03 (Lot-02)</p> <p><b>Delivery Date:</b> 30-08-2022 (Radial Drilling m/c) &amp; 28-04-2022 (Portable Magnetic Base Drill m/c).</p> <p><b>Warranty Period:</b> 27 Months from date of shipment or 24 Months from date of Installation/Acceptance of machine at site whichever comes first.</p> <p><b>LD details (if any):</b> N/A</p> <p><b>Current Status: -</b></p> <ul style="list-style-type: none"> <li>• Installation / Commissioning &amp; Local Training of Radial Drilling Machine has been carried out.</li> <li>• Commissioning &amp; Local Training of Two No. Magnetic Drilling Machines has been carried out.</li> </ul>
3	LOT - 03	<p>Installation / Commissioning &amp; Local Training of Air Compressor &amp; Air Tank (Model: L160RS-13W Simmer Germany) has been carried out.</p> <p><b>Contract No:</b> GMHD/HMWE-03 (Lot-03)</p> <p><b>Delivery Date:</b> 23-02-2021</p> <p><b>Warranty Period:</b> 24 Months after goods have been delivered at site and accepted by CE/PD 2<sup>nd</sup> Rehab Project Warsak.</p> <p><b>LD details (if any):</b> N/A</p>
4	LOT - 04	<p>Heavy Duty Horizontal Lathe Machine (Model: CW61200N China) has been received at site on 16-10-2022.</p> <p><b>Contract No:</b> GMHD/HMWE-03 (Lot-04)</p> <p><b>Delivery Date:</b> 16-10-2022.</p> <p><b>Warranty Period:</b> 24 Months after goods have been delivered at site and accepted by CE/PD 2<sup>nd</sup> Rehab Project Warsak.</p> <p><b>LD details (if any):</b> N/A</p>
5	LOT - 05	<p>Installation / Commissioning &amp; Local Training of Universal Portable Radial Drilling Machine (Model Z3550 China) has been carried out.</p> <p><b>Contract No:</b> GMHD/HMWE-03 (Lot-04)</p> <p><b>Delivery Date:</b> 14-09-2022</p> <p><b>Warranty Period:</b> 24 Months after goods have been delivered at site and accepted by CE/PD 2<sup>nd</sup> Rehab Project Warsak</p> <p><b>LD details (if any):</b> N/A</p>

## FINANCIAL INFORMATION:

The Project Capital Cost is as under:

Project Capital Cost		
Local	Foreign	Total
10,970.716	11,283.519	22,254.235
ECNEC Approval: 09.07.2015		
Admin Approval: 27.10.2015		

To meet above capital cost of the Project, Government of Pakistan and Agency Française de Development as a Lead Financer arranged the Credit Facility Agreements including from KfW and EIB as co-financier and Grant Facility Agreement from European Union (EU) for 2<sup>nd</sup> Rehab. Project Warsak. Further, GoP re-lent the loans and Grant to WAPDA by signing of a separate Subsidiary Loan Agreements (SLAs) and Subsidiary Grant Agreement (SGA) respectively.

The Packages I to VI collectively are being financed through Loans and EU Grant exclusively is funding the Climate Change Adoption Strategy.

### Financing Plan:

Donor Agency	Amount (in Euro & Million)	Agreements Signing Dates	SLAs and SGA Signing Dates	Facility Availability Deadline
AFD France Loan CPK - 1031 01P	41.5	22.09.2015	15.02.2016	30.08.2026
KfW Germany Loan No. BMZ 2011 65745	40.0	21.09.2015	09.05.2016	30.12.2024
EIB Loan No. 83.179	50.0	17.11.2015	17.11.2015	31.12.2025
EU Grant CPK 1031 02R	4.5	21.09.2015	09.05.2016	28.06.2025
<b>Total Donors</b>	<b>136</b>			

### Repayment of Loans and Grace Period:

After expiry of the Grace Period, which is 72 months from the signing date of Credit Facility Agreement, the loans amount is repayable in 28 semi-annual installments.

### Loans / Grant Utilization Statement:

Loan & Grant Utilization Statement - Aggregate				
Donor Agency	Financing	Utilization Up to 30.06.2023	Balance as on 01.07.2023	Percentage of Utilization 30.06.2023
	Euro in Million			%
AFD France Loan CPK - 1031 01P	40.000	13.211	26.789	33%
KfW Germany Loan No. BMZ 2011 65745	40.000	6.475	33.525	16%
EIB Loan No. 83.179	50.000	-		0%
EU Grant CPK 1031 02R	4.500	1.94	2.612	43%
<b>Total</b>	<b>134.500</b>	<b>21.626</b>	<b>112.925</b>	<b>16.07%</b>

### Expenditures Statements:

The following expenditures up to 30.06.2023 (Provisional) have been incurred for eligible expenses of the Project:

PKR/Million

Head of Account	Expenditure as on 31.05.2023	This Month Exp.	Total Cumulative
<b>Capital Expenditure/Assets:</b>			
Office Equipment	4.960		4.960
Computer & Ancillary equipment's	0.049		0.049
Furniture & Fixture	1.834	0.207	2.041
Transportation Equipment	18.402		18.402
Arms & Ammunition		<b>0.486</b>	0.486
<b>A) Sub-Total (Assets)</b>	<b>25.245</b>	<b>0.693</b>	<b>25.938</b>
<b>Capital Work-in-Progress:</b>			
<b>Other Building Residential/Non-Residential</b>	0.478		0.478
<b>Power Generation Plant Assets.</b>	1439.449		1439.449
<b>Dam &amp; Reservoir Assets:</b>	1257.141	114.700	1371.841
<b>General / Plant Assets – W/Shop:</b>	90.678		90.678
<b>Consultancy &amp; Engineering</b>	435.637	47.988	483.625
<b>Preparatory Works / Preliminary Expenses</b>			
<b>B) Sub-Total (CWIP)</b>	<b>3223.383</b>	<b>163.381</b>	<b>3386.071</b>
<b>Project Management Expenses</b>	277.589	29.303	306.892
<b>Interest During Construction</b>	893.763	165.834	1059.597
<b>Suspense A/cs</b>	152.821		152.821
<b>C) Sub-Total Project Management Expenses, IDC &amp; Suspense A/cs</b>	<b>1324.173</b>		<b>1519.31</b>
<b>Total A+B+C</b>	<b>4572.801</b>		
<b>D)</b>		<b>358.518</b>	
<b>Grand Total = A+B+C+D</b>			<b>4931.319</b>

### Budget Allocation and Expenditure Statement:

Sr. #	Financial Year	Budget Allocation			Expenditure			Remarks
		Local	F/Aid	Total	Local	F/Aid	Total	
1	2015-16	50.000	20.000	<b>70.000</b>				Exp was incurred from O&M Budget of Warsak Power Station for Package-I, II & III under Fast-Track-Procurement and the same was booked to 2nd Rehab. Project.
2	2016-17	62.000	395.000	<b>457.000</b>	151.770	956.340	<b>1108.110</b>	
3	2017-18	445.000	500.000	<b>945.000</b>	160.126	46.012	<b>206.138</b>	
4	2018-19	223.000	70.000	<b>293.000</b>	171.289	15.675	<b>186.964</b>	
5	2019-20	2545.000	130.000	<b>2675.000</b>	181.420	65.270	<b>246.690</b>	
6	2020-21	585.000	1831.000	<b>2416.000</b>	197.329	73.180	<b>270.509</b>	
7	2021-22	654.000	1208.000	<b>1862.000</b>	338.518	1292.283	<b>1630.801</b>	
<b>Total</b>		4564.000	4154.000	<b>8718.000</b>	1200.452	2448.760	<b>3649.212</b>	
<b>Approved PSDP 2022-23 (Current Financial Year)</b>								
8	2022-23	2000.000	470.000	<b>2470.000</b>	317.741	964.366	<b>1282.107</b>	
<b>Overall Financial Utilization against PC-1 Cost: 22.15%</b>								

## **Bank Guarantees against Advance Payments**

Sr. #	Consultants / Contractors	No. & Date	Currency	Amount	Issuance Bank	Validity	Remarks
1.	M/s WRC	No.1398FBG180010 Dated, 09-05-2018	Euro	287,189.00	MCB Bank Ltd, Trade Service Center 2 <sup>nd</sup> Floor MCB Nila Gumbad Bank Square Lahore.	09-04-2024	1 <sup>st</sup> Amendment issued Dt: 25.03.2021
2.	M/s GE Hydro France 204 & Sinohydro Corporation Limited	451020135698-FP dated 24-09-2021	EURO USD PKR	4,718,430 2,370,624 125,966,609	Standard Chartered Bank (Pakistan) Limited Tufail Road Branch P.O Box No. 6131 Tufail Road Lahore.	23.12.2026	
3.		451020135983-FA dated 27-09-2021	EURO USD	3,817,873.63 1,194,042.61	Standard Chartered Bank (Pakistan) Limited main branch P.O Box No.5556, I.I Chandigarh Road, Karachi.	23.12.2025	
5.	M/s KTD	LG20900100030556 Date:03-12-2021	US\$	24,800/-	JS Bank, Head Trade Services, 8 <sup>th</sup> Floor Shaheen Complex, Karachi	01-05-2023	10% Advance Payment as per Contract
6.	M/s GE-SH (JV)	451020146971-FA dated 11-01-2023	EURO USD PKR	581,764.00 791,003.10 104,336,840.34	Standard Chartered Bank (Pakistan) Limited main branch P.O Box No.5556, I.I Chandigarh Road, Karachi.	29-07-2026	

## **Performance Guarantees:**

Sr. #	Consultants / Contractors	No. & Date	Currency	Amount	Issuance Bank	Validity	Remarks
1.	M/s Technicon (Civil)	005/2021 15.03.2021	PKR	86,629,299.00	Bank of Khyber Head Office, 34-Mall, State Life Building Peshawar	14.09.2025	
2.	M/s KTD Workshop Equipment (Lot-1)	LG20900100025693 18.12.2020	USD	41,000.00	JS Bank, Head Trade Services, 8 <sup>th</sup> Floor Shaheen Complex, Karachi.	16.12.2023	
3.	M/s KTD Workshop Equipment (Lot-2)	LG20900100025694	USD	8,600.00		16.12.2023	
4.	M/s Gardner Denver FZE, UAE (Lot-3)	2021LG20003854	Euro	10,572.00	Askari Bank, Central Foreign Trade, 9 <sup>th</sup> Floor, 27-H Pace Tower Building, College Road, Gulberg-II Lahore.	30.06.2023	
5.	M/s Glow Pak International Lahore (Lot-4)	0018/BAH/1297/2021 dated 14-10-2021	PKR	4,650,000/-	Bank Al Habib Limited New Garden Town Lahore.	25.03.2024	
6.	M/s Glow Pak International Lahore (Lot-5)	0018/BAH/1298/2021 dated 14.10. 2021	PKR	1,500,000/-		25.03.2024	
7.	M/s Akhunzada Associates Pvt Ltd	MD22354409000083 dated 20.12.2022	PKR	2,999,350/-	Bank of Khyber Phase 5 Branch, Hayat Abad Peshawar.	19.12.2023	
8.	M/s C-Digital	3040IGT2300489PK dated 23.02.2023	PKR	2,167,110/-	Askari Bank Ltd, Chaklala Scheme III Branch, Rawalpindi.	22.02.2024	
9.		3040IGT2300600PK dated 16.03.2023	PKR	6,000,000/-		15.03.2024	
10.	M/s C-Digital	3040IGT2300868PK dated 28.04.2023	PKR	2,603,621/-	Askari Bank Ltd, Chaklala Scheme III Branch, Rawalpindi.	27.04.2024	
11.		3040IGT2300866PK dated 28.04.2023	PKR	4,622,644/-	Askari Bank Ltd, Chaklala Scheme III Branch, Rawalpindi.	27.04.2024	

## CONTRACT AGREEMENTS / P.OS AND CONSULTANCY SERVICES AGREEMENTS DETAILS – PHYSICAL AND FINANCIAL PROGRESS

Sr. No.	Package	Description	Cost	Equivalent Cost* (Euro)	Status	Consulting Services by	Percent share for each package	Percent share for Combined package	Physical Progress achieved for each Package	Overall percent Physical Progress of the project
1	Package - I (Fast Track)	Trash rack Cleaning and Handling Machine	2,317,000 €	2,317,000 €			2.14%	8.08%	100%	2.14%
2	Package -II (Fast Track)	Spillway Gate Wire Rope Hoist System	US\$ 4,569,000+ PKR 19,957,000	4,291,411 €			3.96%		100%	3.96%
3	Package - III (Fast Track)	Supply of Complete Stator Winding	2,147,000 €	2,147,000 €			1.98%		100%	1.98%
4	Package IV (Contract No. GMHD/C-01)	Civil Works	PKR 896,292,000 (exclusive local taxes)	5,121,669 €	WRC		4.73%	74.81%	21.04%	0.99%
5	Package – V+VI, (Contract No GMHD/E&M-02)	E&M Work	Euro47,184,300+U S\$23,706,239.66 and PKR 1,241,666,067	75,953,811 €	WRC		70.09%		15.07%	10.56%
6a	Contract No. ICB/AFD/H&R/01, Awarded to M/s CDIGITAL on 22.07.2019	Flood Management (Main Equipment)	US\$ 413,108.49 and PKR 43,803,000	628,002 €	WRC		0.58%	2.44%	90%	0.52%
6b	Contract No. ICB/AFD/H&R/01 Amendment No. 1 for additional telemering station. Contract on May 2021	Flood Management (Additional Equipment)	Amendment No. 1 (US\$ 102,917 and PKR 11.011.360)	157,018 €			0.14%		90%	0.130%
7		Flood Management for two CNR Trainings	Euro 44,240	44,240 €			0.04%		100%	0.04%
8		Community Development & Accompanying Measure (Consultancy Contract)	PKR 59,582,500	340,471 €	Mott MacDonald Pakistan (MMP)		0.31%		75%	0.24%
9		Community Development & Accompanying Measure (Works Contract)	Euro 500,000	500,000 €	To be awarded		0.46%		0%	0.00%



10		Sustainable Sediment Management (Consultancy Contract)	Euro 208,196 and PKR 46,855,500	475,942 €	JV of M/s GLM Engineering COOP, M/s Nespak (Pvt) Ltd & Hagler Bailly Pakistan (Pvt) Ltd on 14.01.2021
11		Sustainable Sediment Management (Works Contract)	Euro 400,000	400,000 €	To be awarded
12		Sustainable Sediment Management (M/s ISRIP WAPDA Service)	PKR 17,417,000	99,526 €	
13		<b>Enhancement of Workshop Equipment (Equipment)- Originally One (1) lot is separated to five (5) Lots</b>			
13.1		Lot 1 (Supply of Vertical Lathe Machine Along with Accessories, Spare Parts and Maintenance Tools)	US\$ 410,000	374,857 €	WRC
13.2		Lot 2 (Supply of Drilling Machines along with Spare Parts & Maintenance Tools Accessories)	Euro 12,400 and US\$ 70,300	76,674 €	WRC
13.3		Lot 3 (Supply of screw type compressor, dryer and air pressure tank along with Spare Parts & Maintenance Tools accessories)	Euro 100,716.21 and US\$ 5,000	105,716 €	WRC
13.4		Lot 4 & 5 (Heavy Duty Horizontal Lathe & Universal Portable Radial Machine)	US\$ 320,000	292,571 €	WRC
14	Consulting Services 1a	Consulting Services Activity 1 a - Sediment Management Structure	Euro 188,884 and PKR 9,680,651	244,202 €	WRC

0.44%		100%	0.44%
0.37%		0%	0.00%
0.09%		100%	0.09%
<b>0.78%</b>	<b>0.78%</b>		<b>0.68%</b>
0.346%		70%	0.24%
0.071%		100%	0.07%
0.09%		100%	0.09%
0.27%		100%	0.27%
0.23%		100%	0.23%

15	Consulting Services 1b	Consulting Services Activity 1 b - Reviewing the procurement plan and bidding document	Euro 187,378 and PKR 8,350,478	235,095 €	WRC		0.22%	5.58%	100%	0.22%
16	Consulting Services 2	Consulting Services Activity 2 - Bidding and Contracting	Euro 340,309 and PKR 8,891,774	391,119 €	WRC		0.36%		100%	0.36%
17	Consulting Services 3	Consulting Services Activity 3 - Work Phase, Time Based Consultancy Services	Euro 2,489,387 and PKR 268,643,843	4,024,495 €	WRC		3.71%		28.00%	1.04%
18	Consulting Services 4	Consulting Services Activity 4 - Services during Defect Liability Period	Euro 396,002 and PKR 20,540,474	513,376 €	WRC		0.47%		0%	0.00%
19	Consulting Services 5	Consulting Services Activity 5 - Supervision of Workshop enhancement	Euro 25,020 and PKR 1,989,644	36,389 €	WRC		0.03%		100%	0.03%
20	Consulting Services 6	Consulting Services Activity 6 - Training	Euro 101,048 and PKR 2,787,250	116,975 €	WRC		0.11%		0%	0.00%
21	Amendment 2.1	Flood Management (Consulting Services)	Euro 112,594 and PKR 16,191,382	205,116 €	WRC		0.19%		100%	0.19%
22	Amendment 2.2	Sustainable Management Strategy (Consulting Services)	Euro 265,586 and PKR 3,241,378	284,108 €	WRC		0.26%		100%	0.26%
23	Administrative Service	Administrative Cost of the Employer (WAPDA)	Euro 9,000,000	9,000,000 €			8.30%	8.30%	25%	2.08%
		GRAND TOTAL (EURO)		108,371,785 €	* The currency rate is taken as an average value		100.00%			26.17%

### **Audit Paras of 2<sup>nd</sup> Rehabilitation Project Warsak.**

<b>Sr.#</b>	<b>Formation</b>	<b>Para/PDP No.</b>	<b>Audit Report</b>	<b>Subject</b>	<b>PAC/DAC Directives</b>	<b>Compliance/Updated status</b>
1	2 <sup>nd</sup> Rehab. Project Warsak	PDP No. 333	2022-23	Execution of Contract costing Rs. 161.116 million without insurance coverage in violation of the PEC standard bidding documents	DAC settled the para subject to verification of relevant record from Audit within two weeks.	A letter has been forwarded to the PD (H&R) to submit updated reply along with supporting documents to Chief Auditor WAPDA SAL
2	2 <sup>nd</sup> Rehab. Project Warsak	PDP No. 374	2022-23	Increase in Cost of E&M Work as Compared to PC-I provision due to delay of more than 70 months in award of Contract - Rs. 2526.037 million	DAC directed the management to submit revised reply along-with documentary evidence to audit within 02 weeks.	In light of Re-audit remarks an updated reply along with supporting documents was forwarded to GM Hydel Dev for onward submission to the quarter concerned.
3	2 <sup>nd</sup> Rehab. Project Warsak	PDP No-375	2022-23	Delay in Award / Implementation of E&M and Civil Works Resulted in Extra Commitment Charges on Foreign Loans- Rs.57.291 million	DAC directed the management to submit revised reply along-with documentary evidence to audit within 02 weeks	In light of Re-audit remarks an updated reply along with supporting documents was forwarded to GM Hydel Dev for onward submission to the quarter concerned.
4	2 <sup>nd</sup> Rehab. Project Warsak	PDP No. 381	2022-23	Non imposition of damages upon Project Consultants on account of non-compliance of contract requirement /Contractual obligations. Rs. 78.146 million	The DAC directed the management to submit revised reply within two weeks to Audit for verification.	In light of Re-audit remarks an updated reply along with supporting documents was forwarded to GM Hydel Dev for onward submission to the quarter concerned.
5	2 <sup>nd</sup> Rehab. Project Warsak	PDP No. 382	2022-23	Un-justified extension in time for completion instead of imposition of liquidated damages – Rs. 14.620 million	DAC directed the management to submit revised reply within one week to Audit.	A letter has been forwarded to the PD (H&R) to submit updated reply along with supporting documents to Chief Auditor WAPDA SAL
6	2 <sup>nd</sup> Rehab. Project Warsak	PDP No. 383	2022-23	Unjustified award of contract for E&M works due to non-adherence to the PPRA rules – Rs. 14,791.803 million	DAC directed the management to submit point wise reply to audit within 15 days and pursue the court case vigorously.	In light of Re-audit remarks an updated reply along with supporting documents was forwarded to GM Hydel Dev for onward submission to the quarter concerned.
7	2 <sup>nd</sup> Rehab. Project Warsak	PDP-251	2021-22	Non-obtaining of insurance policy of the works from the contractor- Rs.1076.74 million	DAC directed the management to deduct insurance premium for uncovered period, if any, and provide record of insurance policies to Audit for verification	In light of Re-audit remarks an updated reply along with supporting documents was forwarded dated 30-03-2023 to GM Hydel Dev for onward submission to the quarter concerned.
8	2 <sup>nd</sup> Rehab. Project Warsak	PDP-252	2021-22	Loss due to levy of commitment charges/non	DAC directed the management to ensure compliance of decision compliance of decision taken in	The Para is linked with inquiry of Keyal Khwar hydropower project for which fat-finding

				utilization fee on unused loans Rs. 43.18 million	previous DAC meeting held on 30.11.2021 on similar para of FAP report wherein, the DAC directed CF&AO and Chief Engineering Advisor (Power) MoWR to conduct fact finding on the matter and report within two months	committee has been constituted vide MoWR letter dated 28.01.2022. In this context CE/PD Warsak Project attended the meeting in office of CF &AO MoWR along with relevant documents dated 25.04.2022. The outcome/fact-finding report is awaited from MoWR.
9	2 <sup>nd</sup> Rehab. Project Warsak	PDP-283	2021-22	Unjustified award of contract without increasing the amount of performance security due to unbalanced bid Rs. 866.29 Million	DAC directed the management to provide revised schedule of activities of the contractor and certify that Authority's interests have been protected to consider the para for settlement	In the light of Re-audit remarks dated 03-01- 2023, an updated reply along with supporting documents was forwarded dated 30-03-2023 to GM Hydel Dev for onward submission to the quarter concerned.
10	2 <sup>nd</sup> Rehab. Project Warsak	PDP-284	2021-22	Unjustified inclusion of provision for income tax in the contract price Rs. 59.90 million	DAC directed the management of get the record in support of their stance verified from the Audit	In light of DAC directives Original record along with supporting documents were produced to Audit for verification dated 22.03.2022, and thereafter a revised reply was forwarded 16.04.2022 to GM Hydel Dev for onward submission to the quarter concerned in response of Re-Audit remarks issued by Audit.
11	2 <sup>nd</sup> Rehab. Project Warsak	DP-285	2021-22	Blockade of funds in shape of advance payment to contractor due to abnormal delay in establishment of letter of credit and amendment in contract agreement Rs. 9.91 million	DAC directed the management to ensure compliance of earlier decision taken in previous DAC meeting held on 30.11.2021 wherein, the DAC directed the management to submit revised reply within 15 days	An updated reply along-with supporting documents has been forwarded by the office of GM (HRM) Water to Audit.
12	2 <sup>nd</sup> Rehab. Project Warsak	PDP-286	2021-22	Increase in contract cost due to irregular amendments in the contract agreement after award of contract Rs. 27.15 million.	DAC directed the management to submit revised reply along with supporting documents to Audit for verification	As per DAC directives revised reply has already been submitted by the office of PD(H&R) to Audit.
13	2 <sup>nd</sup> Rehab. Project Warsak	PDP-287	2021-22	Unjustified provision for purchase of vehicle through contractor in violation of austerity measures Rs. 6.50 million	DAC directed the management to ensure compliance of its earlier decision taken in previous meeting held on 30.11.2021 wherein, the management was directed to submitted revised reply to Audit	As per DAC directives revised reply has already been submitted by the office of PD(H&R) to Audit.
14	2 <sup>nd</sup> Rehab. Project Warsak	PDP-256	2020-21	Loss due to levy of commitment charges/non- utilization fees on unused loans – Rs. 44.15 Million	DAC directed the management to justify the delay in procurement process with comparison of timeline for each	In Light of DAC Directives Reply along with relevant documents is forwarded to Director General (WR), Lahore vide General Manager (Hydel) Development, Lahore letter No. 12647-

					activity given in WAPDA procurement and contract manual within 02 months.	49/GMHD/CEHD/G-11 dated 19.07.2021, result of which is still awaited.
15	2 <sup>nd</sup> Rehab. Project Warsak	PDP-257	2020-21	Irregular excess payment of provincial sales tax on consultant's invoices – Rs. 0.77 Million	The DAC accepted the stance of management and directed the management that expenditure should be distinguished and, in future, PST should be levied on remuneration cost only.	Original record has been presented to the team of Director General Audit (Water Resources) Lahore, result of which is awaited.
16	2 <sup>nd</sup> Rehab. Project Warsak	PDP-258	2020-21	Non-obtaining of insurance coverage by the consultant – Rs. 369.02 Million	The DAC directed the management to get insurance coverage provided by consultants verified form Audit within one month.	Original record has been presented to the team of Director General Audit (Water Resources) Lahore, result of which is awaited.
17	2 <sup>nd</sup> Rehab. Project Warsak	PDP-259	2020-21	Unjustified expenditure on grant of project allowance without clearance from Finance Ministry – Rs. 2.99 Million	-	Para was referred to Director (Finance) Regulation to follow up, on Head office level due to clubbed Para.
18	2 <sup>nd</sup> Rehab. Project Warsak	PDP-260	2020-21	Non-depositing of withheld amount of income tax with FBR – Rs. 0.72 Million	The DAC Admitted the excuse of the management that tax was wrongly deducted and directed that such instances should not be repeated in future.	Original record has been presented to the team of Director General Audit (Water Resources) Lahore, result of which is awaited.
19	2 <sup>nd</sup> Rehab. Project Warsak	PDP-247	2019-20	Unauthorized retention of funds surplus against AFD grant No. CPK-1031- Rs. 235.77 Million	DAC directed the management to submit the following record to Audit for verification within one month: <ul style="list-style-type: none"> <li>• Re-imbursement record of funds by the donor</li> <li>• Executive decision for incurring expenditure</li> </ul> Credit of funds and interest received by WAPDA.	Reply alongwith relevant documents has been submitted in light of DAC Directives to Audit Party, result of which is still awaited.
20	2 <sup>nd</sup> Rehab. Project Warsak	PDP-516	2019-20	Non-deduction of provincial sales tax amounting to Rs. 6.10 Million on making payment to the consultants	DAC directed the management to provide the record of deduction of PST alongwith following record to audit for verification within one month: <ul style="list-style-type: none"> <li>• Accountal of Provincial Sales Tax deduction in the bank statement.</li> <li>• Credit to Provincial Sales Tax Authority; and</li> </ul>	Reply alongwith relevant documents has been submitted in light of DAC Directives to Audit Party, result of which is still awaited.

					Entry in the book of accounts	
21	2 <sup>nd</sup> Rehab. Project Warsak	DP-548	2019-20	Non-deduction of income tax on advance payment to the consultants – Rs. 3.25 Million	DAC directed the management to provide the record of income tax deducted from consultant and get it verified from Audit within one month.	Recovery of Income Tax has been made from Activity 1, Activity 2 invoice and verification will be done after filing to FBR.
22	2 <sup>nd</sup> Rehab. Project Warsak	PDP-549	2019-20	Loss due to levy of commitment charges on used loan – Rs. 14.06 Million	DAC directed the management to conduct a fact finding enquiry within one month and get the relevant record verified from Audit.	A fact finding committee was constituted to probe into the matter, the result of which is awaited.
23	2 <sup>nd</sup> Rehab. Project Warsak	PDP-623	2019-20	Unjustified inclusion of 25% extra charges in the service agreement by ISRIP – Rs. 1.25 Million	The DAC directed the Management to provide approval of WAPDA Authority for the 25% extra charges to Audit for verification (27 <sup>th</sup> & 28 <sup>th</sup> December 2019)	In light of Audit directives, this office took up the matter with ISRIP and in response ISRIP has provided approved estimates of deposit works from other formations of WAPDA wherein the same practice has been observed and 25% extra charges have also been charged in the approved estimates. The same has been forwarded to Audit and reply of Audit is awaited.

## MEETINGS / SITE VISITS:

- Kick off meeting carried out on 01-06-2023 in Conference room Warsak colony.
- E&M site Meeting carried in GE meeting room on 15-06-2023.
- E&M Coordination meeting held on 21-06-2023.
- Virtual Meeting with GE-SH JV held on 23-06-2023 regarding WARSAK-TF-228-R1-230612 Governing system.
- Civil Coordination meeting No. 23 was held on 20-06-2023.

## NIHPT/HPTI MANGLA:

AFD, inter-alia, in CPK 1031 01P credit facility has granted the Euro 1.5 million Loan to National Institute of Hydropower Training (NIHPT/HPTI) Mangla for consultancy services and equipment to be imported respectively.

This Office, on behalf of and as requested by NIHPT/HPTI, sends drawdown out of its part to AFD and following drawdowns have been made and payments have been released by AFD so far:

Sr. No.	DDR No.	Disbursement Date	Euro/M	Remarks
1.	10 & 11	27.08.2020	0.270	<b>Consultancy:</b> Payment to M/s Integration and Power (4 <sup>th</sup> Invoice)
2.	15	29.04.2021	0.153	<b>Equipment-Lot-3:</b> Payment to M/s Ayk Trading (90% of contract value)
3.	18	05.08.2021	0.296	<b>Equipment-Lot-3:</b> Payment to M/s IBEX Suigarpe (90% of contract value)
4.	22	15.02.2022	0.050	<b>Equipment-Lot-1 &amp; Lot-3:</b> 10% Payment to M/s IBEX Suigarpe & Ayk Trading.
5.	26	13.06.2022	0.147	<b>Lot-1:</b> Equipment 80% Payment made to M/s WSCNY.
6.	33	14.12.2022	0.037	<b>Lot-4:</b> 20% remaining payment of M/s WSCNY.
7.	33	16.12.2022	0.188	<b>Lot-2:</b> 80% payment to M/s Mushtaq Contractor.
<b>Total Disbursement</b>			<b>1.141</b>	
<b>Credit Facility Available for NIHPT/HPTI Mangla</b>			<b>1.500</b>	
<b>Balance</b>			<b>0.359</b>	

## **ACHIEVEMENTS:**

### **Trash Rack Cleaning Machine:**

- Since the installation of Trash Rack Cleaning machine, there has been a significant increase in power production of Warsak Power Station. Warsak Power Station has a record 1104.947 GWh generation in the year 2019-2020.

### **Spill Way Gates:**

- The Sprocket system on the spillway gates were causing repeated breakage of gate lifting chains in the past, which not only wasted valuable time of the maintenance staff for its repair but also had to bear the financial burden of the authority. After installation of steel wire ropes in place of sprockets has eliminated many problems which has saved the valuable time of the maintenance staff and now that times is being spent on other maintenance matters.

### **Stator Winding:**

- New Stator winding is installed in unit No.3. Old stator winding was of insulation Class-B, and the new winding is of Class-F which is more resistant to high temperature and more reliable on full load operation.
- Unit No. 3 was running on load 20-25 MW with old stator winding.
- After replacement of stator winding, Unit load reached to 36-38 MW with a net increase of about 16 MW.

## **BOTTLENECKS:**

- Non-Operationalization of EIB Loan.



## COVID-19 PANDEMIC:

Donor Agency AFD has issued document pertaining to guidelines to be followed and included in Construction / Work site to strengthen COVID-19 health Control. The said document was shared vide email dated 16-06-2020 with the request to include a section related to COVID-19 in monthly progress report which is also important for E&S measures. The said document briefly includes the following components to be ensured during the Pandemic COVID-19.

- Actor, Roles, Responsibilities and Resources
- Coordination with Stakeholders
- Decision proves for Project Continuity
- Prevention of transmission of COVID-19 at the project site.
- Management of COVID-19 cases amongst project workers.
- Management of Community Health Risks
- Plans, Procedures and process and
- Monitoring and reporting

WAPDA being executor and owner of the Warsak HEPS 2<sup>nd</sup> Rehabilitation Project are strictly ensuring adoption of SOPs issued by WAPDA Authority and Government of Pakistan from time to time in order to mitigate spread of COVID-19 in offices as well as construction sites. In March 2020 the outbreak hit Pakistan and the cases were started to surge. In the initial phase GoP launched complete lock down in the country and only essential services were allowed throughout the country and employees of those departments / institutions were allowed to perform duties. WAPDA being a Federal Department implemented the decision of GoP and issued instructions to keep the attendance at bare minimum offices as well as at construction sites. The employees performing duties were instructed to strictly follow the SOPs during the Pandemic. Wearing Masks, Gloves, using hand Sanitizers frequently, avoid gatherings, keep offices disinfected regularly and other SOPs as instructed from time to time were ensured to be followed in true letter and spirit. WAPDA Fortified Dispensary Warsak in the initial phase distributed Masks, gloves and hand sanitizers in all the offices of Warsak HEPS 2<sup>nd</sup> Rehabilitation and Warsak Power Station.

In May 2020 the Lockdown was relaxed by GoP with the revised SOP. All the offices were instructed to keep social distancing, wear masks, gloves and use hand sanitizers while working. The cases of COVID-19 patients are increasing day by day despite launching smart lock down and strictly following SOPs. There are still unknowns about Coronavirus as trials are underway. Due to surge in reported cases in WAPDA House Lahore, the WAPDA Head office was closed down w.e.f 12-06-2020 to 28-06-2020 in order to mitigate spread of COVID-19. Still the SOPs issued from time to time are intact and followed in true letter and spirit in WAPDA offices and sites.

2<sup>nd</sup> Wave of COVID -19 has hit most of the countries of the world including Pakistan and 2<sup>nd</sup> wave is proved to be more deadly therefore Govt. of Pakistan have enforced smart Lockdown in the highly reported areas. Strict decisions have been taken by Govt. of Pakistan like smart lockdown, ban on public gathering, ensure social distancing, wearing of masks in public in order to curb the spread of corona virus. WAPDA have also endorsed the instructions of govt. of Pakistan for all offices and sites to be complied in true letter and spirit. Staff strength is ordered to be reduced to 50% and work from home strategy has been endorsed.

3<sup>rd</sup> Wave of COVID-19 is proving to be more threatening and lethal. Govt. of Pakistan has enforced lockdown in the major cities of country including Peshawar. As per SOP the staff strength has been reduced to 50% and work from home policy has been implemented in offices. The recent spike of COVID-19 cases in the country is influencing the project activities negatively.

WAPDA as organization strictly implements the SOPs of COVID-19 to curb the spread of corona virus and after award of Contracts, the SOPs described in AFD document will be ensured to be followed by all the stakeholders during execution of the project in true letter and spirit.

## **SALIENT FEATURES OF EXISTING E&M EQUIPMENT:**

### **Dam**

Type: Mass concrete gravity Dam  
(Height = 250 ft, Length = 460 ft, Area = 4 Sq miles)

Gross Storage Capacity (Designed): 62,000 Acre ft.

Live Storage Capacity (Designed): 25,000 Acre ft.

Dead Storage Capacity (Designed): 36,700 Acre ft.

### **Spillway**

Type: Overflow  
Length: 440 ft.  
No. of Gates: 09 Nos. (Size of Each Gate 40 x 40 Ft).  
Discharge Capacity of Each Gate: 60,000 Cusecs.

### **Power Tunnel**

Type: Concrete Lined  
Length: 365 Ft  
Diameter: 39 Ft

### **Penstocks**

No. of Penstocks: 06  
Diameter: 18 Ft

### **Turbine**

Type: Francis (Vertical Shaft)  
Rated Capacity: 55,000 H.P.  
Net Head: 144 Ft.  
Speed: 136.3

### **Power House**

No. of Units: 06  
Capacity: (Unit # 1-4) 40 MW each (Unit # 5 & 6) 41.5 MW each  
Total Capacity: 243 MW (4 x 40 + 2x 41.5)  
Rated Head: 46 Meter (144 ft)  
Generation Voltage: 11 KV  
Transmission Voltage: 132 KV

### **Equipment**

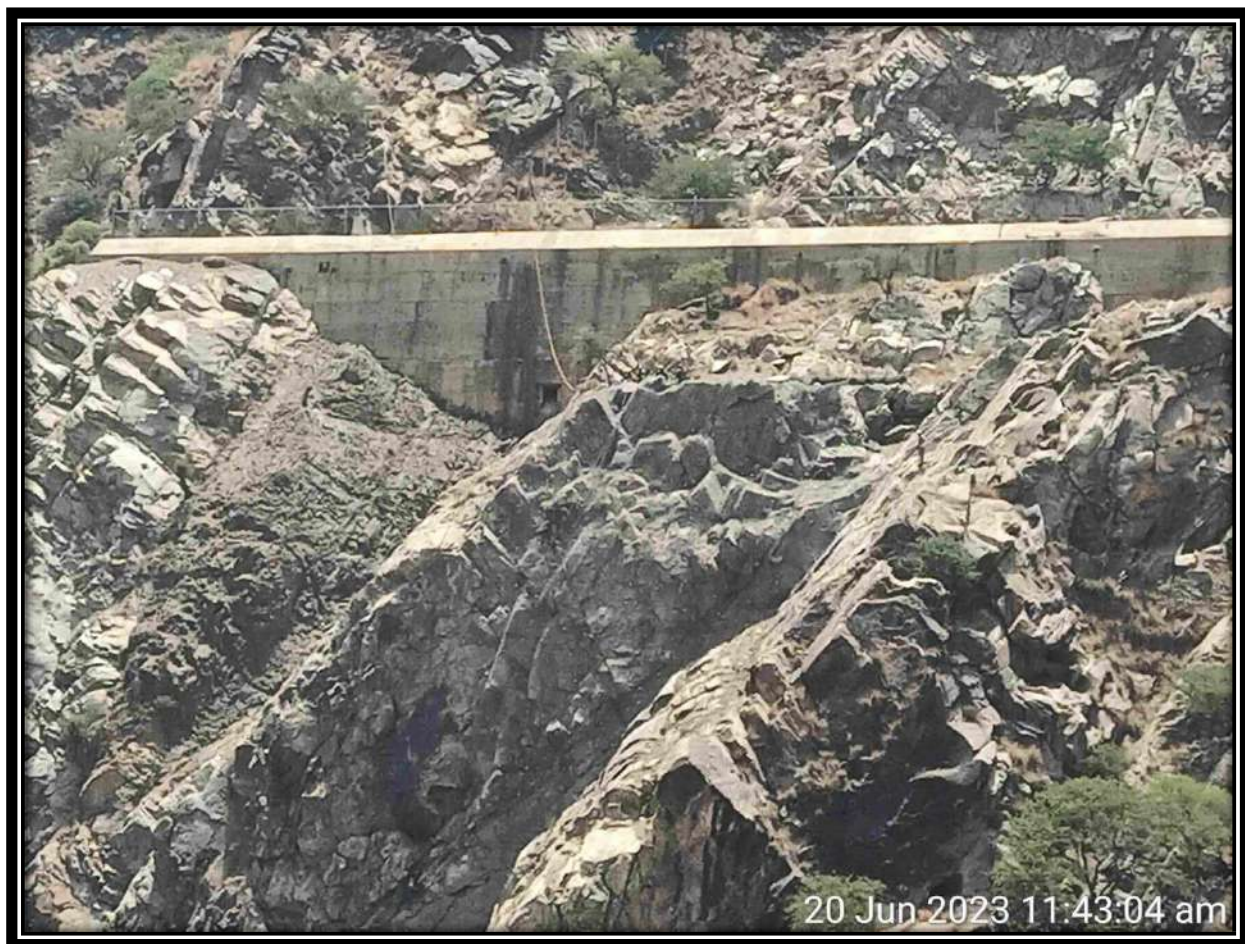
Generator: CGE Canada  
Turbine: Dominion Engg. Canada

## Site Photos



Dam Front View



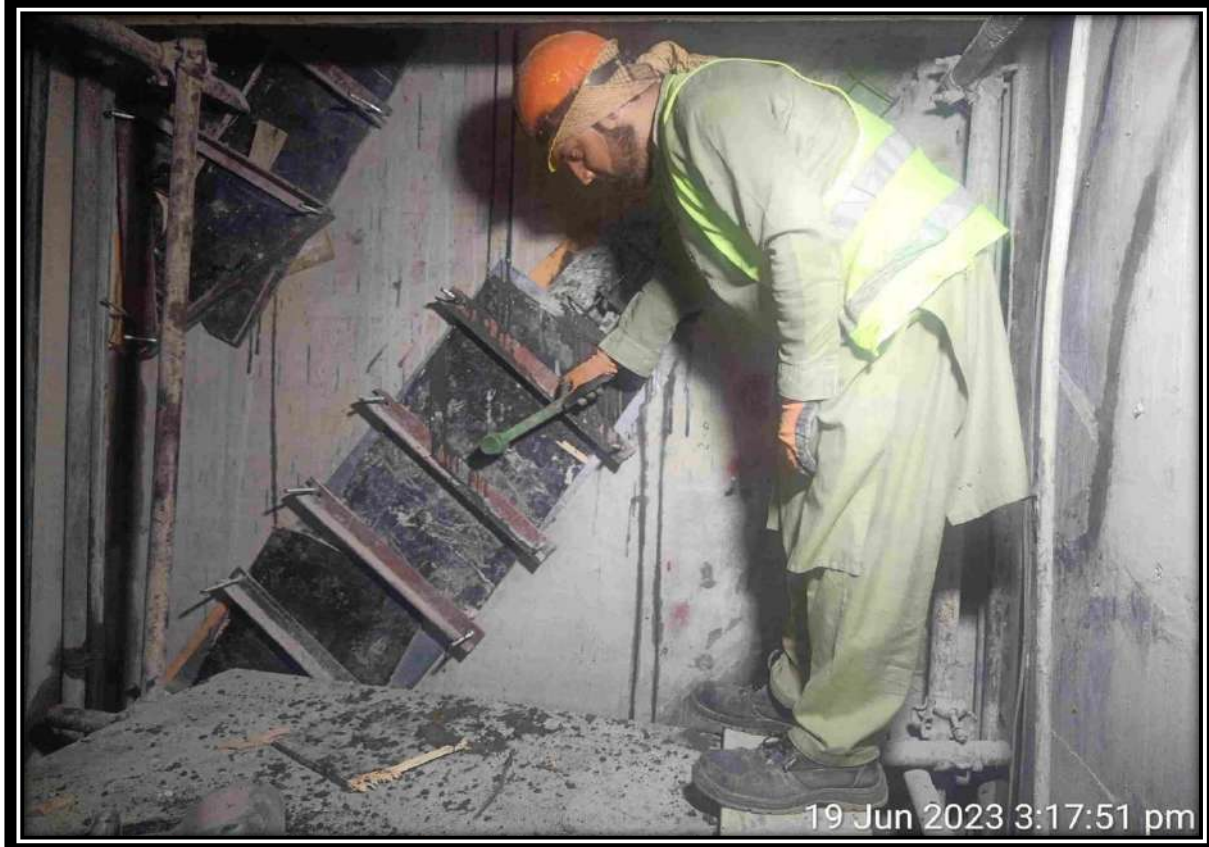


**Rock Face Protection works at Switch Yard Area**









**Crack Repair Works in Progress**





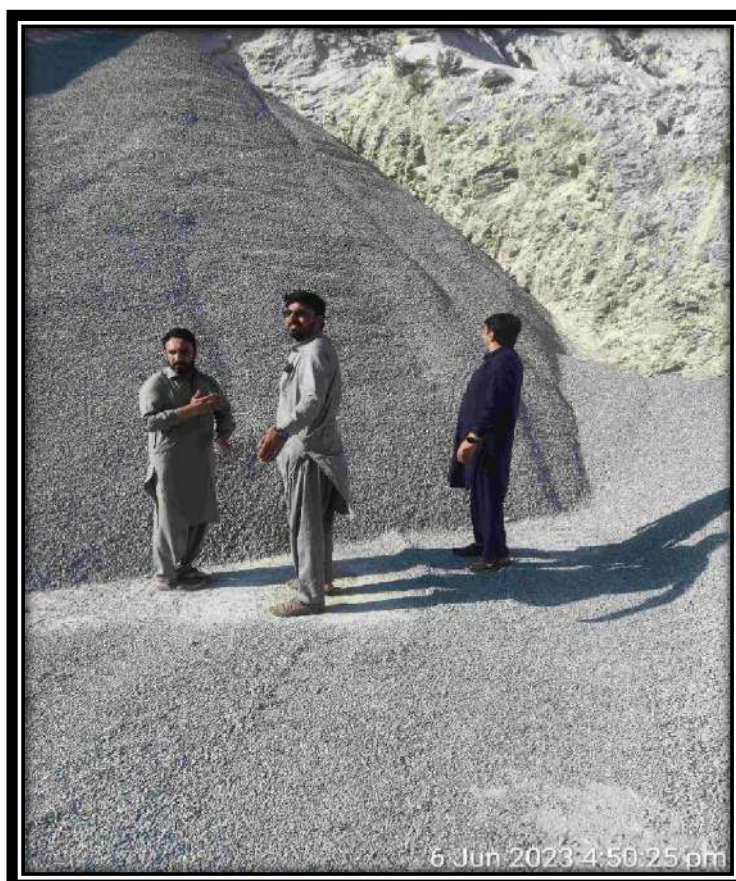




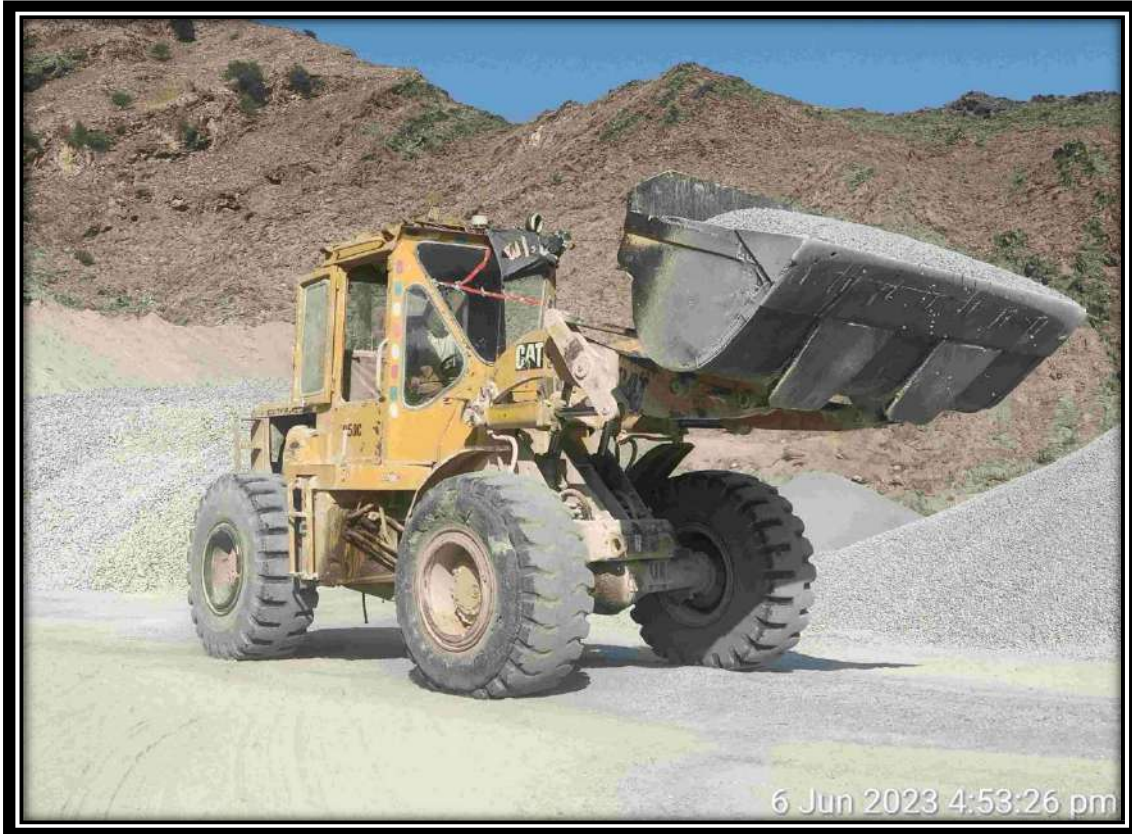




**Material Sampling and Testing at Site Laboratory**







**Visit to Mohmand Crush Plant**



**Joint Site Visit**



**Civil Coordination Meeting No: 23**

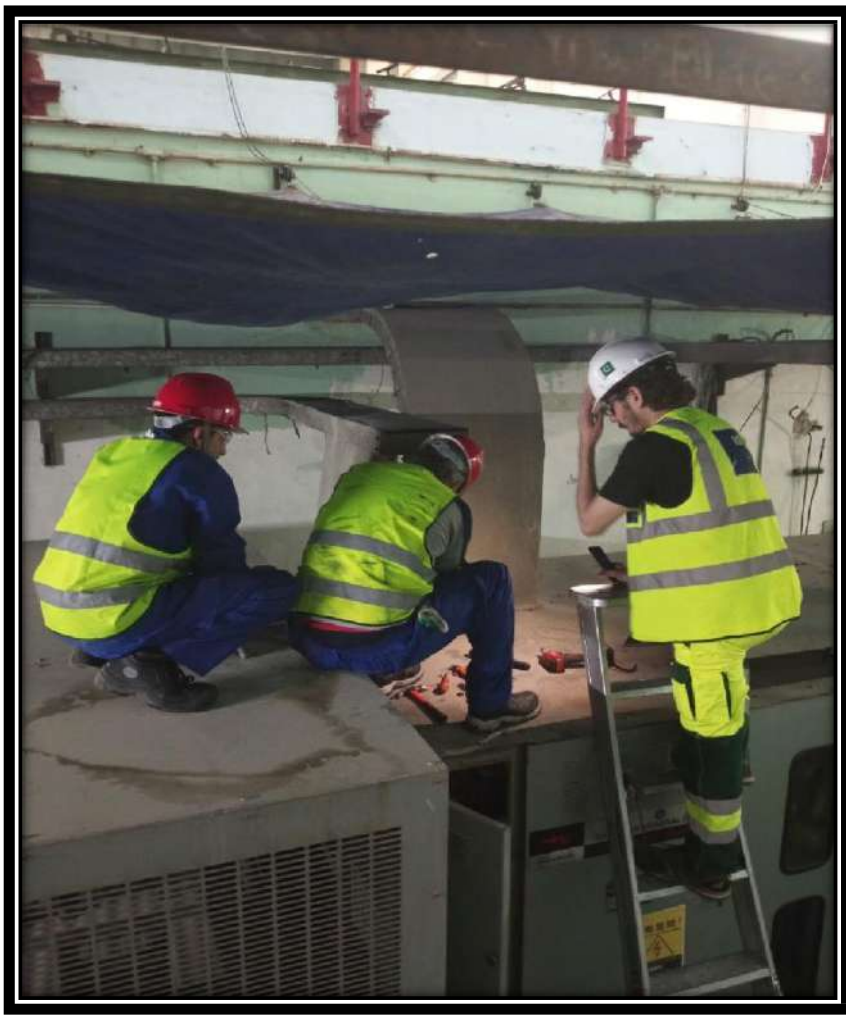




**Installation of Sensors on Unit 6**



**Cable Laying Started in Switchyard**



**Removal of Old Excitation Cable from Excitation Panel**



**Connection of Temporary Power Supply to Emergency Panel in Switchyard**

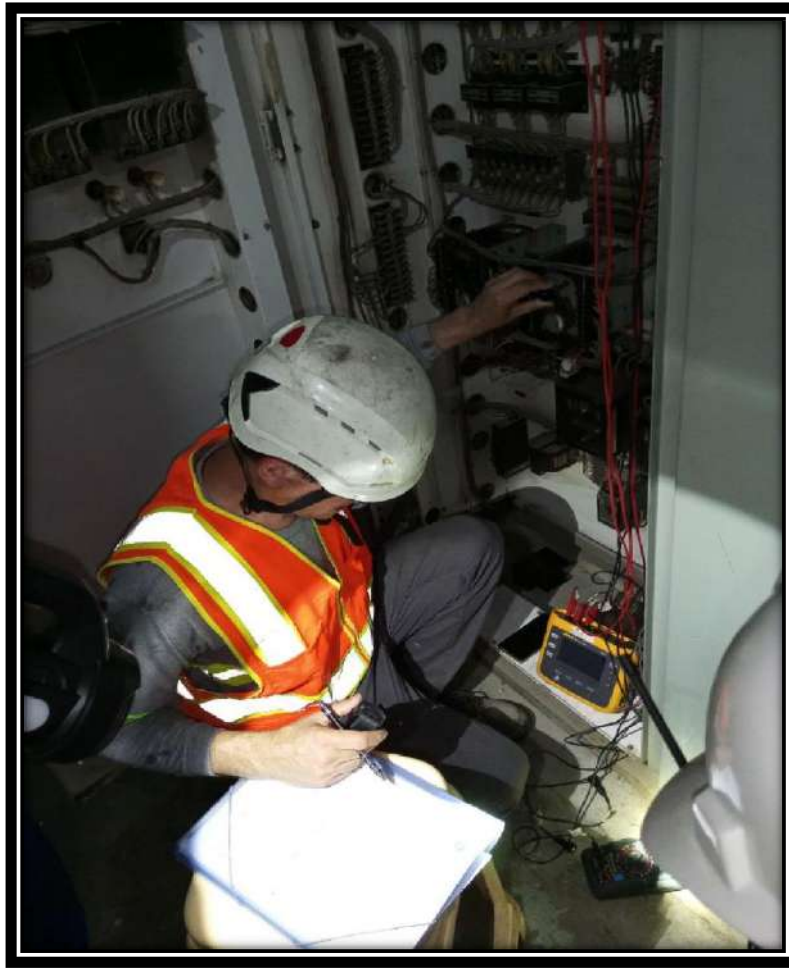




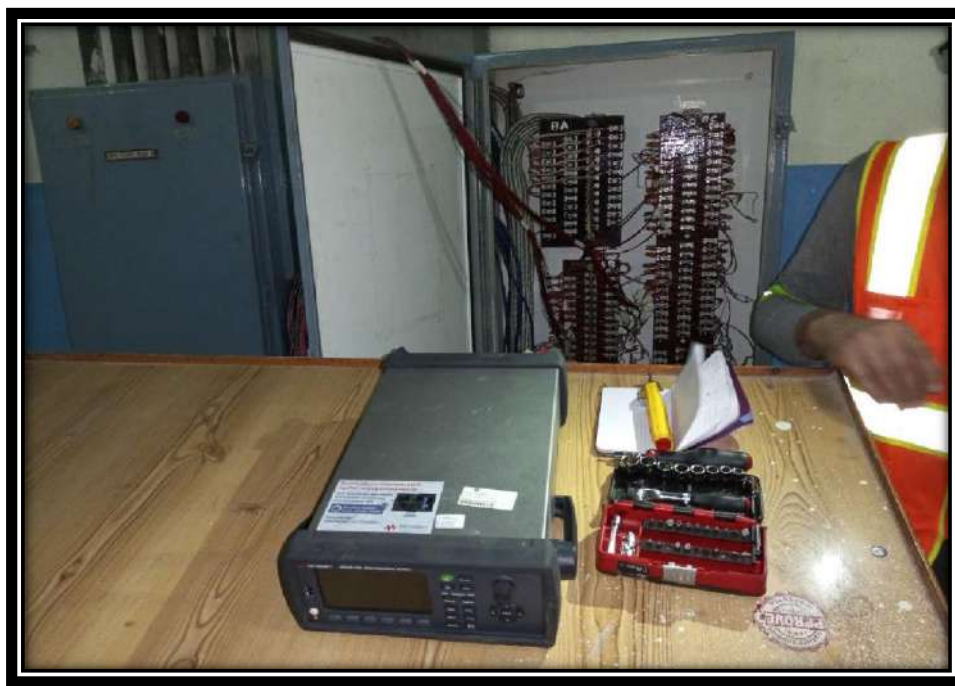
**Connection of Temporary Power Supply to Excitation Panel of Unit 6**



**Megger Testing of Newly Installed Cable**



**Recording of Voltage Values for Cpen Circuit Test**



**Data Acquisition system connected to Temperature Terminal box for Mechanical heatrun on load**



**Insulation Testing of Stator Windings**



**Lot:1 Plano Milling machine**





**Lot 2: Radial Drilling Machine**



**Lot 3: Air Compressor**



**Lot 1: Vertical Lathe Machine**



**Foundation works for Vertical lathe Machine are in progress**





**Lot 4: Heavy duty horizontal Lathe Machine**



**Foundation works are in progress for Heavy duty horizontal Lathe Machine**



**Lot 5: Universal Portable Radial Drilling machine**