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17. Gaps in Knowledge and Uncertainties Encountered

17.1 Assumptions

The Client has provided the Firm of Experts with limited information regarding the project as it is still in the preliminary design stage. Subsequently the design information is still in the process of evolution and will get refined as it progresses.

The engineering design of the project is being undertaken by Wärtsilä Finland Oy. A geotechnical investigation was undertaken by the KP&LC after they procured the land on which the proposed project is to be constructed. Design features will be implemented to minimize the risks from external factors that could threaten the integrity of the proposed power plant. For example, the design will include measures to minimize the threat of damage to the power plant through accidental and malicious third party activity.

The public consultation process was effective in identifying the critical issues that needed to be addressed through specialist investigations. Specialist input has thus been appropriately scoped to investigate the critical issues.

Due to the interrelated nature of biophysical, social and economic issues, it is assumed that individual specialists collaborated to discuss shared issues and impacts in order to establish complementary ways of avoiding and mitigating adverse environmental impacts.

The Proponent and their selected EPC contractor will implement the measures contained in the EMP. The EMP will be revised as necessary prior to construction and/or operational activities to include written plans, method statements and operational procedures.

A monitoring and evaluation system including auditing will be established and operationalized to track the implementation of the EMP. This will assist in ensuring that management measures are effective to avoid, minimize and mitigate impacts and that corrective action is being taken to address shortcomings and/or non-performances.

17.2 Limitations

As is well known, Kenya currently cannot satisfy the demand for electric power to its consumers.

Subsequently the project faces a limitation in the time taken by the lead agencies and the public to review the ESIA Study and provide objective feedback to the Proponent.

While the development is designed to significantly mitigate risk through compliance with the latest thermal power plant industry standards and will include international peer review, the possibility of incidents resulting in fires and explosions cannot be ruled out.

17.3 Uncertainties

Uncertainty arises from a variety of aspects in any development, and for this particular EIA Study has emanated from the following:

- The changes that may occur in baseline conditions, due to external factors over the lifetime of the project;
- Uncertainty related to Proponent's policy initiatives that might influence the assessment of future baseline and post-development conditions;
- Uncertainty in design information which should be dealt with by the definition of design parameters for the development by the EPC contractor and Proponent; and
- Uncertainty in relation to project planning and implementation as the detailed program and means of construction may be influenced by the choice of sub-contractors' and the detailed design of the development.

In the latter case, proposals for a Construction HSE Management Plan are made to deal with this source of uncertainty and the inherent problems of predicting construction effects. The Proponent has been unable to provide the Firm of Experts with adequate information on the construction phase technologies, procedures and processes; subsequently the Firm of Experts has relied on their past experience of such technologies, procedures and processes of similar types of projects.

The difficulties in compiling the information for this ESIA Study have related principally to the above sources of uncertainty. To obviate these difficulties the Firm of Experts has endeavored to use their past experience wherever possible and consultation with Proponents having similar projects to gauge and recommend appropriate mitigation measures in this ESIA Study.

17.4 Limitations of this Assessment

The key issues pertaining to the project including surface water, hydrogeology, ecology, air quality, noise quality and socio-economics have been assessed and presented in this ESIA Study. ESIA is an iterative process and the Proponent and its consultants will adopt a process of continual improvement in managing and/or mitigating adverse environmental impacts arising from the project. The EMP will be used as a basis of environmental management and will be improved and refined periodically.