

# Environmental Monitoring Report

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Bi-annual Report  
Covering the period of July – December 2016

## PAK: Jamshoro Power Generation Project

Project Number: 47094-001  
ADB Loan/Grant Number: L3090/3091/3092-PAK  
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Prepared by the Jamshoro Power Company Limited (JPCL), with the assistance of Mott MacDonald Limited (United Kingdom) in joint venture with MM Pakistan (Pvt) Ltd (Pakistan), for the Islamic Republic of Pakistan and the Asian Development Bank (ADB).

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# 1 Introduction

The Government of Pakistan aims to increase the share of coal-based generation from almost none in 2016 to 15% over the next few years. In support of this initiative Jamshoro Power Company Limited (JPCL) and Genco Holding Company (GENCO), supported by the Asian Development Bank (ADB), is planning a brownfield extension of the Jamshoro Power Station in order to improve the total plant efficiency and increase the power output from the Plant. The project is known as the Jamshoro Power Generation Project (JPGP).

The project site is approximately 20km northwest of Hyderabad, and about 150km northeast of Karachi in the Sindh Province of Pakistan. The Indus River is about 3.5km east of the power plant site. Currently there are four fossil fuel-fired electricity generating units installed and operating at the site (Unit 1 is oil fired and Units 2 – 4 have dual-fuel capability (oil/gas)).

JPGP is proposed to initially comprise of 1x660MW (net) supercritical power plant with facilities to expand to 2x660MW plants. The project aims to decrease the existing power shortfall in Pakistan and address environmental concerns from the existing oil-fired power units. The new boiler(s) will be designed to utilise imported sub-bituminous coal blended at 80/20 with local lignite as its fuel.

Currently (end of December 2016) JPGP is in the early implementation stage the following activities underway:

- (i) Proposals for construction and operation of the 2x660MW (gross) supercritical power plant have been received and are under part-1 review. It is currently envisaged that all parts of the review of proposals will be complete in the second or third quarter of 2017.
- (ii) The following tender packages associated with rehabilitation and remediation of some aspects of the existing oil fired plant have been issued, proposals received and contracts awarded:
  - a. Lot 1 – rehabilitation of evaporation ponds
  - b. Lot 2 – rehabilitation of cooling tower/blow-down water drainage channel
  - c. Lot 3 – residential colony municipal waste facility

Work is expected to start on these packages in quarter 1 of 2017

- (iii) The following tender packages associated with rehabilitation and remediation of some aspects of the existing oil fired plant have been issued but no satisfactory bids have been received and they will be retendered:
  - a. Lot 4 – hazardous waste disposal facility and hazardous waste collection and disposal
  - b. Lot 5 - residential colony municipal wastewater treatment plant

It is expected that these lots will be retendered in quarter 1 of 2017

- (iv) Tender packages for Lot 6 – remediation of oil contaminated soils – are under preparation following detailed tender discussion and are expected to be issued in quarter 1 of 2017

This report is the fourth semi-annual environmental monitoring report for the project covering the period from July 2016 to December 2016. Subsequent semi-annual reports will be reconfigured as necessary to reflect activities and available information as the project develops.

## 2 Environmental monitoring and management

### 2.1 Environmental monitoring

At the time of compiling this report (January 2017) no construction, rehabilitation or remediation activities had commenced on site and none is envisaged to commence until Q1 2017. As a result an environmental monitoring programme has not been developed. The monitoring programme will be developed in conjunction with the successful bidder(s) and approved by the project implementation consultant (PIC) (Mott MacDonald) and JPCL project management unit (PMU).

As part of the feasibility study for the project and as required by the ADB an environmental audit was undertaken of the existing plant. The audit was included as part of the environmental and social impact assessment (ESIA) for the 2x660MW supercritical power plant (Environmental Impact Assessment; Jamshoro Power Generation Project; Hagler Bailly Pakistan, October 29 2013 (the ESIA report)). Section 6 of the ESIA report (Issues Related to Existing Plant and Corrective Actions) identified several items related to the existing plant that require remediation or rehabilitation.

The items that were identified are subject to a loan condition applied by ADB that requires the identified remediation works to have a signed contract in place prior to commencement of works on the site associated with the new facility (660MW supercritical power plant).

### 2.2 Environmental management

The ESIA study and subsequent ESIA report for the proposed 2x660MW power plant were developed for the Asian Development Bank and include reference to Pakistan national standards and regulatory requirements and international guidelines including ADBs Safeguard Policy Statement (2009) and the World Bank/International Finance Corporation Environment, Health and Safety Guidelines for Thermal Power Plants (2008) (IFC EHS guidelines). International treaties that Pakistan is a signatory to are also considered.

The EIA report correctly identifies that both Pakistan national environmental quality standards (NEQS) and IFC EHS guidelines will have to be complied with. In operation this means that the most stringent of the NEQA and IFC EHS Guidelines environmental limits/standards/guidelines will have to be complied with (with the exception of ambient air quality standards where national standards, where they exist, take precedence over IFC EHS guidelines).

A gap analysis with respect to draft bidding documents and technical specifications was prepared by the PIC and a number of items were identified that were included in the technical requirements for the 2x660MW supercritical power plant when the tender documents were issued.

### 3 Actions during the next reporting period

During the forthcoming period (January to June 2017) the following actions are anticipated:

- Second-round bid documents will be received from bidders for the 2x660MW power plant construction and operation packages
- Review of the 2x660MW construction and operation second-round tenders will commence
- Execution of lots 1, 2 and 3 for the remediation/rehabilitation packages will commence on site
- Lots 4, 5 and 6 for the remediation/rehabilitation packages will be issued for interested bidders to submit proposals

PIC environmental specialists will:

- Respond to queries relating to environmental aspects of the issued bid documents
- Review received bids for technical packages for compliance with environmental requirements
- Review received bids for remediation/rehabilitation packages
- Assist with selection of the preferred bidders
- As appropriate, work with preferred bidders/awarded bidders to establish environmental management and monitoring plans, programmes and reporting.

The next semi-annual environmental monitoring report will cover the period from January to June 2017 and will be made available by the end of July 2017.