PERFORMANCE AUDIT REPORT

ON

REHABILITATION OF JABBAN HYDROELECTRIC POWER STATION PROJECT

AUDIT YEAR 2017-18

AUDITOR GENERAL OF PAKISTAN

PREFACE

Articles 169 and 170 of the Constitution of the Islamic Republic of Pakistan, 1973 read with Sections 8 and 12 of the Auditor General's (Functions, Powers, Terms and Conditions of Service) Ordinance, 2001 require the Auditor General of Pakistan to conduct audit of Expenditure and Receipts of Government of Pakistan.

This Report is based on performance audit of Rehabilitation of Jabban Hydroelectric Power Station Project, Dargai for the period July, 2007 to June, 2017. The Directorate General Audit Water Resources (the then Directorate General Audit WAPDA) conducted performance audit of Rehabilitation of Jabban Hydroelectric Power Station Project, Dargai during October, 2017 with a view to reporting significant findings to relevant stakeholders. In addition, Audit also assessed, on the test check basis whether the management complied with applicable laws, rules and regulations in managing the Rehabilitation of Jabban Hydroelectric Power Station Project, Dargai.

Audit findings indicate the need for taking specific actions to realize the objectives of the Rehabilitation of Jabban Hydroelectric Power Station Project, Dargai besides instituting and strengthening internal controls to avoid recurrence of violations and irregularities.

Audit observations have been finalized in the light of discussion in the Departmental Accounts Committee (DAC) meeting.

The Audit Report is submitted to the President in pursuance of the Article 171 of the Constitution of the Islamic Republic of Pakistan, 1973 for causing it to be laid before the both Houses of Majlis-e-Shoora [Parliament].

Sd/-

Dated: 16 OCT 2019 **Javaid Jehangir**
Islamabad Auditor General of Pakistan

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Abbreviations and Acronyms

ADP	Annual Development Programme
AFD	Agence Francaise De Development
CCPG	Central China Power Group
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CFA	Credit Facility Agreement
CIF	Cost, Insurance and Freight
CoC	Conditions of Contract
CSA	Consultancy Services Agreement
DAC	Departmental Accounts Committee
DLC	Defect Liability Certificate
DLP	Defect Liability Period
ECNEC	Executive Committee of National Economic Council
EoT	Extension of Time
E&M	Electrical & Mechanical
FAT	Factory Acceptance Test
FBR	Federal Board of Revenue
FFC	Federal Flood Commission
GFR	General Financial Rules
GoP	Government of Pakistan
GST	General Sales Tax
GWh	Gigawatt Hour
HPP	Hydropower Project
HRL	Habib Rafique Limited
IDC	Interest during Construction
IPC	Interim Payment Certificate
JHPS	Jabban Hydroelectric Power Station
JV	Joint Venture
KM	Kilo Meter
KPK	Khyber Pakhtunkhwa
KV	Kilo Volt
L/C	Letter of Credit

LD	Liquidated Damages
LoA	Letter of Acceptance
MoU	Memorandum of Understanding
MoWR	Ministry of Water Resources
MW	Megawatt
NICL	National Insurance Company Limited
NOC	No Objection Certificate
PC-I	Planning Commission-I
PD	Project Director
PEC	Pakistan Engineering Council
P&D	Purchase and Disposal
RJHPS	Rehabilitation of Jabban Hydroelectric Power Station
RTR	Reliability Test Run
S.E	Superintending Engineer
SRC	Standing Review Committee
ToC	Taking over Certificate
USD	US Dollar
VO	Variation Order
WAPDA	Water and Power Development Authority

EXECUTIVE SUMMARY

The Directorate General Audit Water Resources (the then Directorate General Audit WAPDA) conducted performance audit of the project for Rehabilitation of Jabban Hydroelectric Power Station (RJHPS) in October, 2017. The main objectives of the audit were to evaluate the economy, efficiency and effectiveness of the project. The audit was conducted in accordance with the prevailing rules and regulations.

Jabban Hydroelectric Power Station (JHPS) is located in Dargai, Malakand District of Khyber Pakhtunkhwa (KPK) province of Pakistan, at a distance of about 210 KM from Islamabad with a generation capacity of 19.6 MW. The JHPS was badly damaged due to a fire incident on November 12, 2006. The situation necessitated to carry out rehabilitation of the Powerhouse on "Fast Track Basis" by installation of new machines of higher efficiency at the same site, thus the project for rehabilitation was envisaged.

Original PC-I of the project was approved by Executive Committee of National Economic Council (ECNEC) at a cost of Rs.1,037.55 million on September 19, 2007 with the intention to enhance the generation capacity from 19.6 MW to 22 MW to provide an estimated 122 GWh energy per annum.

Later on, revised PC-I of the project was approved by the ECNEC on December 09, 2010 at a total cost of Rs.3753.575 million but an expenditure of Rs.4,000.761 million was incurred. The completion date of the project was June 30, 2012 but it was completed on March 11, 2014. The project started its commercial operation with effect from March, 2014.

AUDIT FINDINGS AND RECOMMENDATIONS

a) Key Audit Findings

- Poor contract management was observed throughout the project execution. These include award of contract to Contractor having inadequate financial and technical resources, delay in award of contract, violation of public procurement rules in bidding process and payment of wrong price escalation. These contractual obligatory deviations resulted in abnormal time and cost overrun.

- Inordinate delays in execution of the works retarded the timely completion of the project. The envisaged benefits were accordingly delayed resulting in loss of revenue.
- Frequent variation in agreed scope of work such as addition of non-BOQs items, deletion of BOQs items and changes in BOQs items were observed resulting in significant increase in cost of the project.
- Detailed site investigations, engineering design / drawings and scheduling of project components were not completed until the approval of original PC-I. Consequently, PC-I was revised and exorbitant cost overrun was observed.
- Reliability Test Run of the plant was not got done as per recommended method. The Factory Acceptance Test at manufacturer premises as per provision of contract agreement in respect of materials and equipment of the plant was also not got performed. Significant defects surfaced due to which the plant remained non-operational for considerable time interval.

b) Recommendations

- Contract management needs to be improved right from invitation to tender up to completion of the project. Technical and financial credentials of the contractors should be assured in the prequalification process. Strict adherence to PPRA rules be made. The speed of execution of the works by the contractor should be in accordance with the agreed schedule of work.
- Management needs to ensure that all project documents are completed and available as per project timelines. Project plans, detailed designs / drawings and feasibility studies should be completed in all respects so as to avoid frequent changes in scope and associated cost and time overruns. All progress reports and project tracking documents be submitted as per timelines to top management for monitoring and feedback.

- Variation Orders to be effected during currency of execution must be realistic and as per site requirements strictly in conformity to the relevant clauses of the contract agreement.
- The prescribed safeguards to project such as Reliability Test Run of plant and Factory Acceptance Test of the material & equipment should be as per contractual obligations.
- Management needs to conduct inquiry to investigate the matter in order to fix responsibility and expedite recovery where pointed by Audit.

1 INTRODUCTION

The Directorate General Audit Water Resources (the then Directorate General Audit WAPDA) conducted performance audit of the project "Rehabilitation of Jabban Hydroelectric Power Station" (RJHPS), which is located at a distance of about 210 KM from Islamabad in Dargai Malakand District, KPK province of Pakistan. The project lies in the operational area of Peshawar Electric Supply Company (PESCO).

Initially, 9.6 MW hydropower project (3x3.2) was constructed at Jabban in 1937 and later on two additional units of 5 MW each were installed in 1952, thus enhancing capacity of the power station to 19.6 MW. The power station was badly damaged due to a fire incident on November 12, 2006. Extent of damage was such that it was not possible to restore operation of the then existing units. The situation necessitated to carry out rehabilitation of the powerhouse on "Fast Track Basis" by installation of new machines of higher efficiency at the same site.

PC-I of the project for RJHPS was approved by the ECNEC on September 19, 2007 at a cost of Rs.1,037.55 million by installing four new generating units of 5.5 MW each, with the generation capacity of 22 MW at the same head & discharge and producing estimated energy of 122 GWh generation per annum.

Later on, revised PC-I of the project was approved by the ECNEC on December 09, 2010 at a total cost of Rs.3,753.575 million with completion date of June 30, 2012. Against this provision, an expenditure of Rs. 4000.761 million was incurred on the project till its completion on March 11, 2014.

1.1 Objectives of the Project

- To rehabilitate the existing JHPS in order to maintain this cheap hydropower potential at Jabban and to provide more reliable and consistent power supply to the National Grid for at least another 50 years, and

- To enhance the capacity of power station from 19.6 MW to 22 MW by using more efficient turbines and other electromechanical equipment.

1.2 Time Phasing

- The project construction period as per original PC-l, was 36 months, i.e. from 2007-08 to 2009-10;
- The project construction period as per revised PC-I, was enhanced from 36 months to 60 months i.e. from 2007-08 to 2011-12, and
- The project was actually started on February 19, 2010 and completed on June 30, 2016 with a delay of four years.

1.3 Capital Cost approved by ECNEC

(Rs.in million)

Cost of the Project	Total
As per original PC-I	1,037.54
As per revised PC-I	3,753.58

1.4 Source of Funding

An amount of Euro 26.5 million was to be met through financing from AFD and remaining to be met through ADP.

1.5 Type of Finance

(Rs.in million)

Cost of the Project	Local Currency	Foreign Component	Total
As per original PC-I	463.83	573.71	1,037.54
As per revised PC-I	2,104.09	1649.49	3753.58

2 AUDIT OBJECTIVES

The main objectives of this performance audit were to:

- Evaluate whether the project was managed with due regard economy, efficiency and effectiveness.
- Identify the factors causing delay in completion of the project resulting in cost escalation.

- Evaluate the contract management in order to check whether the award of contracts and execution thereunder were transparent and economical.
- Evaluate effectiveness of project after its completion, whether it generated energy as per envisaged provisions of PC-I.
- Review the overall operational efficiency and check whether internal controls were in place & operative and functioning effectively.

3 AUDIT SCOPE AND METHODOLOGY

3.1 The period under review for this performance audit was July, 2007 to June, 2017. During this period, total expenditure of Rs.4,000.76 million **(detailed in Annex-A)** was incurred by June, 2017 and would further increase upon outstanding final payment to the contractor. Auditable record was made available in the office of RE, JHPS, Dargai, Malakand.

3.2 Following audit methodology was adopted during the course of execution of performance audit:

3.2.1 Discussions with the project management

3.2.2 Examination of selected project record and necessary auditable documents including but not limited to:

- PC-I of the project
- Contract agreement
- Consultancy agreement
- Project Completion Report (PCR)
- Bid evaluation report
- Progress report of the project
- Selected cash vouchers

3.2.3 Site visits.

4 AUDIT FINDINGS AND RECOMMENDATIONS

4.1 Financial Management

4.1.1 Loss due to non-provision of NICL insurance cover by the contractor – Rs.400 million

According to section 166 read with section 156 of Insurance Ordinance 2000, “Federal and Provincial Governments are required to place all insurance services relating to public property only with National Insurance Company Limited”.

During performance audit of RJHPS project, it was observed that the contractor M/s HRL-CCPG JV did not obtain insurance cover through NICL. Hence, national exchequer sustained a loss in the shape of foregone insurance premium amounting to Rs.400 million.

Implication

Violation of the provision of Insurance Ordinance, 2000 resulted in loss of Rs.400 million due to non-provision of insurance coverage from NICL up to the Financial Year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018.The management explained that as per sub-clause 43.12 of particular CoC, the contractor can provide insurance cover to the project from any renowned insurance company operating in Pakistan and acceptable to the Employer. After signing of contract agreement in any project, contract documents are binding upon all the stakeholders. The contractor provided insurance coverage to the project as per contract agreement from EFU and New Jubilee Insurance Companies.

The DAC in its meeting held on November 23, 2018 directed the management to revisit the rationale for NICL and submit a revised reply as to why the condition was incorporated in contract, DAC also directed to provide context for other insurance companies. Further progress was not reported till finalization of the report.

Audit Recommendations

Audit recommends that the management needs to submit a revised reply and inquire the matter besides fixing responsibility of loss.

4.1.2 Irregular expenditure in excess of revised PC-I -Rs.247.18 million

According to the revised PC-I, an amount of Rs.3753.58 million was approved for the project.

During performance audit of RJHPS project, it was noticed that an expenditure of Rs.4,000.76 million was incurred against provision of revised PC-I of Rs.3753.58 million. Hence, an expenditure of Rs.247.18 million was irregularly incurred over and above the approved cost.

Implication

Non-adherence to revised PC-I resulted in irregular expenditure of Rs.247.18 million up to the Financial Year 2016-17. Poor project management resulted in cost overrun.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that the major factors escalating the project cost were in accordance with the rules of project cycle and approval from the competent authority existed. 2nd revised PC-I after clearance from WAPDA was submitted to MoWR for scrutiny and further processing.

The DAC in its meeting held on November 23, 2018 pended the para till provision approval of 2nd revised PC-I from ECNEC.

Audit Recommendations

Audit recommends that the management needs to investigate the matter for fixing responsibility besides providing approval of 2nd revised PC-I from ECNEC to Audit.

4.1.3 Loss due to non-recovery of liquidated damages charges - Rs.132.92 million

According to preamble of CoC, and sub clauses 27.1 of special CoC, failure of the contractor to meet the time for completion entitles the Employer to make reduction in contract price at the rate of 0.05% of contract price per day subject to maximum of 10% of the contract price stated in the Letter of Acceptance (LoA) excluding provisional sum. According to sub clause 26.1.1, no financial compensation would be allowed to the contractor against EoT.

During performance audit of RJHPS project, it was observed that as per contract No. GMH/JRP/01, signed on October 15, 2009 between WAPDA and M/s HRL-CCPG (JV), the contractor was contractually required to complete the entire work of units No.1, 2, 3 & 4 and substation on November 18, 2011, November 03, 2011, October 18, 2011, October 03, 2011 and June 18, 2011, respectively. But the contractor failed to complete the works as per contractual completion dates. Later on, EoT was granted for 784 days, against each of the units 1 to 4 and 942 days against the above-mentioned substation (as detailed in **Annex-B**). The contractor again failed to complete the works as per the EoT. The works were eventually completed on March 09, 2014, January 23, 2014, March 11, 2014, March 04, 2014 and March 09, 2014 with delays of 101 days 71 days, 133 days, 141 days and 96 days respectively. Despite considerable delays LD charges were waived off against EoTs cost claim by the Authority in its approval dated May 17, 2017. The decision of the Authority was not in line with the contract provisions as financial compensation against EoT was not allowed under the particular CoC, Sub-clause 26.1. Thus, undue favour was extended to the contractor resulting in loss of Rs.132.92 million to the Authority.

Implication

Poor contract management resulted in a loss of Rs.132.92 million to the Authority in the shape of LD charges up to financial year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that Authority granted EoT to the contractor on merit in accordance with Sub-clause 26.1.1 of particular CoC. EoT was granted up to project completion dates, therefore, imposition of LD charges on the contractor was incomprehensible. Moreover, contractor M/s HRL-CCPG (JV) lodged a claim amounting to Rs.254.94 million against EoT cost compensation which was regretted as EoT financial cost compensation was not covered under contract provisions. As EoT cost lodged by the contractor has not been entertained, therefore it was proved that Authority granted EoT to the contractor without financial compensation as evident from Authority approval dated May 17, 2017.

The reply was not tenable because after serving notice to the contractor for payment of LD charges, the said LD charges clause came into force. Hence, grant of extensions up to project completion date after serving notice to the contractor regarding payment of LD charges seems unjustified for which the matter needs investigation.

The DAC in its meeting held on November 23, 2018 directed the management to provide complete record to Engineering Advisor (Power) to conduct thorough investigation into the matter.

Audit Recommendations

Audit recommends that management needs to impose LD charges upon the contractor and ensure recovery without further delay.

4.1.4 Irregular payment on account of civil works - Rs.128.08 million

According to Schedule of Prices, cost of entire civil works was Rs.385.80 million.

During performance audit of RJHPS project, it was observed that an amount of Rs.513.87 million was paid to the contractor on account of civil works from IPC-I to IPC-40C against provision of Rs.385.80 million. Resultantly, an amount of Rs.128.08 million was an excess payment. Approved VOs and justification for extra civil works undertaken were not provided. In absence of proper justification and record, authenticity of expenditure incurred on civil works could not be ascertained.

Implication

Violation of provisions of Schedule of Prices resulted in irregular payment of Rs.128.08 million on account of civil works up to the Financial Year 2016-17 resulting in cost overrun.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018.The management explained that 2nd revised PC-I proforma after clearance from WAPDA SRC vide letter dated March 27, 2018 has been submitted to MoWR vide letter dated April 23, 2018 for scrutiny and further processing.

The DAC in its meeting held on November 23, 2018 pended the para till approval of 2nd revised PC-I from ECNEC. Further progress was not reported till finalization of the report.

Audit Recommendations

Audit recommends that management needs to either justify the excess expenditure or recover it from the person(s) at fault besides provision of approved copy of 2nd revised PC-I.

4.1.5 Irregular expenditure in excess from the provision of PC-I - Rs.115.27million

According to the revised PC-I of the project, an amount of Rs.51 million was provided for procurement of consultancy services.

During performance audit of RJHPS project, it was noticed that an expenditure of Rs.166.27 million was incurred against revised PC-I provision of Rs.51 million. Hence, an expenditure of Rs.115.27 million was irregularly incurred in excess of the approved amount.

Implication

Non-adherence to revised PC-I resulted in irregular expenditure of Rs.115.27 million in excess of provision of PC-I up to the Financial Year 2016-17. Failure to complete the project as per timelines and within the allocated budget depicts inefficiency on the part of project management.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that according to revised PC-1, an amount of Rs.71 million was allocated for consultancy services charges contrary to the amount of Rs.51 million as pointed out in para.

2^{nd} revised PC-I proforma after clearance from WAPDA has been submitted to MoWR for scrutiny and further processing.

The DAC in its meeting held on November 23, 2018 directed Member (Water) to conduct a fact-finding inquiry for incurring undue expenditure on retaining the Consultants along with the calculation of recoverable amount. The committee shall submit its recommendations regarding recoverable amount within 3 weeks. No further progress was intimated till finalization of the report.

Audit Recommendations

Audit recommends that the management needs to produce the fact-finding inquiry report along with calculation of recoverable amount and a copy of 2^{nd} revised PC-I besides fixing responsibility.

4.1.6 Unjustified payment - Rs.66.44 million

According to para 1, 2 (2.1 & 2.2), 3(ii, iii & iv) 13 and 14 (i, ii & iii) of preamble to Schedule of Prices of the contract agreement, the quantities as shown in the Schedule of Prices are estimated and provisional quantities only being given as an indication of the scope of work to enable the tenderer to submit a bid against different items of the works in accordance with his estimate of costs. The estimated quantities shall be used for comparing tenders. It may however, be noted that the basis of payment will be the actual quantities of work executed and measured by the contractor and as verified by the Engineer.

During performance audit of project RJHPS, it was noticed that an amount of Rs.66.44 million (detailed in **Annex-C**) was paid to the contractor on account of civil and other works in the shape of Lot without measuring actual work executed. This lump sum payment was not justified as it was to be made on the basis of actual quantity of work executed as per contract provisions. Therefore, payment of Rs.66.44 million was irregular.

Implication

Violation of the provisions of Schedule of Prices resulted in unjustified payment of Rs.66.44 million up to the Financial Year 2016-17. This led to avoidable cost overrun.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that as per clause 4.1 of preambles to Schedule of Prices that the unit rates and lump sum amount entered in the Schedule of Prices would be the rates at which contractor will be paid. In every project there were certain items which could not be clearly foreseen or estimated in the Schedule of Prices but provision was kept for such items in the lot or lump sum amount of Schedule of Prices. The scope of these items (lump sum) was then properly defined during course of the project and the contractor executes these items as per instructions of the Engineer or employer.

The reply was not tenable because payment against civil work, 132 KV switchyard equipment & gantry foundation, sanitary work etc and miscellaneous metal work was required to be made on the basis of actual work done as per contract provisions instead of lumpsum basis.

The DAC in its meeting held on November 23, 2018 directed the management to submit detailed item wise reply as to why the work was paid as lumpsum. DAC also directed to provide full justification of the work executed and get it verified from Audit. Further progress was not reported till finalization of the report.

Audit Recommendations

Audit recommends that management needs to submit detailed item wise reply against payment made in lump sum along with justification and fix responsibility of making unjustified payment amounting to Rs.66.44 million.

4.1.7 Unjustified payment made to contractor on account of dismantling of concrete floor - Rs.65.99 million

According to BoQ item 5 of Schedule of Prices, 305 ton steel was allowed to be consumed in the execution of work. Similarly, 4,950 m^3 dismantling of concrete was provided under BoQ item I (a) (iv).

During performance audit of RJHPS project, it was observed that an amount of Rs.65.99 million **(detailed in Annex-D)** was paid in excess of the provision of BoQ quantity to the contractor. Excess payment was made on account of dismantling concrete floor of power house building up to natural soil level and for providing and fixing steel for reinforcement. Against the provision of steel i.e. 305 ton, 591 ton steel was utilized without approved change in design of work. In the absence of revised design expenditure incurred in excess of the provision of BoQ quantity was irregular and needed justification. Similarly, 6,447 m^3 dismantling of concrete was allowed against the provision of 4,950 m^3. In both cases, an aggregate amount of Rs.65.99 million was paid in excess to the contractor without proper justification and approval of employer.

Implication

Management's inefficiency to control cost overrun resulted in irregular payment amounting to Rs.65.99 million on account of dismantling of concrete floor up to the Financial Year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that as per priority of contract documents drawings had got higher priority than Schedule of Prices, therefore, the detailed design drawings supersede the Schedule of Prices. Sub clause 31.8 of particular CoC states that for the removal of doubt, it was declared that any increase or decrease of the estimated quantities set out in the Schedule of Prices ascertained by measurement in accordance with the provision of sub clause 33.8 thereof was not a variation within the meaning of this clause. The works executed at site are according to approved construction drawings and the quantities exceeded in items of Schedule of Prices would be regularized in the 2^{nd} revised PC-I, already in process.

The reply was not tenable because an excess quantity of BoQ items amounting to Rs.65.99 million was paid to the contractor without an approved change in design. Moreover, justification for change in design and scope duly supported with documentary evidence be provided.

The DAC in its meeting held on November 23, 2018 showed its displeasure as planning of project was not done properly. Proper estimation was not done by the Consultant which resulted in exorbitant increase in financial cost. Further progress was not reported till finalization of the report.

Audit Recommendations

Audit recommends that the management needs to inquire the matter for fixing responsibility for unjustified payment, poor planning and poor estimation of BoQ besides making provision of copy of approved 2nd revised PC-I to Audit.

4.1.8 Over payment on account of escalation and interest thereon - Rs.29.34 million

According to the instructions issued by WAPDA dated July 17, 1982, "all losses whether of public money or of stores, shall be subjected to preliminary investigation by the officer in whose charge they were, to fix the cause of the loss and the amount involved".

During performance audit of RJHPS project, it was observed that an amount of Rs.79.28 million was paid to M/s HRL-CCPG (JV) under escalation bill No.10 on March 26, 2014. Later on, it came to the notice of project management and accounts section that an amount of Rs.20.52 million was an excess payment. The excess amount remained under utilization of the contractor for at least 43 months from March 26, 2014 until finalization of this report. During this period, no effective steps were taken by project management to recover the excess payment made to the contractor. Moreover, interest at the rate of 12% per annum on excess payment was worked out as Rs.8.82 million. Since the payment was made due to negligence, therefore, responsibility of loss be fixed upon the persons at fault.

Implication

Weak contract administration resulted in non-recovery of Rs.29.34 million on account of over payment on escalation and interest thereon up to the Financial Year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018.The management explained that the over payment of escalation was based on EoT case decision by M/s NESPAK being Consultant of the project for RJHPS. The Engineer M/s NESPAK gave decision on EoT case in August, 2014 and imposed LD on the contractor M/s HRL-CCPG (JV). The revised EoT was granted up to December 04, 2013, whereas, escalation amount was provisionally paid to the contractor up to ToC dates i.e. March 11, 2014. Therefore, M/s NESPAK recommended to recover the excess amount of escalation Rs.20.52 million. M/s NESPAK also gave decisions on some civil works claims and rejected those claims of the contractor. M/s HRL-CCPG (JV) being contractor of the project for RJHPS had contested the decision of M/s NESPAK on EoT case and other claims rejected by M/s NESPAK. M/s HRL-CCPG (JV) requested for review of EoT case and amicable settlement before entering into arbitration. The Authority constituted a committee for amicable settlement with the contractor and after detailed meetings with the contractor and site visits the committee submitted its recommendations. It was recommended that opinion of third party may be obtained in this regard. Third party opinion was then obtained by the Authority. At last, MoU was signed between WAPDA and the contractor M/s HRL-CCPG (JV) for global amicable settlement. According to MoU, the revised EoT dates were dragged to ToC dates, therefore, regularizing the gap for which excess payment of escalation was made to the contractor.

The reply was not tenable because the revised escalation of Rs. 20.52 million remained with the contractor for 43 months for which mark-up @ 12% amounting to Rs.8.82 million was to be recovered. Copy of global amicable settlement between WAPDA and the contractor may also be provided to proceed further in the matter.

The DAC in its meeting held on November 23, 2018 directed the management to provide revised reply for payment made to JV and get the bank guarantee verified from Audit. The fate of the para would be decided after receipt of the findings of enquiry in para 4.2.6. Further progress was not reported till finalization of the report.

Audit Recommendations

Audit recommends that the management needs to inquire the matter and recover the excess paid amount along with interest thereon from the contractor without further delay besides provision of record in compliance of above DAC's directive.

4.1.9 Loss due to non-submission of sales tax invoices by the contractor - Rs. 21.54 million

According to FBR office order No.C.No.1 (42) STM / 2009 / 99638-R dated July 24, 2013,"all department and offices were required to ensure that:- i) Purchase of taxable goods may only be made from sales tax registered persons against sales tax invoice and payment through banking channel. ii) In case of public works, it may be ensured that the contractors engaged make purchase only from sales tax registered persons. Since the contractors engaged make purchase against public tender are required to have a BoQ, the organization must require such contractors to present sales tax invoices of all the material mentioned in the BoQ as evidence of its legal purchase, before payment is released to them. iii) At the time of audit, it may be ensured that the above-mentioned legal requirements have been fulfilled". Moreover, implementation of legal requirement was required to be examined by audit vide AGP's office letter No.266/07-P&C/I-C/2013 dated August 19, 2013.

During performance audit of RJHPS project, it was observed that an amount of Rs. 126.70 million was paid to the contractor M/s HRL-CCPG (JV) on account of procurement of steel for utilization in the execution of civil works as per Schedule of Prices of the contract agreement. At the time of payment for steel, the contractor did not submit any sales tax invoice. In the absence of sales tax invoices, sales tax payment could not be verified. Resultantly, national exchequer sustained a loss of Rs.21.54 million.

Implication

Non-adherence to FBR instructions resulted in loss of Rs.21.54 million up to the Financial Year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that it is obvious that instructions of GoP are applicable on all contracts but office order No. C.No.1 (42) STM/2009-R dated July 24, 2013 was issued after contract signing of RJHPS i.e. on February 18, 2010. The referred notification of FBR is to be followed in the ongoing and future projects instead of the project for RJHPS which has already been completed.

The reply was not tenable because payment of IPC-44C was made on September 13, 2013 after the issuance of FBR instructions. Furthermore, clarification from FBR relating to management's stance may be provided to proceed further in the matter.

The DAC in its meeting held on November 23, 2018 directed the management to keep the para pending until FBR's clarification and Supreme Court's decision in a similar reference was shown to Audit. Further progress was not reported till finalization of the report.

Audit Recommendations

Audit recommends that the management needs to investigate the matter for fixing responsibility besides making good the loss.

4.1.10 Loss due to non-recovery of General Sales Tax and Income Tax - Rs.12.32 million

According to the instructions issued by WAPDA dated July 17, 1982, "all losses whether of public money or of stores, shall be subjected to preliminary investigation by the officer in whose charge they were, to fix the cause of the loss and the amount involved". According to Para-10 of GFR Vol-I, "every public officer is expected to exercise the same vigilance in respect of expenditure incurred from public money as a person of ordinary prudence would exercise in respect of his own money and the expenditure should not be prima facie more than the occasion demands".

During performance audit of project, it was noticed that a release order was issued in favour of M/s Kay Trading Company, Lahore for disposal of unwanted material / equipment of Jabban Power House at a contract price of Rs.56 million vide letter No. CE (P&D) DD/DYD/29-W (07-08/4095-97) dated July 31, 2009. The said amount was deposited by the bidder. This amount did not include GST and Income Tax. Before issuance of release order, amount of GST and Income Tax was to be recovered from the bidder, but the same was not received.

Implication

Non-adherence to Authority instructions resulted in non-recovery of General Sales Tax and Income Tax amounting to - Rs.12.32 million up to the

Financial Year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that the recovery of Rs. 7.72 million had already been affected. This office requested office of DG (P&D) on April 27, 2018 for providing the desired payment voucher. As and when provided, the Audit will be informed accordingly.

The reply was not tenable because no sufficient documentary evidence to substantiate the stance was provided.

The DAC in its meeting held on November 23, 2018 settled the para subject to verification of record. Further progress was not reported till finalization of the report.

Audit Recommendations

Audit recommends that the management needs to provide record in support of reply and get the same verified.

4.1.11 Infructuous expenditures - Rs.7 million

According to Para-10 of General Financial Rules (GFR) Vol-I, "every public officer is expected to exercise the same vigilance in respect of expenditure incurred from public money as a person of ordinary prudence would exercise in respect of his own money and the expenditure should not be prima facie more than the occasion demands".

During performance audit of RJHPS project, it was noticed that six WAPDA officers were nominated for a foreign visit to China for a period of 30 days to participate in training and monitoring of manufacturing process of E&M equipment pertaining to the project under contract agreement No. GMH/JRP/01. Against this visit, an amount of Rs.07 million was paid to the contractor. Subsequently, none of these foreign trained officers were posted at this project. This state of affair substantiated that the said expenditure incurred was an undue benefit extended to irrelevant officers and so the expenditure of Rs.07 million did not contribute in any way towards achieving project objectives.

Implication

Non-utilization of trained officers in the project activities resulted in infructuous expenditure amounting to Rs.7 million. This indicated that the funds of the project were spent uneconomically.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that the said foreign training was not specific to only JHPS but in fact it covered broader scopes of E&M technologies. The nominations were made in the interest of WAPDA keeping in mind the future requirements as the officers who secured foreign training later served WAPDA in other power stations and imparting their knowledge to the system on the basis of foreign training.

The reply was not tenable because no documentary evidence to substantiate the stance was provided.

The DAC in its meeting held on November 23, 2018 directed the management to provide the record of postings of these trainees to Audit in order to verify relevance of training program and job description. Further progress was not reported till finalization of the report.

Audit Recommendations

Audit recommends that management needs to provide record of postings of trainees at the project for verification besides fixing responsibility for incurring infructuous expenditure of Rs.07 million.

4.1.12 Irregular expenditure in excess from the provision of revised PC-I - Rs.5 million

According to revised PC-I of the project an amount of Rs.2 million was provided for the road.

During performance audit of RJHPS project, it was noticed that an expenditure of Rs.7 million was incurred on account of construction of metallic road in residential areas, thus increasing the scope of work. Resultantly, an expenditure of Rs.5 million was incurred irregularly beyond the planned scope of work for which no proper justification was given.

Implication

Non-adherence to revised PC-I resulted in irregular expenditure of Rs.5 million up to the Financial Year 2016-17. This resulted in extra burden on project resources with uneconomical spending and resultant cost overrun.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that increase in cost was due to inflation and increase in scope of work. It was further explained that case for 2nd revised PC-I of RJHPS is in progress and the subject excess payment will be regularized in the 2nd revised PC-I. 2nd revised PC-I proforma after clearance from WAPDA has been submitted to MoWR for scrutiny and further processing.

The DAC in its meeting held on November 23, 2018 pended the para till approval of 2nd revised PC-I from ECNEC.

Audit Recommendations

Audit recommends that the management needs to investigate the matter for fixing responsibility regarding expenditure incurred in excess of the provision of revised PC-I and be recovered from the officer(s) at fault.

4.1.13 Irregular payment on account of detention charges of containers - Rs.2.99 million

According to the provisions of Schedule of Prices, payment on account of detention charges of the containers shall not be made to the contractor.

During performance audit of RJHPS project, it was observed that an amount of Rs. 2.99 million was paid to the contractor M/s HRL & CCPG (JV) on account of detention charges of the containers. Payment of detention charges was irregular as per the Schedule of Prices.

Implication

Non-adherence to the provisions of Schedule of Prices resulted in cost overrun and irregular payment of Rs. 2.99 million on account of detention charges to the contractor.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that a shipment consisting 25 containers arrived at Karachi port in the last week of October 2012, but due to custom clearance, Muharram-ul-Haram and poor law and order situation in Karachi, the services including mobile services remained blocked and curfew was imposed in Karachi. The circumstances were beyond control. Contract clause 44 "Force Majeure" upholds in such circumstances. Contract Sub-clause 44.4 & 44.5 merited the contractor for reimbursement of detention charges on presentation of bonafide supporting documents along with claim.

The reply was not tenable because no documentary evidence to substantiate the stance was provided.

The DAC in its meeting held on November 23, 2018 settled the para subject to obtaining certificate from CRRK that demurrage was not got reimbursed by the contractor and subject to verification of record from Audit. Further progress was not reported till finalization of the report.

Audit Recommendations

Audit recommends that the management needs to provide record in support of their reply for verification.

4.1.14 Non-recovery of interest charges - Rs.2.06 million

As per IPC No. 40-C regarding Civil, Erection and other works under clause 33.1, B-iii, "The amount of interest to be Rs.1.19 million against work done was verified by the Consultant".

During performance audit of RJHPS project, it was observed that total amount of BoQ item C-15 was Rs.7.99 million. At the time of verification, an amount of Rs.5.99 million against (75%) of the item was verified on provisional basis by the Consultant due to expiry of dead line of AFD loan, paid through IPC-40C. However, the actual amount against work done when verified was Rs.1.19 million. Excess payment was to be recovered from the contractor. Since the excess payment remained with the contractor for at least 43 months. Therefore, interest of Rs.2.06 million was required to be recovered from the contractor in addition to Rs.4.80 million.

Implication

Wrong certification of work resulted in cost overrun and excess payment of Rs.4.80 million to the contractor. Non-recovery of interest on said amount resulted in loss on account of interest amounting to Rs.2.06 million.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that the excess amount of Rs.4.80 million for the BoQ Item ''C-15 Unforeseen Items'' as pointed out by Audit has been recovered from the contractor.

The reply was not tenable because the said amount remained with the contractor for 43 months for which mark-up Rs.2.06 million was required to be recovered from the contractor.

The DAC in its meeting held on November 23, 2018 showed its concern over the provisional payment made to the contractor without a bank guarantee and directed to get the recovery record verified from Audit and avoid such payments in future.

Audit Recommendations

Audit recommends that management needs to recover interest charges of Rs.2.06 million from the contractor as the recovery of Rs.4.80 million as overpayment was verified by the Audit.

4.1.15 Irregular expenditure - Rs.1.59 million

There was no provision in the revised PC-I of JHPS for construction of retaining wall and boundary wall around Assistant Resident Engineer bungalow.

During performance audit of RJHPS project, it was observed that an expenditure of Rs.1.59 million was incurred on account of construction of retaining wall and boundary wall around Assistant Resident Engineer bungalow. Resultantly, an expenditure of Rs.1.59 million was irregular and unjustified.

Implication

Violation of revised PC-I resulted in irregular expenditure of Rs.1.59

million up to the Financial Year 2016-17. Project resources were utilized on execution of work beyond scope. Hence, it was an avoidable cost overrun.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that the works of construction of retaining wall and boundary wall around Assistant Resident Engineer bungalow were executed as per approval of the competent Authority. NOC for execution of these works was also obtained from the concerned donor agency AFD. These works were not included in the contract Schedule of Prices signed with main contractor of the project for RJHPS. Therefore, these works were then executed through other local contractors after obtaining approval from competent Authority. These works were executed as per PC-I provisions and according to approval of competent Authority.

The reply was not tenable because incurrence of expenditure on account of construction of retaining wall and boundary wall around Assistant Resident Engineer without its inclusion in the scope of work of main contractor was irregular and unjustified.

The DAC in its meeting held on November 23, 2018, retained the para and directed the management to provide approval of revised PC-I by the ECNEC. However, it would be settled after spot verification of record by the Audit.

Audit Recommendations

Audit recommends that the management needs to investigate the matter for fixing responsibility for incurring irregular expenditure of Rs.1.59 million and for recovery of the same amount from the officer(s) at fault.

4.1.16 Over payment due to inclusion of deleted spare parts by the contractor in the list of 5% Defect Liability Period payment - Rs.1.34 million (equivalent to US$ 0.013 million)

According to M/s NESPAK's the Consultant of the project, letter No. 2963/165/Z1/01/9668 dated March 11, 2015, mandatory spares parts valuing US$ 0.0260 million were deleted from the list of Schedules of Prices for being not required.

During performance audit of RJHPS project, it was noticed that mandatory spares parts valuing US$ 0.260 million were deleted from the list as the same were redundant. Hence, these were not received. Contrary to the above, these spares parts were included in the list prepared for making payment of 5% DLP. The said payment was not admissible to the contractor when these spare parts had already been deleted and were subsequently not received.

Implication

Poor contract management resulted in cost overrun and over payment of Rs.1.34 million up to the Financial Year 2016-7.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that the issue of spare parts deletion was resolved in March 2015 after detailed deliberation as evident from M/s NESPAK letter March 13, 2015. Afterwards, project management recovered the entire amount paid to the contractor for deleted spare parts. 5% DLP cost of deleted spare parts as pointed out by Audit was paid in advance to the contractor i.e. March 2014 in the wake of expiry of loan agreement and spare parts deletion issue was resolved in March 2015. The amount involved has since been recovered after resolution of spare parts issue.

The reply was not tenable because upon deletion of mandatory spare parts valuing US$ 0.260 million inclusive of amount pointed out by Audit i.e. US$ 0.013 million (5% of deleted spare parts), DLP paid was irregular and unjustified for which responsibility needs to be fixed in addition to making recovery.

The DAC in its meeting held on November 23, 2018 settled the para subject to verification of recovery record by Audit. Further progress was not reported till finalization of the report.

Audit Recommendations

Audit recommends that the management needs to recover over payment from the contractor besides fixing the responsibility.

4.2 Procurement and Contract Management

4.2.1 Loss due to delay in execution of the project - Rs.2,931.28 million

According to the instructions issued by WAPDA dated July 17, 1982, "all losses whether of public money or of stores, shall be subjected to preliminary investigation by the officer in whose charge they were, to fix the cause of the loss and the amount involved". According to para-10 of GFR Vol-I, "every public officer is expected to exercise the same vigilance in respect of expenditure incurred from public money as a person of ordinary prudence would exercise in respect of his own money and the expenditure should not be prima facie more than the occasion demands". According to para 3.1.2 of LoA forming a part of contract agreement an irrevocable L/C for 65% of the contract price (CIF) of imported plant and equipment shall be opened by the Employer within 60 days from signing of the contract.

During performance audit of RJHPS project, it was noticed that contract No. GMH/JRP/01 for dismantling of existing civil structures, design, supply, construction, erection, testing and commissioning of 22 MW of project for RJHPS was signed on October 15, 2009 between WAPDA and M/s HRL-CCPG (JV). The contractor was contractually required to complete the work of unit No.1,2,3&4 and substation by November 18, 2011, November 03, 2011, October 18, 2011, October 03, 2011 and June 18, 2011 respectively. The contractor, however, failed to complete the above works on agreed completion dates. A series of EoTs for completion was granted i.e. of 784 days for units 1 to 4 and of 942 days against above mentioned sub-station project component. The contractor contended that the delay was caused by the project management as it could not timely arrange to open the LC to the contractor for equipment and hand over site of 132 KV sub-station, penstock, and power house. Thus, overall project work was delayed by 973 days due to non-fulfillment of contractual obligations by the employer. This state of affair caused financial loss of Rs.2,931.28 million **(detailed in Annex-E)** in the shape of less generation of revenue, IDC, escalation, admin and other overhead expenses.

Implication

Project mis-management resulted in time overrun which led to cost overrun of Rs.2,931.28 million. The Authority had to sustain revenue loss in the shape of less generation of electricity.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that there is no contradiction in imposition of LDs. M/s NESPAK being consultant of the Project worked out LDs after giving decision on EoT. The same LDs were then waived off by Authority in the MoU signed with contractor M/s HRL-CCPG (JV) regarding global amicable settlement. It is obvious fact that during course of the project, construction drawings go through revisions before final approval of the same. The delay reasons mentioned are the basis on which EoT was granted to the contractor as these reasons inadvertently occurred on either part of Employer or beyond control of both Employer and contractor.

The reply was not tenable because no documentary evidence to substantiate the stance was provided.

The DAC in its meeting held on November 23, 2018 was not satisfied with management reply as no justification was given for delay of 17 months in opening of LC. DAC pended the para with the direction to submit a revised reply to Audit. Further progress was not reported till finalization of the report.

Audit Recommendations

Audit recommends that management needs to submit a detailed reply and investigate the matter for fixing responsibility of loss.

4.2.2 Irregular award of contract - Rs.2,087.66 million

The Public Procurement Rules, 2004 issued by PPRA does not allow a prequalified bidder to withdraw his bid from the bidding process. Furthermore, procuring agencies, while engaging in procurements, shall ensure that the procurements are conducted in a fair and transparent manner, the object of procurement brings value for money to the agency and the procurement process is efficient and economical.

During performance audit of RJHPS project, it was noticed that prequalification of the contractors was carried out for work of RJHPS. As a result, six (6) JVs were declared prequalified. All of them purchased tender documents but only two JVs participated in the bidding process. Later on, M/s HMC–Energy Power Brazil (JV) withdrew from the bidding process during the initial stage, leaving a single bid from M/s HRL-CCPG China (JV) for detailed evaluation. The Authority accorded approval for award of contract to M/s HRL-CCPG (JV) for carrying out complete work of RJHPS at a contract price of Rs.2,087.661 million. Audit was of the view that award of contract to a single bidder was not justified as its bid rate was very high as compared to the original PC-I cost i.e. Rs.1,037.55 million (100 % above the approved PC-I cost). Therefore, retendering should have been done in order to ensure award of contract on competitive rates but the same was not done. Thus, undue favour was given to the contractor.

Implication

Non-adherence to Public Procurement Rules, 2004 resulted in irregular award of contract to a single bidder at uneconomical rates.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that owing to urgency of works and prevailing poor law and order situation in project area, it was not affordable to retender and repeat the hiring process of contractor. Neither any procedural relaxation nor favor has been extended to contractor. Accordingly, the contract was awarded to M/s HRL–CCPG (JV) with the approval of WAPDA Authority dated May 06, 2009. As far as contract cost is concerned, the original PC-I of project was approved in 2007 based on market rates of 2006, while increase in quoted rates by M/s HRL-CCPG (JV) is attributed to market inflation, escalation etc. (i.e. US dollar exchange rate of Rs.85 in 2009 Vs Rs.60 in 2006).

The reply was not tenable because no sufficient documentary evidence to substantiate the stance of the management was provided.

The DAC in its meeting held on November 23, 2018 was not satisfied with the reply given by the management and directed Member (Power) WAPDA to submit a fact-finding report along with a revised reply to Audit within 15 days. Further progress was not reported till finalization of the report.

Audit Recommendations

Audit recommends that the management needs to submit a fact-finding report along with revised reply besides fixing responsibility regarding irregular award of contract to a single bidder at an extraordinary cost.

4.2.3 Loss due to abnormal increase in cost of rehabilitation work of the Project due to project mismanagement– Rs.1,459.09 million

According to the instruction of Planning Commissioning no project will be launched unless and until its feasibility report, Detailed Engineer Design & PC-II is completed and approved.

During performance audit of project RJHPS, it was noticed during scrutiny of original PC-I that although cost estimates were required to be prepared on the basis of detailed engineering design, they were prepared on the basis of preliminary design. Resultantly, several modifications led to exorbitant increase in cost estimates in revised PC-I. It is pertinent to mention here that the detailed engineering design of the project was not prepared until the finalization of original PC-I. As repair and modification were a major component of the project therefore delayed completion of detailed engineering design resulted in serious setbacks proposing most civil structures to be demolished and reconstructed. Not only was the scope of work completely changed in all civil works but this also caused a significant increase in cost due to local currency component. Thus, cost of some major civil structures (i.e. bridge between Jabban colony and power station, construction roads and new houses was altogether ignored at the planning stage). Lack of proper foresight and poor planning unjustifiably increased the cost of project from Rs.628.91 million to Rs.2,088 million.

Implication

Non-adherence to instructions of the Planning Commission was inefficiency on the part of the management as it led to cost escalation.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018.The management explained that 1st revised PC-I of project for RJHPS had already been approved in 2010 which had regularized the subject matter of abnormal increase in cost of rehabilitation.

The reply was not tenable because no justification for abnormal increase in cost of rehabilitation work of the project from Rs.628.910 million to Rs.2,088 million was provided.

The DAC in its meeting held on November 23, 2018 was not satisfied with the reply and therefore pended the para with the observation that why the highest forum such as P & D Division / ECNEC etc. were not approached. DAC also directed the management to submit a revised reply covering all details of abnormal increase in project cost.

Audit Recommendations

Audit recommends that the management needs to submit a revised reply covering all details of abnormal increase in project cost besides fixing responsibility regarding irregular execution of the project without completion of detailed engineering design.

4.2.4 Loss due to delay in award of the main contract to M/s HRL-CCPG (JV) for Rehabilitation of Jabban Hydroelectric Power Station - Rs.1,252.27 million

According to the consultancy agreement, time given for Phase-I and Phase-II was one year (6 months + 6 months).

During performance audit of RJHPS project, it was noticed that a consultancy agreement was signed on August 31, 2007 between WAPDA and M/s NESPAK for RJHPS at contract price of Rs.53.63 million. The CSA consisted total three phases. The first phase was related to preparation of design, bidding documents and prequalification of the construction. The second phase pertained to invitation of bids, evaluation of bids and award of the contract. Against these two phases, a period of one year (6 months +6 months) was provided in the CSA. Contrary to above, above tasks were completed in 25 months instead of 12 months. Due to abnormal delay in award and signing of the main contract agreement, the project was delayed for a period of 13 months. Moreover, loss of 183 GWh energy equivalent to Rs.1,252.27 million was sustained by WAPDA.

Implication

The delay in award of contract resulted in avoidable generation loss of Rs.1,252.27 million (183 GWh x Rs.6.843 per KWh) to WAPDA up to the Financial Year 2016-17 depicting inefficiency of the project management.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018.The management explained that planning for execution of any work was done keeping in consideration all the possible practical factors. However, it was impossible to predict and foresee 100% true picture of future resulting in deviation from planned program & timeline. Execution of any work was always accompanied with several bottlenecks hampering its pace resulting in time delay. Authority, after detailed deliberation and considering the factors delaying completion of phase-I & II genuine, accorded approval under Amendment No.1 regularizing the delay of 17 months. Although, award of contract to the main contractor delayed for a period of 17 months but the reasons behind this delay could not be averted. The struggle and hard work jointly by WAPDA and M/s NESPAK in phase-I & II paved the way for smooth execution and completion of the project.

The DAC in its meeting held on November 23, 2018 directed the management to submit deviation's summary (commercial & technical) accepted by the employer or contractor, to Engineering Advisor (Power) for evaluation. Mr. Asim, Jr. Engineer Warsak would assist the committee.

Audit Recommendations

Audit recommends that the management needs to investigate the matter to fix responsibility for delay in award of the contract for RJHPS.

4.2.5 Irregular payment due to procurement of additional spare parts and equipment - Rs.605.52 million (equivalents to USD 6.31 million)

The contract agreement signed between WAPDA and M/s HRL & CCPG JV did not contain any provision for procurement of additional spare parts & equipment. The material shall not be installed without factory acceptance tests as per particular conditions of the contract under sub-clause 20.6 of the contract agreement.

During performance audit of RJHPS project, it was noticed that additional material valuing USD 6.31 million equivalent to Pak Rs.605.52 million was procured from the contractor. Payment of procurement was made through commercial invoice 10A and 10B by the office of the Chief Resident Representative, WAPDA, Karachi during the months of November, 2012 and February, 2013. The procurement was irregular as there was no such provision in the contract agreement for procuring additional material, spare parts and equipment. Therefore, procurement valuing Rs.605.52 million was irregular. Moreover, factory acceptance tests required to be conducted before supply of material at site were not carried out in violation to the provision of contract agreement.

Implication

Inefficiency in contract administration resulted in irregular payment and cost overrun due to procurement of additional spare parts and equipment amounting to Rs.605.52 million up to the Financial Year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that all the equipment procured through Commercial Invoice No. 10A & 10B as pointed out by Audit were delivered to site after necessary Factory Acceptance Tests (FATs) conducted in the presence of Employer and Consultant representatives. FATs reports of some of the major equipment i.e. Hydro Turbine, Governor (main controller of the hydraulic turbine which varies the water flow through the turbine) and Generator were attached for ready reference. Project authorities did not violate the contract agreement. Material procured through Commercial Invoice No. 10A & 10B conformed to technical specifications and were not additional items as pointed out by Audit. These were instead included in BoQ of contract agreement.

The DAC in its meeting held on December 12, 2018 directed the management to get all the relevant record verified from Audit and settled the para subject to verification.

Audit Recommendations

Audit recommends that the management needs to produce record in support of reply to proceed further in the matter.

4.2.6 Unspent balance out of AFD Credit Facility Agreement Loan - Rs.255.93 million (equivalent to 1.9 million Euro)

An amount of 1.9 million Euro equivalent to Rs.255.93 million was found unspent out of AFD Credit Facility Agreement (CFA) No. CPK 1006 01 A.

During performance audit of RJHPS project, it was noticed that CFA No. CPK 1006 01 A was signed on 26 July, 2010 between AFD and Islamic Republic of Pakistan for providing a fund of 26.5 million Euro to the project "Rehabilitation of Jabban Hydroelectric Power Station and technical training of WAPDA Engineer". Subsequently, the CFA was relent to WAPDA by signing a subsidiary loan agreement on December 13, 2010. Originally, deadline for utilization of loan was fixed in June, 2012 which was later extended twice i.e. to June 30, 2013 and March 31, 2014. At the time of expiry of the loan, an amount of Rs.255.93 million (equivalent to 1.9 million Euro) remained un-utilized. Non-utilization of this loan prior to expiry indicated poor project management and execution of JHPS.

Implication

Poor financial management resulted in non-utilization of balance loan amounting to Rs.255.93 million up to the Financial Year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that AFD entered into a loan agreement with GoP on July 26, 2010 worth 25 million Euros for RJHPS. GoP further relent the loan amount to WAPDA by signing a subsidiary loan agreement on December 13, 2010. According to amendment No. 3 of loan agreement, the deadline fixed for 100% utilization of loan amount was March 31, 2014. Project authorities did its best to utilize 100% loan amount up to the deadline and achieved a milestone of utilizing 92.4% loan amount in the best national interest. It was also mutually agreed that the unutilized loan amount (if any) up to March 31, 2014 would be returned back to GoP (refer Para 3 of

Amendment No.3). So, complying with the rules of business, the unspent loan amount of Rs.255.93 million (equivalent to 1.9 million Euros) had since been deposited to GoP in the head of account No. E02421-WAPDA Power Wing through TR-6 challan form on January 13, 2015. Project management had done its all-out efforts to utilize maximum amount of loan up to the deadline and had complied with the loan agreement by depositing back the unspent amount of loan.

The DAC in its meeting held on December 12, 2018 directed the management to get all the relevant record regarding timely return of funds to GoP verified from Audit and settled the para subject to verification.

Audit Recommendations

Audit recommends that the management needs to produce record in support of reply or investigate the matter as to why the unspent balance of loan was not timely returned to GoP.

4.2.7 Irregular payment of skilled labour price escalation - Rs.68.43 million

According to standard procedure and formula for price adjustment (first edition 2009) issued by the PEC, Islamabad, no escalation is admissible to the contractor on skilled labour.

During performance audit of RJHPS project, it was noticed that an amount of Rs.171.07 million was paid on account of price escalation to the contractor M/s HRL & CCPG (JV). Out of total escalation amount paid, an amount of Rs.68.43 million **(detailed in Annex-F)** was allowed in lieu of skilled labour. Payment of price escalation on skilled labour was not admissible to the contractor as it was not allowed in the standard procedure and formula for price adjustment issued by the PEC.

Implication

Violation of PEC procedure and formula for price adjustment resulted in irregular payment and cost overrun of Rs.68.43 million up to the Financial Year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018.The management explained that contract of RJHPS allowed escalation on skilled labour as per clause 47.1 of particular CoC. It was confirmed that the skilled labour was engaged locally.

The DAC in its meeting held on December 12, 2018 directed the management to provide complete record to Joint Secretary (Water) for his opinion on the issue.

Audit Recommendations

Audit recommends that the management needs to produce record in support of reply or recover the irregular payment of Rs.68.43 million from the contractor and fix responsibility.

4.2.8 Irregular award of Consultancy Agreement to M/s NESPAK in violation of Public Procurement Rules - Rs.53.63 million

According to Rules-20 of Public Procurement Rules, 2004, "the procuring agency shall use open competitive bidding as the principle method of procurement for the procurement of goods, services and works".

During performance audit of RJHPS project, it was noticed that a consultancy agreement was signed on August 31, 2007 between WAPDA and M/s NESPAK for RJHPS at contract price of Rs.53.63 million without prior advertisement in print media or open competitive bidding.

Implication

Violation of Public Procurement Rules in hiring services of the consultant resulted in uneconomical procurement amounting to Rs.53.63 million up to the Financial Year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that it was matter of sheer importance to hire the services of a well reputed local consultant having the past experience, including supervision of construction, erection, testing and commissioning etc. independently. Services of foreign consultants were not planned to be availed as per PC-I provision. Furthermore, poor Law & Order situation in the project area at the time of consultancy contract award also supported the stance of hiring local consultants. M/s NESPAK being the most experienced local firm was awarded the contract of consultancy services of RJHPS amounting to Rs.53.63 million on August 23, 2007 by the approval of WAPDA Authority.

The DAC in its meeting held on November 23, 2018 was not satisfied with management's reply and pended the para with the direction to submit a revised reply to Audit.

Audit Recommendations

Audit recommends that the management needs to submit a revised reply and inquire the matter of hiring of consultancy services without advertisement in print media or open competitive bidding.

4.2.9 Irregular payment due to procurement without conducting Factory Acceptance Tests at manufacturer premises - Rs.26.56 million (equivalent to US$ 0.258 million)

The material shall not be installed without FATs as per particular CoC under sub-clause 20.6 of the contract agreement.

During performance audit of RJHPS project, it was noticed that material valuing USD 0.258 million equivalent to Rs.26.56 million was supplied by the subcontractor, M/s Alstom, of M/s HRL-CCPG (JV) at site. The procurement of material and its installation on the plant was irregular as FATs were not carried out at manufacturer's premises. In the absence of FATs, genuineness of the material could not be ascertained and verified. Approval of the competent authority regarding supply of material by the subcontractor was irregular as it was not in line with the provisions of contract agreement.

Implication

Violation of the contract provision resulted in irregular payment of Rs.26.56 million up to the Financial Year 2016-17 compromising the quality of the material / equipment.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that the material was manufactured before establishment of LC and due to the fact that foreign supplier could not hold it for indefinite period of time, the material was delivered to their local representatives i.e. Siemens Pakistan, Karachi. Project authorities accorded approval and accepted the material only after detailed study of foreign FATs report being in line with contract technical specifications and necessary FATs carried out locally under supervision of WAPDA and M/s NESPAK representatives at Siemens Pakistan, Karachi. The results seem fairly satisfactory confirming authenticity of the material.

The DAC in its meeting held on December 12, 2018 directed the Engineering Advisor (Power) to conduct a fact-finding inquiry and submit a report within one month. Further progress was not reported till finalization of report.

Audit Recommendations

Audit recommends that the management needs to conduct fact finding inquiry and submit report within one month and fix responsibility for irregular procurement without conducting FATs.

4.2.10 Irregular payment on account of price escalation on account of steel and cement - Rs.23.69 million

According to clause 47.1 of the particular conditions of the contract agreement, "basic rates of cement and steel were allowed as ex-factory for the purpose of escalation".

During performance audit of RJHPS project, it was noticed that an amount of Rs.23.69 million **(detailed in Annex-G)** was paid on account of price escalation of steel and cement to the contractor on the basis of monthly Statistical Bulletin published by the Federal Bureau of Statistics, Statistics Division, GoP. The payment of price escalation was irregular as basic rates allowed for cement and steel price escalations were ex-factory rates. Enhanced rates were to be allowed on the basis of increase in ex-factory price instead of Statistical Bulletin rates. It is also pertinent to mention here that prices of the local goods were required to be quoted as ex-factory in case of civil works, as per clause 5 of preamble to Schedule of Prices, for the purpose of tender. Therefore, the payment was irregular.

Implication

Non-adherence to original contract provisions resulted in irregular payment of Rs.23.69 million on account of price escalation of steel and cement up to the Financial Year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that clause 5.1 (d) of preamble to Schedule of Prices titled as ex-factory Pakistan Price, for local goods, states that the tenderer should quote prices for local goods, materials (other than materials required for civil works such as concrete and reinforcement etc. cost of which will be included in the price of civil works). It was crystal clear from the abovementioned clause that ex-factory price excludes rates of concrete (cement, sand and crush) and reinforcement (steel). According to priority of contract documents preambles to CoC has got more priority and supersession over particular CoC therefore contents of clause 5.1 (d) of preambles to Schedule of Prices supersede over contents of clause 47.1 of particular CoC. Hence, the basic rates of cement and steel for the purpose of escalation were Statistical Bulletin of Pakistan rather than ex-factory prices as clearly defined in detail in clause 47.1.

The DAC in its meeting held on December 12, 2018 directed the management to get contract provision along with all the relevant record verified from Audit and settled the para subject to verification.

Audit Recommendations

Audit recommends that the management needs to investigate the matter for fixing responsibility besides making the loss good as departmental contention was not found satisfactory.

4.2.11 Loss of markup due to early release of retention money – Rs.12.12 million

According to contract provision, retention money shall be released to the contractor on expiry of DLP and after issuance of DLC by the employer.

During performance audit of RJHPS project, it was noticed that an amount of Rs.101.04 million **(detailed in Annex-H)** was paid to the contractor on account of 5% retention money of contract price to M/s HRL & CCPG (JV) upon their submission of bank guarantee against units No. 1,2,3,4 and 132 KV substation. The payment was irregular as it was to be released to the contractor on expiry of DLP and upon issuance of DLC by the employer. The early release of retention money caused a loss of Rs.12.12 million to WAPDA in the shape of markup.

Implication

Violation of contract provision resulted in loss of Rs.12.12 million in the shape of markup due to early release of retention money up to the Financial Year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that the advance payment of DLP was made to contractor against equivalent bank guarantees in order to utilize maximum loan before its expiry. The deadline for expiry of AFD loan was March 31, 2014, therefore, Authority decided to make payment of DLP to contractor in advance against equivalent advance payment bank guarantees in order to utilize maximum loan. Authority had accorded approval for making advance payment to the contractor for DLP against amount of Bank Guarantees.

The DAC in its meeting held on December 12, 2018 settled the para subject to regularization of the Authority’s decision regarding release of retention money and its verification by Audit.

Audit Recommendations

Audit recommends that the management needs to produce record as directed by the DAC.

4.2.12 Delay in completion of the project due to non-inclusion of additional scope of work at the time of preparation of bidding documents

According to the instructions issued by WAPDA dated July 17, 1982, "all losses whether of public money or of stores, shall be subjected to preliminary investigation by the officer in whose charge they were, to fix the cause of the loss and the amount involved". According to Para-10 of GFR Vol-I, "every public officer is expected to exercise the same vigilance in respect of expenditure incurred from public money as a person of ordinary prudence would exercise in respect of his own money and the expenditure should not be prima facie more than the occasion demands".

During performance audit of the project for RJHPS, it was noticed that a consultancy agreement was signed on August 31, 2007 between WAPDA and M/s NESPAK for RJHPS at contract price of Rs.53.63 million. It was the duty of the Consultant to make a comprehensive design so as to include additional scope of work **(Detailed in Annex-I)** in the bidding documents for smooth execution of the project. But the same could not be incorporated. As a result, the additional scope of work was incorporated at a later stage which caused delay in execution of the project on one hand and increase in the cost of the project on the other hand. This was a clear negligence or incompetence of the Consultant who did not include additional scope of work at the time of preparation of bidding documents.

Implication

Contract mis-management resulted in delay in completion of the project due to non-preparation of realistic scope of work at the time of preparation of bidding documents up to the Financial Year 2016-17. Poor project management resulted in time overrun and subsequent cost overrun.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that the additional works emerged during execution of project due to actual site conditions and if necessary, their inclusion in contract as VO was inevitable for successful completion of the project. It was a normal practice to include VO during execution of the project as it was not possible to foresee and include 100% complete design and works in the bidding documents.

The reply was not tenable because no documentary evidence to substantiate the stance was provided.

The DAC in its meeting held on November 23, 2018 directed Engineering Advisor (Power) to conduct a fact-finding inquiry to examine CSA and submit a report to the committee within 30 days. The inquiry committee would examine the case and give findings to ascertain the cause of increase in scope. Further progress was not reported till finalization of the report.

Audit Recommendations

Audit recommends that the management needs to provide a fact-finding inquiry report regarding increase in scope and fix responsibility of delay in execution of the project due to non-inclusion of additional work at the time of preparation of bidding documents.

4.3 Construction and work

4.3.1 Loss due to non-achievement of annual energy output- Rs.9.58 million

According to PC-I, ‘‘annual output of 122 GWh was required to be generated.’’

During performance audit of RJHPS project, it was noticed that the JHPS was designed to generate 122 GWh units annual energy but it generated annual energy of 120.26 GWh only during the year 2014-15 which resulted in shortfall of 1.4 GWh. It was a matter of serious concern that the project could not achieve its primary objective. As per PC-V, the justification given for less generation of energy was that the contractor did not have required resources and expertise to construct the power house. Thus, a loss of Rs.9.58 million on account of less energy generation was sustained.

Implication

Poor contract management resulted in loss of Rs.9.58 million up to the Financial Year 2016-17 on account of less generation of energy output. Non-achievement of targets regarding annual energy output reduced the effectiveness of the project.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that when unit No.4 was shut down in emergency it was in its DLP. During DLP units are under test run and normally faults occur which are rectified by the contractor. On all the occasions the fault was rectified and unit was restored. The said unit No.4 is normally operating and has generated 119.748 GWh energy since commissioning which means that it is properly installed and functioning.

The DAC in its meeting held on December 12, 2018 directed the management to submit a revised reply and settled the para subject to verification of reconciliation of generation record.

Audit Recommendations

Audit recommends that management needed to produce record in support of reply or investigate the matter and fix responsibility regarding loss due to deficient annual energy output.

4.3.2 Irregular Reliability Test Run of units No.1, 2, 3 & 4

According to special provision 21.02 under the clause 27.3 of the contract agreement, the RTR of the plant shall be considered to have been successfully completed only after being in operation for this one period hereinafter termed as Reliability Test Period.

During performance audit of RJHPS project, it was noticed that RTR of units No.1, 2, 3 & 4 carried out in the first instance was unsuccessful due to certain technical faults. Subsequently, RTR of the plant was again recommended and completed in spells for unit No. 2 and unit No. 3. However, completion of RTR was unsuccessful as it was to be conducted for a continuous period of 30 days. The plea taken by the management of annual canal closure was an attempt to conceal its failure to conduct RTR successfully. Annual canal closure is declared in advance and brought into the notice of affectee institutions, departments and general public by the Irrigation Departments, Govt. of KPK. Before the execution of RTR, it was the duty of project management to coordinate with the Irrigation Department of the Govt. of KPK to ensure water availability. The above state of affairs showed that the contractor was given an undue favor by enabling him to claim and delay charges under clause 27.3 of particular CoCs. It was concluded that the plant was not designed and manufactured according to the prescribed specifications and standards.

Implication

Violation of contract provisions resulted in irregular RTR of plant units No.1, 2, 3 & 4 up to the Financial Year 2016-17. This reduced the effectiveness of the project.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that according to contract provisions, the units after commissioning had to go through initially 72 hours, stability test run and then 30 days RTR. The RTR of units was not completed within 30 days as the RTR was recommenced several times due to occurring of faults. According to contract clause SP21.02, if any unit of the plant remained stopped continuously for more than 8 hours on account of making adjustment to any fault then RTR of that respective unit needs to be recommenced. Project authorities ensured the stability of units and did not make any compromise on stability of units. Contractor tried his extreme best to complete the RTR as early as possible as due to delay in completion of RTR, ToCs of units also got delayed. It was basically a loss to contractor not to complete RTR within 30 days and no favour was extended by employer to contractor.

The DAC in its meeting held on December 12, 2018 directed the Engineering Advisor (Power) to conduct an inquiry in the matter and check record in which round, the test was successful in all four units. DAC further directed to submit a report within one month. The committee also directed the management to prove that no benefit was given to the contractor. Further progress was not reported till finalization of report.

Audit Recommendations

Audit recommends that the management needs to conduct an inquiry and submit a report in compliance of DAC's decision.

4.4 Assets Management

4.4.1 Loss of revenue due to forced stoppage of power plant - Rs.240.13 million

According to the instructions issued by WAPDA dated July 17, 1982, "all losses whether of public money or of stores, shall be subjected to preliminary investigation by the officer in whose charge they were, to fix the cause of the loss and the amount involved".

During performance audit of RJHPS project, it was noticed that four units remained stopped for 5,906 hours due to forced shutdowns during intermittent period 2013 to 2015 causing generation loss of 35.109 GWh. Hence, WAPDA sustained a loss of revenue to the tune Rs.240.13 million. This state of affair indicated that units were neither properly installed nor were functioning to produce required energy output.

Implication

Revenue loss of Rs.240.13 million was suffered due to forced stoppage of power plant up to the Financial Year 2016-17 undermining the effectiveness of the project.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that when units were shut down in emergency, it was in its DLP. During DLP units were under test run and normally faults occur which are rectified by the contractor. On all the occasions the fault was rectified and unit was restored. The units were normally operating properly commissioning which means that these were installed and functioning in a proper way.

The DAC in its meeting held on December 12, 2018 directed the Engineering Advisor (Power) to conduct inquiry in the matter with the following TORs:

- No additional price escalation amount to be paid to the contractor during DLP;
- Report, whether contractor responded timely, and
- Report, causes of stoppages.

Audit Recommendations

Audit recommends that the management needs to conduct an inquiry as per TORs in compliance to DAC's decision and submit a report accordingly.

4.4.2 Loss due to non-availing of opportunity of Clean Development Mechanism income - Rs.230.96 million

According to clause 11.1of 1st revised PC-I, "the Clean Development Mechanism (CDM) income was considered as opportunity of financing through sale of Certified Emission Reduction (CER) to bring Rs.57.97 million annually as additional funding to the project".

During performance audit of RJHPS project, it was noticed the management did not adhere to the above-mentioned clause of revised PC-1, thereby losing an opportunity of earning substantial amount of CDM income. Resultantly, national exchequer sustained a loss of Rs.230.96 million during a period of four years (Rs.57.974 million x 4 = 230.96 million).

Implication

Non-adherence to 1st revised PC-I resulted in loss of Rs.230.96 million due to non-availing of opportunity of CDM income.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that according to PC-I clause 7.3.6 (b) titled as consultancy for CDM" which states that in order to register validation of CDM activities of the Project according to CDM procedures and rules, additional consultancy service had to be contracted. However, the costs to be expected for this process (so called development costs) were to be borne by the Consultant chosen. Consultancy cost would be received by the Consultant from the CDM benefits on maturing of the case. Project authorities had taken up the case of registering validation of CDM with WAPDA's Consultant on CDM i.e. M/s Dynamic Solution. In order to fulfill the pre-requisites for registering the project for carbon credit under CDM and as required by the Kyoto protocol under CDM, a conference was organized at Jabban Project site on April 30, 2012. Advertisement for conference regarding CDM at Jabban Project Site to be held on April 30, 2012 was also published in daily newspapers. The conference was attended by local notables and general public relating to different walks of life. Presentation on CDM was given to the audience. Their view, comments, reservations and suggestions were recorded. Director Environmental Cell WAPDA, Assistant Director Environmental Protection Agency KPK and WAPDA's Consultant on CDM i.e. M/s Dynamic Solution attended the conference and recorded all the proceedings. Project office also prepared Environmental Impact Assessment Report of RJHPS being pre-requisite for registering CDM activities at RJHPS. Project authorities tried their extreme best to mature the case of registering the project for CDM protocol.

The DAC in its meeting held on December 24, 2018 directed the management to submit a revised reply with all valid reasons duly supported with relevant documentary evidences in collaboration with WAPDA Environmental Cell covering its age, mechanism of CDM approval, total income margin, effect of CDM on Internal Rate of Return to Audit.

Audit Recommendations

Audit recommends that the management needs to submit a revised reply with all valid reasons duly supported with documentary evidence or it may investigate the matter for fixing responsibility regarding losing the opportunity of earning substantial amount of CDM income.

4.4.3 Irregular expenditure due to waiving-off the provisions of test on the execution of pen stocks - Rs.187.18 million

According to Schedule of Prices of the contract agreement, penstocks shall be completed for units No. 2,3,4 including all accessories, erection, testing and commissioning.

During performance audit of RJHPS project, it was noticed that work on penstocks was executed at a cost of Rs.187.18 million for units No. 2, 3 and 4 of JHPS. After its completion, Hydro Static pressure test of penstock of for units No. 2, 3 and 4 was waived off in the progress review meeting held on January 05, 2015 at WAPDA House, Lahore. In place of requisite test, the contractor was required to deposit Rs.900,000. Similarly, load test of 30 ton crane was also waived off in the above stated monthly review meeting. Contractor was directed to deposit another Rs.200,000 as crane was to be used throughout the erection work. The condition of conducting tests on works could not be waived off as it was a mandatory provision of the contract agreement. In the absence of requisite tests, authenticity and reliability of material installed at site of work could not be ascertained and verified. Hence, execution of work valuing Rs.187.18 million was irregular.

Implication

Violation of contract provision resulted in irregular execution of the works to the tune of Rs.187.18 million up to the Financial Year 2016-17 depicting inefficiency on the part of project management.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that all the four penstocks installed after rehabilitation in new Jabban Power station had similar technical specifications i.e. same material grade, thickness, diameter with same hydraulic head. There were several other tests including factory inspection, commissioning tests of penstocks which were successfully executed by the contractor after installation. Therefore, declaring total expenditure incurred on penstocks 2, 3 & 4 amounting to Rs.187.18 million for not conducting a single test as irregular by Audit was unjustified. All the installed penstocks are working appropriately since its installation and no defect had been observed till now which guarantees the authenticity and purification of procured material. Therefore, annulling Authority decision by audit seems inconceivable.

The DAC in its meeting held on December 24, 2018, pended the para and directed the management to submit a revised reply with supporting documents to Audit.

Audit Recommendations

Audit recommends that the management needs to submit a revised reply along with supporting documents to proceed further in the matter.

4.4.4 Loss due to non-recovery and irregular deletion of mandatory spare parts, testing equipment and maintenance tools -Rs.16.38 million (USD 0.26 million)

According to the instructions issued by WAPDA dated July 17, 1982, "all losses whether of public money or of stores, shall be subjected to preliminary investigation by the officer in whose charge they were, to fix the cause of loss and the amount involved". According to Para-10 of GFR Vol-I, "every public officer is expected to exercise the same vigilance in respect of expenditure incurred from public money as a person of ordinary prudence would exercise in respect of his own money and the expenditure should not be prima facie more than the occasion demands".

During performance audit of RJHPS project, it was noticed that mandatory spare parts testing equipment and maintenance tools valuing USD 0.26 million were deleted from the Schedule of Prices. Later on, cost of these spare parts was never recovered from the contractor. Deletion of mandatory spares parts was irregular as approval to delete the mandatory spare parts was not obtained from the competent authority. Moreover, Authority sustained a loss of USD 0.156 million equivalent to Rs.16.38 million in lieu of mark-up as USD 0.26 million remained with the contractor for a period of five years. Advance payment was made at the time of singing contract agreement. Subsequent deletion of pre-approved and prepaid spares indicates that undue favor to the contractor.

Implication

Mis-management and inefficiency resulted in loss of Rs.16.38 million due to irregular deletion of mandatory spare parts, testing equipment and maintenance tools up to the Financial Year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that total, approximately ninety five percent (95%), payment of spare parts & erection tools (deleted later on) which came to be USD 0.247 million was released to the contractor up to March, 2014. The issue of spare parts deletion was resolved in March, 2015 after detailed deliberation as evident from M/s NESPAK letter No.9670 dated March 13, 2015. Afterwards, project management recovered the entire amount paid to the contractor for deleted spare parts. In view of foregoing, it was evident that cost of deleted spare parts as pointed out by Audit was paid to the contractor up to March, 2014 and spare parts deletion issue was resolved in

March, 2015. The amount involved had since been recovered after resolution of spare parts issue.

The DAC in its meeting held on December 12, 2018 settled the para subject to verification by Audit.

Audit Recommendations

Audit recommends that management needs to produce record in support of reply for verification.

4.4.5 Non-preparation of PC-IV i.e. Project Completion / Close out Report

According to the requirement of Planning Commission, Government of Pakistan, "it was mandatory for the project authorities to prepare PC-IV i.e. Project Completion / Project Close out Report. According to description of services of consultancy agreement with M/s NESPAK for RJHPS, the Consultant was bound to prepare Project Close out Report.

During performance audit of RJHPS project, it was noticed that the plant was completed in March, 2014 and its DLP expired in March, 2015. However, PC-IV i.e. Project Completion / Close out Report was not prepared which was required to assess the performance of plant in comparison with its envisaged objectives as provided in PC-I. No conclusion could be drawn in absence of PC-IV as performance could not be assessed against the laid down objectives in PC-I.

Implication

Non-adherence to the instructions of Planning Commission resulted in non-preparation of PC-IV up to the Financial Year 2016-17. This inevitably reduced the effectiveness of the project.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that draft Project Close out Report of JHPS had been prepared on the sample format of PC-IV. Chief Engineer (Hydel) Dev. after detailed scrutiny raised some observations conveyed vide email dated April 10, 2018 and asked for its redressal. A meeting was held on December 22, 2017 in the office of Member

(Power) WAPDA regarding pending issues wherein sub-contractor M/s AL-FAJR have been directed for supplying deficient spare parts without further delay, refer para 3 of Minutes of Meeting. Member (Power) inquired the details of the case of pending invoices of the contractor amounting to Rs.1.13 million and advised Chief Engineer (Hydel) Dev. to take up the matter with Chief Engineer/Finance Department for its earliest resolution (refer para 6 of Minutes of Meeting). Till finalization of the matter, Audit is requested that para may not be pressed further please.

The DAC in its meeting held on December 12, 2018 pended the para till the revision of 2nd revised PC-I.

Audit Recommendations

Audit recommends that the management needs to investigate the matter for fixing responsibility regarding non-preparation of PC-IV i.e. Project Completion / Close out Report.

4.4.6 Human Resource mis-management in the office of Resident Engineer, Jabban Hydroelectric Power Station

As per Form PC-V of RJHPS, "Out of 100, sanctioned strength 46 posts were lying vacant in the office of Resident Engineer, JHPS".

During performance audit of RJHPS project, it was noticed that there was a sanctioned strength of one hundred (100) posts in the office of Resident Engineer. Forty-six (46) posts out of these hundred (100) sanctioned posts were lying vacant. Availability of staff against sanctioned strength was inevitable for proper functioning of the power house in order to ensure safety and to achieve maximum generation output.

Implication

Poor human resource management could lead towards an untoward incident and reduce generation output of power house.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that 14 No. of posts will be filled from time to time. In recent, 04 No. employees were transferred/posted at JHPS vide following office orders:

a. Mr. Tahir Mehmmod (Jr. Engineer), transferred to JHPS vide office order No. 687-86/CE/DDA/WSK-14 dated March 05, 2018.

b. Mr. Aslat Khan (Foreman), transferred to JHPS vide office order No. RE/WSK/2974-79 dated November 01, 2017.

c. Mr. Abdul Hameed (Asst Foreman) transferred to JHPS vide office order No. 6239-43/CE/DDA/WSK10-1 dated February 16, 2018.

d. Mr. Saiful Jalal (Attendant), transferred to JHPS vide order No. 7615-20/CE/DDA/WSK-10.1 dated April 16, 2018.

The DAC in its meeting held on December 12, 2018 directed the management to submit a revised reply to Audit and settled the para subject verification by Audit.

Audit Recommendations

Audit recommends that the management needs to submit a revised reply as decided in the DAC.

4.4.7 Less generation due to non-execution of punch list items by the contractor

According to special CoC agreement sub clause (30-13) "After the DLC has been issued, the contractor and the Employer shall remain liable for the fulfillment of any obligation which remains unperformed at that time. For the purposes of determining the nature and extent of any such obligation, the contract shall be deemed to remain in force."

During performance audit of RJHPS project, it was noticed that huge work relating to punch list items (items that must be addressed before the project is completed) was left incomplete by the contractor M/s HRL-CCPG (JV) after issuance of DLC. Non-execution of punch list items caused less generation of power plant as was evident from the fact that required output could not be achieved.

Implication

Non-adherence to the contract agreement resulted in less generation thereby undermining project effectiveness up to the Financial Year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that all the units of RJHPS were taken over by the Employer after issuance of respective ToCs appending thereto list of pending items to be completed by the contractor during DLP in accordance with CoC 30.2. Project authorities had strictly adhered to the contract agreement. ToCs of units were issued when they were ready for generation and punch list comprised of such minor works that had not affected generation of units. Entire punch list of units and substation had been completed by the contractor during DLP.

The DAC in its meeting held on December 12, 2018 directed the management to get the generation record and letter No.1451 dated November 14, 2016 verified from Audit and settled the para subject to verification.

Audit Recommendations

Audit recommends that management needs to produce record in support of reply besides fixing responsibility regarding less generation due to non-execution of punch list items by the contractor.

4.5 Monitoring & Evaluation

4.5.1 Loss due to keeping Jabban Hydroelectric power station on standby - Rs.682.87 million

According to the instructions issued by WAPDA dated July 17, 1982, "all losses whether of public money or of stores, shall be subjected to preliminary investigation by the officer in whose charge they were, to fix the cause of the loss and the amount involved". According to Para-10 of GFR Vol-I, "every public officer is expected to exercise the same vigilance in respect of expenditure incurred from public money as a person of ordinary prudence would exercise in respect of his own money and the expenditure should not be prima facie more than the occasion demands".

During performance audit of RJHPS project, it was observed that according to Form-E (performa showing actual measured operational data, running, outage hours and maintenance data of the power plant) of the years

2014-15, 2015-16 and 2016-17, JHPS was kept on standby for 7,208.93 hours, 6,270.55 hours and 4,656.56 hours, respectively. No justification to keep these units on standby was recorded on the Form-E. As a result of keeping these units on standby, JHPS could not generate 39.600 GWh, 34.320 GWh and 25.872 GWh energy during the years 2014-15, 2015-16 and 2016-17 respectively. The state of affair caused a loss of Rs.682.87 million **(detailed in Annex-J)** to the national exchequer in the shape of energy loss.

Implication

Non-adherence to Authority instructions resulted in reduced project effectiveness. Loss of Rs.682.87 million was suffered due to keeping JHPS on standby up to the Financial Year 2016-17.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that according to Form-E of 2014-15, 2015-16 & 2016-17 of JHPS, the generation of units are 121.575 GWh, 138.265 GWh & 124.138 GWh, respectively. According to PC-I, the net annual energy target of 122 GWh was achieved in the year 2015-16 and 2016-17. Standby was due to non-availability of water or canal closure for recovery of dead body and heavy trashes in monsoon season are the reasons which are beyond control and caused generation loss, moreover scheduled maintenance of units cannot be avoided for smooth operation of power house. Besides, occurrence of fault repeatedly in the Financial Year 2014-15 and being the DLP for all the units, operational management has achieved the generation target of 121.575 GWh against 122 GWh as mentioned in PC-I of RJHPS evident from Form-E of JHPS.

The DAC in its meeting held on December 24, 2018 directed the management to get the Form-E verified from Audit and settled the Para subject to verification of the record.

Audit Recommendations

Audit recommends that the management needs to produce record in support of reply for verification.

4.5.2 Loss due to fluctuation in exchange rate of dollar -Rs.485 million

According to PC-I "total cost of the project was estimated as Rs.1,037.45 million at a foreign currency exchange rate of Rs.60 per dollar which increased to Rs.3,753.57 million in the revised PC-I due to increase in rate of Rs.85 per USD".

During performance audit of RJHPS project, it was noticed that non-completion of the project within stipulated period resulted in successive revisions of PC-I cost, over a period of six years. This caused a loss to the authority on account of foreign currency exchange rate fluctuations. Audit held that besides other factors, the avoidable delay in completion of the project contributed to loss of Rs.485 million **(detailed in Annex-K)**.

Implication

Loss of Rs.485 million was suffered due to dollar rate fluctuations up to the Financial Year 2016-17 resulting in increase in cost of the project.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018.The management explained that according to original PC-I approved in 2007, the total cost of the project was Rs.1,037.54 million at the exchange rate of Rs.60 per US dollar. 1st revised PC-I was approved by ECNEC on December 09, 2010 for amount of Rs.3,753.57 million at the exchange rate of Rs.85 per US Dollar. The project could not be completed in the stipulated time as unavoidable delays occurred during course of the project. The reasons for delay of the project were such that contractor could not be held responsible for those delays.

The DAC in its meeting held on December 24, 2018settled the para subject to verification of revised PC-I.

Audit Recommendations

Audit recommends that the management needs to provide a copy of revised PC-I besides investigating the reasons of delay.

4.5.3 Loss due to non-supply of mandatory spare parts by the contractor - Rs.10.61 million (equivalent to US$ 0.103 million)

According to M/s NESPAK being Consultant of the project vide letter No. 2963/165/21/01/9668 dated March 11, 2015, the contractor did not supply mandatory spare parts valuing US$ 0.103 million.

During performance audit of RJHPS project, it was observed that mandatory spare parts valuing USD 0.103 million were not supplied despite expiry of DLP.

Implication

Non-supply of mandatory spare parts resulted in loss of Rs.10.61 million up to the Financial Year 2016-17 putting the operation of the project at stake.

Management Response

The matter was taken up with the management in January, 2018 and reported to MoWR in February, 2018. The management explained that a meeting was held on January 05, 2015 under the chair of worthy Member (Power) WADPA, wherein, a committee was constituted to sort out the mandatory spare parts and erection testing equipment and maintenance tools not required for JHPS but included in BoQ of the contract agreement. As per recommendations of committee, mandatory spare parts & tools amounting to USD 260,950 which were not required for new JHPS had been deleted and amount recovered thereof. Furthermore, committee recommended that deficient spare parts & tools valuing USD 0.103 million were required and be delivered as per contract provisions. This comprised of spare parts amounting to USD 57,657 & erection and maintenance tools valuing USD 45,759. Erection and maintenance tools valuing USD 45,759 had been delivered at site by the contractor evident from its site delivery certificate. With regard to delivery of deficient mandatory spare parts amounting to USD 57,657, it was apprised that project authorities had directed the contractor to deliver the same being part of their contractual obligations as evident from letters. Besides, ninety-five percent (95%) of amount paid to the contractor for these undelivered spare parts had also been recovered from the contractor as evident from SE/PD JHPS letter No. SE/PD/Rehab:/JHS-103/3552-55 dated December 23, 2015. Therefore, no question of loss arises here. In view of foregoing, it was evident that project authorities were continuously pursuing and vigorously striving for early resolution of delivery of deficient mandatory spare parts issue. Audit would be informed when these spare parts were delivered at site.

The DAC in its meeting held on December 24, 2018 directed that an inquiry be conducted by the Engineering Advisor (Power) and D.G. (S&FM) of FFC as to why performance guarantee was not forfeited at the time of work and a fact-finding report on the issue be submitted to MoWR and Audit within 30 days.

Audit Recommendations

Audit recommends that the management needs to conduct a fact-finding report on the issue and submit to Audit to proceed further in the matter.

4.6 Overall Assessment

Overall assessment of RJHPS with reference to three "Es" i.e. Economy, Efficiency and Effectiveness is as follows:

Economy

The project could not be termed to have followed the principle of economy as cost of Rs.2,087 million was incurred against the approved cost of PC-I at Rs.1,037.54 million. Cost analysis of the bidder was not made at the time of award of contract. The estimated cost of rehabilitation work at the time of submission of original PC-I was Rs.628.910 million while the lowest responsive bid was received for Rs.2,088 million resulting in higher revised cost of project. Later on, PC-I was revised at the cost of Rs.3,753.57 million.

Efficiency

The project could not be termed as well designed and well planned. Detailed site investigations and detailed engineering design of the project were not completed at the time of approval of original PC-I and award of contract. Even some essential works were included in the execution of project like replacement of penstock at unit No.3 & 4. Consequently, PC-I was revised causing delay in completion of the project and increasing its cost from Rs.1,037.40 million to Rs.3,753.57 million. This state of affair reflected gross negligence on the part of project management who did not foresee these issues at the initial stage of the project.

Effectiveness

The target to achieve the generation output was fixed as 122 GWh. Against this provision energy output was not achieved during the year 2014-15. However, it was achieved during the year 2015-16. But incidents of frequent forced outages were also observed which caused generation loss of Rs.213.13 million. This state of affair reflected that Power House was not functioning properly as evident from frequent forced outages during the year 2015-16.

5. CONCLUSION

Audit concluded that it was fundamentally crucial for RJHPS to be completed successfully within time, budget and expected output. However, it faced significant problems as the management could not administer and closely monitor project progress. Issues of Financial, technical and contract mismanagement were observed throughout the project cycle. As a result, envisaged benefits as per PC-I could not be achieved well in time and the project was considerably delayed. Hydel power projects are a main contributor to economic and social development of Pakistan. Poor project performance affected significantly the economic development.

ACKNOWLEDGEMENT

We wish to express our appreciation to the management and staff of the project for RJHPS for the assistance and cooperation extended to us during this assignment.

PROJECT DIGEST

Name of the Project

Rehabilitation of Jabban Hydroelectric Power Station

Location of the Project

JHPS is located in District Malakand, Khyber Pakhtunkhwa province of Pakistan, at a distance of 45 km from the city of Mardan and 7 km upstream of 20 MW Dargai Hydroelectric Power Station. The project area can easily be accessed through a metaled road linked with Mardan-Malakand highway at Dargai. The condition of the road is very good. The area is also connected through Islamabad-Peshawar motorway passing close to Mardan.

Type of Project

To rehabilitate the existing JHPS to maintain the utilization of cheap hydropower potential at Jabban and to provide more reliable and consistent power to the national grid for at least another 50 years.

To enhance the capacity of Power Station from 19.6 MW to 22.0 MW by using more efficient turbines and other electromechanical equipment.

RJHPS is energy generation project in order to meet ever-increasing demand of the cheap electricity.

Project Stage

The project has been completed on 30.06.2016 with its 100 % physical status. However, overall expenditure of Rs.4,000.76 million was incurred on the completion of the Project.

Authorities Responsible for

1.	Sponsoring	Ministry of Water and Power, Government of Pakistan.
2.	Execution	Water and Power Development Authority (WAPDA)
3.	Operation and Maintenance, Lahore	General Manager (Hydel-Dev) WAPDA
4.	Concerned Ministry	Ministry of Water and Power
5.	Approval of PC-I by ECNEC	Original 19.09.2007 Revised 09.12.2010

6. Donor Agency: Agence Francaise De Developpement (AFD)
7. Consultant M/S NESPAK
8. contractor M/s Habib Rafique Ltd & CCPG
9. Period of Award of project (Phase-II) 01.03.2008 to 31.08.2008(six month)
10. Date of order to commence the work 18.02.2010
11. Date of commencement of work 19.02.2010

<u>Completion Schedule</u>

Equipment	Time (Month)	Contractual Date	Actual Commissioning Date	ToC issued w.e.f
132 KV Switchyard	16	17.06.2011	29.11.2012	09.03.2014
Unit No. 4	19.50	05.10.2011	29.07.2013	04.03.2014
Unit No. 3	20.00	20.10.2011	27.10.2013	11.03.2014
Unit No. 2	20.50	03.11.2011	08.11.2013	23.01.2014
Unit No. 1	21.00	18.11.2011	04.12.2013	09.03.2014
Project Completion (Overall)	21.00	18.11.2011	-	11.03.2014

CHRONOLOGY OF PROJECT HISTROY

1.	Date of signing of consultancy agreement	31.08.2007
2.	Date of approval of PC-I by ECNEC	10.09.2007
3.	Preparation of design & bidding document and Pre-qualification of constructor assigned to Consultant (Phase –I 06 months)	01.09.2007 to 28.02.2008
4.	Invitation of bids, evaluation &award of contract assigned to Consultant (Phase-II 06 months)	01.03.2008 to 31.08.2008
5.	Date of opening of tender of the main contract of power plant	December, 2008
6.	Date of issuance of letter of acceptance	30.05.2009
7.	Date of signing of the contract agreement	15.10.2009
8.	Date of order to commence the work	18.02.2010
9.	Date of actual commencement of the project	19.02.2010
10.	Date of completion of the project as per original PC-I	10.09.2010
11.	Date of completion of the project as per revised PC-I	09.12.2010
12.	Date of approval of revised PC-I	01.01.2011
13.	Date of completion as per contract (unit No. 4)	24.08.2011
14.	Date of completion as per contract (unit No. 3)	08.09.2011
15.	Date of completion as per contract (unit No. 2)	23.09.2011
16.	Date of completion as per contract (unit No. 1)	08.10.2011
17.	Date of actual completion (unit No. 2)	23.01.2014
18.	Date of actual completion (unit No. 4)	04.03.2014
19.	Date of actual completion (unit No. 1)	09.03.2014
20.	Date of actual completion 132 KV sub-station	09.03.2014
21.	Date of actual completion of the project (overall)	11.03.2014
22.	Date of actual completion (unit No. 3)	11.03.2014
23.	Date of completion as per contract 132 KV Substation	17.06.2011
24.	Date of expiry of DLP	11.03.2015

Annex-A

(Audit Scope and Methodology)

Statement regarding PSDP Allocation & funds released/utilized

Year	Financial phasing as per revised PC-I		PSDP allocation	Release of funds	Actual Utilization
	Local Currency	Foreign Currency			
2007-08	19.920	-	48.000	19.388	19.388
2008-09	23.016	-	275.000	21.654	21.654
2009-10	553.754	320.443	720.000	420.491	420.491
2010-11	913.400	1,007.476	480.790	93.445	93.445
2011-12	600.99	302.386	577.000	333.097	333.097
2012-13	-	-	1,161.000	1,640.778	1,640.778
2013-14	-	-	884.000	1,104.130	1,104.130
2014-15	-	-	12.524	295.299	295.299
2015-16	-	-	41.233	41.233	41.233
2016-17	-	-	109.168	31.246	31.246
Total	**2,111.08**	**1,630.305**	**4,308.715**	**4,000.761**	**4,000.761**

Source of information:

Original PC-I

- Revised PC-I
- Progress reports of the project
- Project accounting reports/record
- PSDP allocation
- Budget allocation

Annex-B

Detail of liquidated damages charges

Project component	Schedule completion	Extension granted	Completion date as per extension granted by the Authority	Actual completion ToC date	Delay
Turbine unit No. 1	18.11.2011	784 days	29.11.2013	09.03.2014	101
Turbine unit No. 2	03.11.2011	784 days	14.11.2013	23.01.2014	71
Turbine unit No. 3	18.10.2011	784 days	30.10.2013	11.03.2014	133
Turbine unit No. 4	03.10.2011	784 days	15.10.2013	04.03.2014	141
132 KV substation	18.06.2011	942 days	04.12.2013	09.03.2014	96

Annex-C

Detail of unjustified payment

(Rs. in million)

BoQ Item	Description	Unit	BoQ Qty	Rate	Qty verified	Amount
1	**Civil Works:** Dismantling of existing foundations and associated civil works and shifting of dismantled material/ debris to employers designated stores/places as per specifications and as directed by the Engineer	LoT	1	1,061,690	1	1.061
2	**Earth work:**					
2.1	Clearing & Grubbing of complete site area as per drawing & specifications and as directed by the Engineer.	Lot	1	213,428	1	0.213
2.2	Filling, levelling& compaction the site are with fill material to raise/level the area as per drawings & specifications and as directed by the Engineer.	Lot	1	6,633,003	1	6.633
3	**132 KV Switchyard equipment & gantry foundation 210 KG/CM2:**					
3.1	3 Phase Transformer foundations					
i	Supply and installation of Rails	Lot	2	3,927,82	2	7.855
ii	Gravels and grating over entire foundation	Lot	2	104,413	2	0.208
iii	Oil resistant paint	Lot	2	98,982	2	0.197
4	**Miscellaneous metal works:** Miscellaneous metal works included but not limited to railing, rungs, ladder, grating and fence complete in all respect	Lot	1	20,846,592	1	20.846
5	**Water Supply sanitation and plumbing work:**					
i	Water supply system for the new power house building control rooks etc. complete an all respect including but not limit to water tank, water supply lines etc. As advised by the client and recommended	Lot	1	8,730,392	0.5	8.293

	by the Engineer.					
ii	**Sanitation system:** Complete sanitation system for disposal of water as advised by the client and approved by the Engineer.	Lot	1	8,825,715	1	8.825
iii	**Plumbing works:** Complete plumbing works for the power house building as advised by the client and approved by the Engineer.	Lot	1	12,305,715	1	12.305
Total						**66.436**

Annex-D

Detail of payment made to Contractor on account of dismantling of concrete floor

(Rs. in million)

BoQ Item	Description	Unit	BoQ Qty.	Rate	Qty. verified	Excess Qty.	Amount
1. a) b)	**Dismantling:** Power House Building Dismantling of concrete/ material floor of power house building up to NSL	CM	4,950	3,311	6,447	1,497	4.956
2.	**Reinforcement:** Provide & fixing of 60 KSI reinforcing steel including cutting placing and binding complete in all respect and or as per drawings / specifications including sub structure super structure, thrust blocks & supports of penstocks forebay / intake etc	Ton	305	213,428	591	286	61.040
Total							**65.996**

Annex-E

Statement showing the detail of events of delay and its financial impact

Sr.No.	Event of delay	Delay time	Fixation of Responsibility of delay by the Consultant
1.	Late handing over of site for 132 KV sub-station	52 days	The delay was fixed on the employer
2.	Delay in opening of L/C for equipment	460 days	The delay was fixed on the employer
3.	Secured metering system (Relocation of CTs for metering system) as additional work included by the employer at later stage.	440 days	The delay was fixed on the employer
4.	Delay in handing over the site of penstock and power house	21 days	The delay was fixed on the employer
Total		**973 days**	

Financial Impact of 973 days

(Rs. in million)

Sr. No.	Detail	Amount
1.	Generation loss on the basis of 122 MKWH on annual basis (122x2.66) =(324.52 MKWH x 6.843)	2,220.69
2.	Escalation paid to the Contractor on account of steel and cement	171.00
3.	Interest During Construction (IDC)	471.30
4.	Admin & overhead expenditure	68.290
Total		**2,931.28**

Annex-F

Statement showing the detail of escalation on skilled Labour

1.	Total escalation	=	171.07 million
2.	Percentage of co-efficient on escalation of Skilled labour	=	26%
3.	Share of skilled labour price escalation	=	171.07 x 26/65
	Total	**=**	**68.43 million**

Annex-G

Detail of price escalation on account of steel and cement

1.	Total payment of escalation paid to the Contractor	=	171.07 million
2.	Share of steel & cement	=	9%
3.	Share of steel & cement price escalation	=	171.07 x 9/65
		=	**Rs.23.69 million**

Annex-H

Statement showing the detail of 5% retention money paid to the Contractor M/s HRL & CCPG JV

(Rs. in million)

Sr. No.	Invoice No.	Amount	Submission/ invoice date	Amount verified by Engineer	Amount paid with date.
1.	Invoice No. 1 DLP for unit No. 4 (Payment through Local LC from Bank Al-falah)	28.385	17.03.2014	28.385	28.385 28.03.2014
2.	Invoice No. 2 DLP for unit No. 3 (Payment through Local LC from Bank Al-falah)	16.030	17.03.2014	16.030	16.030 28.03.2014
3.	Invoice No. 3 DLP for unit No. 2 (Payment through Local LC from Bank Al-falah	40.485	17.03.2014	9.838	9.838 28.03.2014
4.	Invoice No. 4 DLP for unit No. 1 (Payment through Local LC from Bank Al-falah	26.217	17.03.2014	26.217	26.217 28.03.2014
5.	Invoice No. 5 DLP for substation (Payment through Local LC from Bank Al-falah	20.576	17.03.2014	20.571	20.571 28.03.2014
Total				**101.041**	

Annex-I

Statement of Brief description of additional scope of work

1. Replacement of existing penstock 3 & 4 instead of retaining the old ones.
2. Dismantling of existing 05 Nos. trash rack and allied concrete and provision of new trash rack instead of retaining old trash racks and concrete.
3. Dismantling of block wall at start of penstock in Forebay and re-construction complete instead of partial repairs.
4. Dismantling and reconstruction of Forebay floor instead of repair.
5. Dismantling of existing thrush block for penstock 1 to 5 and reconstruction for four new penstocks instead of modification of existing thrust block of unit No. 1 & 3 only.
6. Dismantling of existing penstock 1,2,3,4 & 5 supporting system/bocks including their foundation and reconstruction of four new penstocks complete in all respect instead of modification to existing penstock 1, 2 & 3 pedestals with new anchor blocks at the existing location.

Annex-J

Statement showing the detail of loss due to keeping the units on stand by

Units	2014-15	2015-16	2016-17
Unit 1	2,018.46	2,597.08	1,510.53
Unit 2	1,397.14	1,002.48	207.47
Unit 3	1,897.12	1,172.45	2,181.52
Unit 4	1,896.21	1,498.54	757.04
Total No. of hours	7,208.93	6,270.55	4,656.56
No. of days	75	65	49
Total units GWh	39.600	34.320	25.872
Rate per KWh	39.600 x 6.843	34.320 x 6.843	25.872 x 6.843
Total Loss (Rs. in million)	**270.982**	**234.851**	**177.042**
Total (Rs. in million)	**(270.982+234.851+177.042)**		**= 682.875**

Annex-K

Statement showing the detail of loss on account of dollar fluctuation

Total payment made in Foreign currency component=19.40 million US$

i)	Rate of dollar at the time of approval of PC-I	=Rs.60/-
ii)	Rate of dollar at the time of revised PC-I	=Rs.85
iii)	Difference (85-60)	=Rs.25
iv)	Loss due to dollar fluctuation (19.40*25)	**=485 million**