Contents

3. Methodology for the ESIA Study

3.1 Description of the ESIA Process

The ESIA process in Kenya is dictated by the requirements of the EMCA and L.N. 101: Environment (Impact Assessment and Audit) Regulations, 2003. The Firm of Experts used the provisions of Part IV of the regulations for undertaking the ESIA Study of the proposed power plant project.

In undertaking the ESIA Study, the following steps were undertaken:

- The landlord of the project site M/s Kenya Power & Lighting Company Ltd. undertook an environmental project report (EPR) study in early January 2010 in order to seek an EIA License from the NEMA. The NEMA issued file reference number NEMA/PR/5/2/6972 for the project. On March 16th, 2010 the NEMA wrote to the landlord asking them to undertake a full ESIA Study of the proposed project by developing a terms of reference for the NEMA's approval.
- An application requesting for the approval of the terms of reference for the ESIA Study was submitted to the NEMA on February 17th, 2010. The NEMA acknowledged receipt of this application and granted an approval on February 26th, 2010. The NEMA is the lead agency in Kenya responsible for issuing an Environment Impact Assessment license for the project.
- Public/stakeholder consultations were held with the Proponent, provincial administration, residents living near the project site, local authority, etc. The objective of this was to provide an opportunity for the stakeholders to engage fully in the project and to raise issues that needed to be addressed in this ESIA Study. On the basis of this information and professional judgment of the Firm of Experts, various environmental baseline studies were undertaken.
- The development of this report which assessed the likelihood, extent and duration of impacts resulting from the proposed project. An environment management plan (EMP) has been developed for the adverse impacts associated with the project and is incorporated in this ESIA Study. The EMP provides guidelines for avoidance, minimization and mitigation of impacts during the construction, operational and decommissioning phases respectively of the project.

Subsequent to the above, it is envisaged that the following steps will be completed prior to the construction phase of the project:

- This ESIA Study will be submitted to the NEMA for consideration;
- A public review period of 30 days is allowed for stakeholders to comment on the ESIA Study. If there are no comments or comments are not received within 30 days from the date of publishing a gazette notice and newspaper advertisement, the NEMA can determine the ESIA Study and issue an EIA License to the Proponent;
- The Proponent officially appoints Mantrac for the engineering, procurement and construction (EPC) management of the project; and

- The Proponent to seek statutory approvals from other lead agencies whose requirements the Proponent needs to satisfy.

3.2 Timing of the EIA Process

The timing of the EIA process has been as follows:

- Project meetings between the Client and the Firm of Experts (October 2009 – to date);
- Desktop review of preliminary design information (February 2010);
- Notification for public participation including preparation of interview questionnaires and responses from the public (March 2010);
- Public open days held with various residents near the project site (March 12th, 2010);
- Administering of Stakeholder Interview Sheets by Sociologist (March 2010);
- Collation of comments from the public/stakeholder consultation meetings and updating of specialist studies (March 2010);
- Undertaking an environment impact assessment based on the findings of the specialist studies (April 2010); and
- Development of an ESIA Study report including an EMP (April – May 2010).

The anticipated timing of the remainder of the EIA phase is as follows:

- Submission of the ESIA Study report to the NEMA (May 2010);
- Permit the Proponent to place NEMA approved advertisements in the Kenya Gazette and a national daily for two consecutive weeks (May – June 2010); and
- ESIA Study approval by the NEMA following review of the EIA documentation by relevant lead agencies (July 2010).

3.3 Objectives and approach of the EIA Study

The specific objectives of the ESIA phase for the proposed project have been to:

- Define the proposed 80MW thermal power plant project;
- Complete specialist studies based on the issues raised by the stakeholders and the professional judgment of the Firm of Experts;
- Consider the likelihood, duration and magnitude of impacts identified by the specialists;
- Provide mitigation measures for the adverse environmental impacts and measures to enhance the benefits arising from the project; and
- Prepare an environment management plan for the construction, operation and decommissioning phases respectively of the project.

In undertaking this ESIA Study, the approach adopted has taken cognizance of the following:

- The regulatory requirements and need for authorization from the NEMA prior to commencing the project;
- The involvement of regulatory authorities as follows:
  - Invitations to and meetings with key authorities;
  - Notification of stakeholders during the consultation stage of the project; and
  - Submission of the ESIA Study to the NEMA for consideration.
- The need for a flexible and appropriate public involvement program; and
- The need for an assessment of environmental and social impacts and development of recommendations for management of impacts.

3.4 Public Participation Process

The public/stakeholder consultation process has been an integral part of this ESIA Study. It has been a continuous process involving not only the residents living in the vicinity of the project site but also those arms of Government directly or indirectly affected by the project. The Socio-economic Impact Assessment Report outlines the public participation process, timing, activities and involvement of the public and authorities for the project. A summary of the process is outlined below.

3.4.1 Public consultation approach and methodology

The geographic reach for the process was facilitated by holding a public open day meeting held on March 12th, 2010 at the project site to maximize access to project information and opportunity to comment. Comments from individuals were tallied as separate responses for written and verbal communications.

3.4.2 Public consultation activities

The public consultation activities for this ESIA Study are summarized as follows:

- Several project meetings were held between the Proponent, IFC, Provincial Administration, Mavoko Municipal Council, EPC Contractor and the Firm of Experts;
- A desktop review of available baseline information was done;
- Several one-on-one meetings were convened on various days to elicit information about the project and raise pertinent issues and concerns about the development;
- Further meetings can be arranged if required with relevant lead agencies and local authorities;

On acquiring approval from the NEMA to place advertisements in the Kenya Gazette and a national daily for two consecutive weeks, the ESIA Study will be available for viewing at various locations for public comments for 30 days.

3.5 Power plant location selection process

Site identification and selection for the proposed power plant was based on the following screening process:

- The KP&LC (landlord) advertised in local dailies in 2009 for the outright purchase of land approximately 4 hectares in size. This size of land is adequate for an 80MW thermal power plant;
- Using their internal site selection criteria, the KP&LC selected the proposed site (L.R. 17842/17843) situated between the Athi River Steel Plant and Stony Athi River and equates to approximately 4 hectares.

3.5.1 Final site location

Aspects which still need to be taken into account during final design of the power plant are the following:

- Comments arising from the ESIA Study report;
- Infrastructural requirements;
- Finalization of the land acquisition process (amalgamation of the two plots and acquiring the change of use); and
- Any additional requirements from the lead regulatory agencies.

3.6 Development of the ESIA Study Report

The development of the ESIA Study and EMP has involved the following components:

- Review of literature on the baseline environment and engineering design basis documents;
- Revision of the terms of reference for the specialists supplemented by feedback from the public consultation process;
- Undertaking the specialist studies given below on the basis of public/stakeholder consultation feedback and professional judgment of the Firm of Experts:
  - Noise risk assessment;
  - Air quality risk assessment;
  - Traffic impact assessment
  - Ecological impact assessment;
  - Socio-economic impact assessment;

  - Soils and geology;
  - Surface water analysis;
  - Hydrogeological impact assessment;
  - Archeological impact assessment;
  - Environmental risk assessment;
- Integration of the findings of the specialists to ensure that all major issues are covered;
- Summary of key findings from the specialist reports;
- Assessment and evaluation of the likely impacts;
- Development of environmental mitigation measures for the adverse impacts identified and an EMP;
- Preparation of a draft EIA Study report for the Proponent's review;
- Production and submission of a final EIA Study report to the NEMA for consideration; and
- Project meetings between the Proponent, design engineers and the Firm of Experts.