



**NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY(NEMA)
THE ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT
ENVIRONMENTAL IMPACT ASSESSMENT LICENSE**

License No: **NEMA/EIA/PSL/2937**

Application Reference No: **NEMA/EIA/PSR/5444**

This is to certify that the Environmental Impact Assessment Project Report received from **United Nations Industrial and Development Organization (UNIDO).**

P.O. Box 41609-00100, Nairobi.

submitted to the National Environment Management Authority in accordance with the Environmental Impact Assessment & Audit Regulations, 2003 regarding the:

Proposed Hydro-Power Project.

whose objective is to carry on

Construction of a 10KW hydro-power project.

located at

Thiba Main Canal along Mwea Irrigation Scheme in Mwea West Constituency, Kirinyaga County.

has been reviewed and a license is hereby issued for the implementation of the project, subject to attached conditions.

Issue date: **02 March, 2016**

Signature

(seal)

Director-General
The National Environment
Management Authority.

P. T. O.



ISO 9001 : 2008 Certified

1.0 General Conditions

- 1.1 This project is for the construction of a 10kW hydropower project on the Thiba Main Canal along Mwea Irrigation Scheme in Mwea West Constituency in Kirinyaga County at an estimated cost of Kshs.60,800,000.
- 1.2 The license shall be valid for 24 months (time within which the project shall commence) from the date hereof.
- 1.3 The Director General shall be notified of any transfer, variation or surrender of this license.
- 1.4 Without prejudice to the other conditions of this license, the proponent shall implement and maintain an environmental management system, organizational structure and allocate resources that are sufficient to achieve compliance with the requirements and conditions of this license.
- 1.5 The Authority shall take appropriate action against the proponent in the event of breach of any of the conditions stated herein or any contravention to the Environmental Management and Coordination Act, 1999 and regulations therein.
- 1.6 This license shall not be taken as statutory defence against charges of environmental degradation or pollution in respect of any manner of degradation/pollution not specified herein.
- 1.7 The proponent shall ensure that records on conditions of licenses/approval and project monitoring and evaluation shall be kept on the project site for inspection by NEMA's Environmental Inspectors.
- 1.8 The proponent shall submit an Environmental Audit report in the first year of occupation/operations/commissioning to confirm the efficacy and adequacy of the Environmental Management Plan complete with an air dispersion model.
- 1.9 The proponent shall provide the final project accounts (final project costs) on completion of construction phase. This should be done prior to project commissioning/operation/occupation.
- 1.10 The proponent shall comply with NEMA's improvement orders throughout the project cycle.

2.0 Construction Conditions

- 2.1 The proponent shall obtain the requisite approvals from the County Government of Kirinyaga and all other relevant Authorities prior to commencement of works.
- 2.2 The proponent shall obtain a "Water Works Authorization" from the Water Resource Management Authority (WRMA) before commencement of works.
- 2.3 The proponent shall put up a project signboard at the project site as per the Ministry of Transport and Infrastructure standards showing the NEMA EIA license number among other details.
- 2.4 The proponent shall ensure that adequate and appropriate sanitary facilities are provided for the workers during construction phase and that proper decommissioning of the facilities is carried out once construction is complete.
- 2.5 The proponent shall ensure that the cooling systems fitted have zero ozone depleting potential as per the Environmental Management and Coordination (Controlled Substances) Regulations of 2007.
- 2.6 The proponent shall ensure proper relocation, compensation and restoration of livelihoods for any project affected persons (PAPs) and develop a consultative plan for emerging issues and grievances redress mechanisms (GRM) as shall be prescribed in the Resettlement Action Plan.
- 2.7 The proponent shall ensure that borrow sites are continually rehabilitated and decommissioned at the end of the project.

- 2.8 The proponent shall ensure that equity is upheld between upstream, midstream and downstream users as pertains to the provision of water for domestic use.
- 2.9 The proponent shall ensure that no child labour is used in the project and that HIV/AIDS awareness is continually done among the site workers and the immediate community to prevent the spread of the scourge.
- 2.10 The proponent shall ensure top level of the trench weir (diversion weir) is covered with bars to prevent entry of sediments into the trench.
- 2.11 The proponent shall maintain the water quality, hydrological flow, river regime and river ecosystem throughout the project cycle.
- 2.12 The proponent shall ensure prevention and control of malaria, water-borne diseases and other potential disease vectors through appropriate biological, chemical and physical measures
- 2.13 The proponent shall ensure that aquatic life downstream is not interfered with, the breeding grounds of aquatic birds and animals, fish spawning areas and fragile ecosystems are protected from the impacts of construction activities and the resulting wastes.
- 2.14 The proponent shall ensure that measures are in place to protect the reservoir and river channel from siltation, de-silting of the water reservoir should not affect other users downstream.
- 2.15 The proponent shall put in place a conservation programme for catchment areas and protection of river banks from erosion and bursting during high water levels.
- 2.16 The proponent shall ensure that the water demand for the construction and operational activities shall not exceed water usage by the local people, both upstream and downstream, as per the provisions of the Water Act of 2002.
- 2.17 The proponent shall make provisions for human and animal crossings and fencing on high risk areas along the proposed water channel.
- 2.18 The proponent shall ensure that all excavated material and debris is collected, re-used and where need be, disposed off as per the Environmental Management and Coordination (Waste Management) Regulations of 2006.
- 2.19 The proponent shall ensure strict adherence to the provisions of the Environmental Management and Coordination (Air Quality) Regulations of 2014.
- 2.20 The proponent shall ensure strict adherence to the provisions of Environmental Management and Coordination (Noise and Excessive Vibrations Pollution Control) Regulations of 2009.
- 2.21 The proponent shall ensure strict adherence to the Occupational Safety and Health Act (OSHA), 2007.
- 2.22 The proponent shall ensure that construction workers are provided with adequate personal protection equipment (PPE) as well as adequate training.
- 2.23 The proponent shall ensure that construction activities are undertaken during the day (and not at night) between 0800 hours and 1700 hours and that transportation of construction material to site are undertaken during off peak hours.

2.24 The proponent shall ensure that the development adheres to zoning specifications issued for development of such a project within the jurisdiction of the County Government of Kirinyaga, Energy Regulatory Commission, and the Water Resources Management Authority, with emphasis on approved land use for the area.

2.25 The proponent shall ensure strict adherence to the Environmental Management Plan developed throughout the project cycle.

3.0 Operational Conditions

3.1 The proponent shall ensure that the development adheres to zoning specifications issued for development of such a project within the jurisdiction of the County Government of Kirinyaga, Energy Regulatory Commission, and the Water Resources Management Authority, with emphasis on approved land use for the area.

3.2 The proponent shall put in place a flood monitoring system around the flood-prone areas of the project and institute appropriate flood control measures.

3.3 The proponent shall monitor the water quality of River Thiba around the project area and put in place measures to prevent water quality deterioration.

3.4 The proponent shall obtain an electric power generation license from the Energy Regulatory Commission as required under section 27 of the Energy Act of 2006.

3.5 The proponent shall obtain an electricity transmission license from the Energy Regulatory Commission in accordance with Section 27 of the Energy Act No. 12 of 2006.

3.6 The proponent shall ensure that all waste water is disposed as per the standards set out in the Environmental Management and Coordination (Water Quality) Regulations of 2006.

3.7 The proponent shall ensure that all equipment used are well maintained in accordance with the Environmental Management and Coordination (Noise and Excessive Vibration Pollution Control) Regulations of 2009.

3.8 The proponent shall ensure that all solid waste is handled in accordance with the Environmental Management and Coordination (Waste Management) Regulations of 2006.

3.9 The proponent shall ensure that all workers are well protected and trained as per the Occupational Safety and Health Act (OSHA) of 2007.

3.10 The proponent shall comply with the relevant principal laws, by-laws and guidelines issued for development of such a project within the jurisdiction of the County Government of Kirinyaga, National Construction Authority, Energy Regulatory Commission, Water Resources Management Authority, Ministry of Health, Directorate of Occupational Health and Safety Services, Kenya Forest Service, Ministry of Energy and Petroleum, Ministry of Agriculture, Livestock and Fisheries and other relevant Authorities.

3.11 The proponent shall ensure that environmental protection facilities or measures to prevent pollution and ecological deterioration such as flood control measures, electrical safety plan, water quality monitoring plan, installation of anti-vibrating devices, occupational health and safety plan, soil and water conservation mechanisms are designed, constructed and employed simultaneously with the proposed project.

4.0 Notification Conditions

- 4.1 The proponent shall notify the Energy Regulatory Commission in writing of any accident or incident causing loss of life, personal injury, explosion, oil spill, fire or any other accidents or incidents as per section 117 (1) of the Energy Act of 2006.
- 4.2 The proponent shall seek written approval from the Authority for any operational changes under this license.
- 4.3 The proponent shall ensure that the Authority is notified of any malfunction of any system within 12 hours on the NEMA hotline No. **020 6006041/0786101100** and mitigation measures put in place.
- 4.4 The proponent shall keep records of all pollution incidences and notify the Authority within 24 hours.
- 4.5 The proponent shall notify the Authority in writing of its intent to decommission the facility **three (3) months** in advance.

5.0 Decommissioning Conditions

- 5.1 The proponent shall ensure that a decommissioning plan is submitted to the Authority for approval at least three (3) months prior to decommissioning.
- 5.2 The proponent shall ensure that all pollutants and polluted material is contained and adequate mitigation measures provided during the phase.

The above conditions will ensure environmentally sustainable development and must be complied with.