

Environmental and Social Data Sheet

Overview

Project Name:	<i>REHABILITATION WARSAK HYDROELECTRIC PROJECT</i>
Project Number:	<i>20130579</i>
Country:	<i>PAKISTAN</i>
Project Description:	The project comprises the modernisation and upgrade of a 50-year old hydropower plant, including a comprehensive rehabilitation programme designed to restore the plant to its original capacity of 243 MW and to achieve an additional 40 years of safe, reliable and cost-effective energy production.
EIA required:	no
Project included in Carbon Footprint Exercise ¹ :	yes

Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

The project would be classified as an Annex II project under the EIA Directive if located within the EU. In this case, an initial environmental examination (IEE) was prepared in August 2012 in accordance with the applicable national legislation. No formal EIA was required and the IEE proposed measures to adequately mitigate the social and environmental impacts, which will be incorporated during implementation of the project. The environmental risks associated with the project are mainly related to site construction works and particular attention will be exercised in relation to the possible presence of PCBs (polychlorinated biphenyls) in the obsolete transformers which date from the 1960s. Social risks are primarily related to the health and safety, and security, of personnel hired to work on the construction sites, and to the general conflict and governance situation in the area.

The project is proposed for co-financing under the Mutual Reliance Initiative agreed between the EIB, AFD and KfW for operations outside the EU. AFD, as Lead Financier, will be responsible for the ongoing environmental and social due diligence of the project. An environmental and social management plan (ESMP) will be required to be in place prior to the start of construction that ensures that the project is implemented in line with the Bank's environmental and social standards and practices, including adherence to the relevant conventions of the International Labour Organisation and international security and human rights standards and practices. With the appropriate mitigation measures in place, the project is considered to be acceptable for Bank financing from an environmental and social perspective.

Environmental and Social Assessment

Environmental Assessment

The project involves the rehabilitation of an existing hydroelectric power station and presents only minor social and environmental risks, predominantly in relation to the site works. The main environmental risks and mitigating measures are as follows:

- Temporary risks linked to site works, including traffic hazards/nuisance, liquid and solid effluent production, noise and dust. Mitigating measures will be included in the technical and administrative specifications in the tender documents for the rehabilitation of both civil infrastructure and mechanical/electrical equipment. Procedures to ensure the correct dismantling of equipment to be replaced will be included in the tender documents.
- Particular care will be exercised in relation to the possible presence of PCBs (polychlorinated biphenyls) in the 1960's-era transformers. If the presence of this persistent organic pollutant

¹ Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings.

(POP) is confirmed by chemical analysis, then antipollution measures will be required to be undertaken to European standards.

- The disposal of waste will be monitored, including estimated volumes, identification of safe disposal sites and possible re-use by the local population.

Operationally-induced environmental risks include the potential spillage of hazardous waste (e.g. oil) and the downstream impact of any sudden increases in flow and sediment loads due to flushing processes applied to manage the accumulation of sediment in the reservoir and in front of the intake structure. The downstream impact of releasing large amounts of water from the reservoir during flushing operations will be required to be addressed in the sediment management plan. The plan will be required to be submitted to the Lead Financier for approval prior to installation of the new sediment removal system.

The project includes two cross-cutting actions which aim to provide support in specific activities that are part of the promoter's climate change adaptation activities:

- Flood management: this will consist mainly of data acquisition (through the installation of gauging stations) and data management (to be coordinated with research institutes and national hydrological centres as well as with local authorities in case of flood risk) and a specific analysis of the vulnerability of downstream zones.
- Sedimentation management: this will include: i) an analysis of current practices; ii) preparation of recommendations and an action plan; iii) training and iv) the implementation of a pilot project.

EIB Carbon Footprint Exercise

In the absence of the rehabilitation works included in the project, the power station would need to be closed down within 3 to 5 years. On the assumption that the equivalent amount of electricity (1 114 GWh per year) would be produced according to a mixture of the current Pakistani fossil fuel-fired energy mix (whose emission factor is estimated at 713 g of CO₂ equivalent per kWh) and the build margin consisting of other hydropower, light and heavy fuel oil power plants (whose emission factor is estimated at 153 g of CO₂ equivalent per kWh), then the project would save the equivalent of 335 000 tonnes of CO₂e per year. For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be allocated pro rata according to the EIB lending amount signed in that year, as a proportion of project cost.

Social Assessment

The main social risks are related to working conditions on the building sites and security concerns, both for the general public and for site personnel. Working conditions, which will be outlined in the tender documents, will be required to conform to the conventions of the International Labour Organisation (ILO) and will be monitored under the ESMP. Pakistan has ratified 32 ILO conventions and it is legitimate to insist that these be applied. The security personnel at the site will be required to comply with the relevant international security and human rights principles and standards.

Prior to finalisation of the ESMP, additional information will be sought on the possible impact of the project on irrigation and drinking water sources and mitigation measures integrated, as needed. Flood warning arrangements will be reviewed as part of the flood management component. The existing flood warning scheme is based on the supply of information to the authorities in Peshawar which then transfer the information to local police stations for further distribution amongst the population.

At a national level the project will have a positive effect on households, in that it will contribute to improving access to electricity and reducing power cuts. The exact numbers affected cannot be quantified; however, taking into account current rates of access, the injection of 1 144 GWh (estimated annual production) into the national grid (equal to 1.2% of total production) represents the electricity consumption of around 2 million people. At a local level the project will create temporary employment on site during the project works and will maintain existing employment in operation and maintenance of the hydropower plant.

Public Consultation and Stakeholder Engagement

No formal public consultation procedures were required under the IEE process carried out for the rehabilitation project. Given the nature and scale of refurbishing works and the security situation in the project area, community consultations were limited to the nearby human settlements and to the Warsak Colony. No specific concerns or objections against the rehabilitation project were raised. Those attending expressed their satisfaction with the forthcoming rehabilitation/refurbishing of the Warsak hydropower plant and an understanding of its importance for the further stable operation of the plant.

The project includes a community development initiative aimed at raising local acceptance of the project and mitigating conflict and security issues. This component is planned to be implemented by NGOs active in the Warsak region and will include community consultation, needs assessment and selection of specific projects (e.g. in water, health, sanitation, etc.) to be supported in the framework of the project in order to ensure that the benefits are shared with the local population.

Other Environmental and Social Aspects

Implementation of the ESMP is the responsibility of the promoter, who will be required to report regularly to the financiers on compliance and major incidents relevant to the ESMP during implementation and for 5 years after the completion of the rehabilitation project. The promoter will establish a specific monitoring and evaluation mechanism to be applied during the construction, operation and maintenance of the project. This will include supervision by the promoter, as project manager, supported by an independent consultant. Additional supervision by a panel of experts may also be required when considered necessary.