



**nema**

mazingira vetu | ubaj wetu | wazihi wetu

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

License No: **NEMA/EIA/PSL/3798**

Application Reference No: **NEMA/EIA/SR/734**

This is to certify that the Environmental Impact Assessment Study Report received from

**Amu Power Company Limited**

**P. O. Box 61872-00200, Nairobi.**

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

**Proposed 1050MW Coal Fired Power Plant.**

whose objective is to carry on

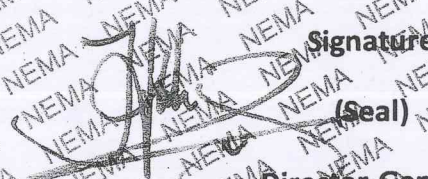
**Construction of a 1050MW coal fired power plant and associated facilities and amenities**

located at

**Kwasasi area, Hindi Division, Lamu County.**

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

Issue Date: **07 September, 2016**



Signature

(Seal)

**Director General  
The National Environment  
Management Authority.**

**P. T. O.**



ISO 9001 : 2008 Certified

Amu Power Company Limited  
P O Box 61872 - 00200

**NAIROBI**

**RE: CONDITIONS FOR LICENSING FOR THE ENVIRONMENTAL IMPACT ASSESSMENT (EIA) STUDY REPORT FOR THE PROPOSED 1050MW COAL FIRED POWER PLANT AT KWASASI, LAMU COUNTY**

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The National Environment Management Authority (NEMA) has reviewed the Environmental Impact Assessment (EIA) Study Report of the above-mentioned proposed project and in light of the provisions of Environmental Management and Coordination Act, 1999; the Authority has considered granting an EIA license for proposed project **subject to the following terms and conditions:**

**1.0 General Conditions**

- 1.1 This project is for the construction of a 1050 MW Coal Fired Power Plant at Kwasasi area, Hindi Division, Lamu County at an estimated cost of Kshs.123.5 Billion.
- 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.
- 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 Lamu and all other relevant Authorities prior to commencement of works.
- 2.2 The proponent shall ensure that the power plant and the coal storage facilities are located away from any settlements around the project area, and shall observe a reasonable buffer zone.

- 2.3 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.
- 2.4 The proponent shall ensure proper relocation, compensation and restoration of livelihoods for any project-affected persons and develop a consultative plan for emerging issues and grievance redress mechanism as shall be prescribed in the Resettlement Action Plan.
- 2.5 The proponent shall in consultation with the National Museums of Kenya, ensure that sites of cultural or archaeological importance are identified and preserved.
- 2.6 The proponent shall in consultation with the Kenya Forest Service, ensure that any endangered plant species and mangroves within the project site are appropriately protected.
- 2.7 The proponent shall put up a project signboard as per the Ministry of Transport and Infrastructure standards showing the NEMA EIA license number among other details.
- 2.8 The proponent shall obtain a construction permit from the Energy Regulatory Commission before commencement of construction works of the facility as required under section 90 of the Energy Act, No. 12 of 2006.
- 2.9 The proponent shall ensure that the designs of the equipment and site comply with Environmental Health and Safety Policy of the electric power sub-sector.
- 2.10 The proponent shall provide a secondary containment at fuel storage areas with a capacity of at least 110% of the largest fuel tank.
- 2.11 The proponent shall ensure that the tank farm and fuel offloading areas have impervious floor finish and monitoring mechanisms.
- 2.12 The proponent shall ensure that water tanks for fire-fighting units are maintained full of water and the fire-fighting strategy is known to all workers on site through regular fire drills.
- 2.13 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.
- 2.14 The proponent shall ensure strict adherence to the provisions of Environmental Management and Coordination (Noise and Excessive Vibrations Pollution Control) Regulations of 2009.
- 2.15 The proponent shall ensure that the cooling systems employed are suitable alternatives with zero ozone depleting potential as per Environmental Management and Coordination (Controlled Substances) Regulations, 2007.
- 2.16 The proponent shall ensure strict adherence to the Occupational Safety and Health Act (OSHA), 2007.
- 2.17 The proponent shall ensure that construction workers are provided with adequate personal protection equipment (PPE), sanitary facilities as well as adequate training.
- 2.18 The proponent shall ensure that construction activities are undertaken during the day (and not at night) between 08.00 hrs and 17.00 hrs; and that transportation of construction material to site are undertaken during weekdays (and not weekends) off peak hours.
- 2.19 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 Lamu with emphasis on approved land use for the area.

2.20 The proponent shall ensure that a continuous emission monitoring system is installed to monitor emissions from the plant.

2.21 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 carry out air quality analysis (to act as a baseline) before commencing operations of the plant.

3.2 The proponent shall obtain all necessary approvals from all the relevant Authorities and Agencies before commencing operations.

3.3 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.

3.4 The proponent shall ensure periodic sampling and testing of stack emissions to monitor particulate matter, Hydrogen Sulphide (H<sub>2</sub>S), NO<sub>x</sub>, CO, CO<sub>2</sub> and SO<sub>2</sub> and implement appropriate interventions.

3.5 The proponent shall ensure that the management of air emissions such as NO<sub>x</sub>, CO, CO<sub>2</sub>, SO<sub>2</sub>, Hydrogen Sulphide (H<sub>2</sub>S), Mercury (Hg) from non-condensable gases, Arsenic (As), Particulate Matter (PM<sub>10</sub>) and other forms of emissions is done in accordance with the World Bank (WB) and International Finance Corporation (IFC) guidelines.

3.6 The proponent shall install air pollution control measures for particulate matter and other pollutants, and ensure the coal storage areas maintain high standards of hygiene.

3.7 The proponent shall ensure measures are put in place to control and manage the fly ash and any fugitive dust arising from the project operational phase activities.

3.8 The proponent shall ensure that rain water harvesting facilities are provided to supplement surface and ground water to ensure sustainable use of cooling water requirements.

3.9 The proponent shall ensure that all drainage facilities are fitted with adequate functional oil water separators and silt traps.

3.10 The proponent shall ensure that appropriate and functional efficient air pollution control mechanisms are installed in the facility to control all air emissions including particulate matter and gaseous emissions.

3.11 The proponent shall ensure that fly-ash is appropriately covered and transported in suitable vehicles in compliance with the requirements of the Environmental Management and Coordination (Waste Management) Regulations of 2006

3.12 The proponent shall ensure that the noise from the plant meet the standards set out in the Environmental Management and Coordination (Noise and Excessive Vibration Pollution Control) Regulations of 2009.

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

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

3.15 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 Ministry of Energy and Petroleum, Ministry of Health, Directorate of Occupational Health and Safety Services, County Government of Lamu, Energy Regulatory Commission, Kenya Forest Service, National Museums of Kenya, Water Resources Management Authority, Ministry of Land, Housing and Urban Development, Ministry of Industrialization and Enterprise Development other relevant Authorities.

3.16 The proponent shall ensure that environmental protection facilities or measures to prevent pollution and ecological deterioration such as emergency response plans, traffic management plans, fly-ash management plan, dust control plan, noise abatement measures, water conservation and reuse plans, functional storm water drains, tree planting, landscaping, waste management, consultative plans and grievance redress mechanisms are designed, constructed and employed simultaneously with the proposed project.

#### **4.0 Notification Conditions**

4.1 The proponent shall notify Energy Regulatory Commission of any malfunction of any system within twelve (12) hours of it happening.

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/ 0786 101100** and mitigation measures put in place.

4.4 The proponent shall keep records of all pollution incidences and notify the Authority within 24 hours.

4.4 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.

3.15 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 Ministry of Energy and Petroleum, Ministry of Health, Directorate of Occupational Health and Safety Services, County Government of Lamu, Energy Regulatory Commission, Kenya Forest Service, National Museums of Kenya, Water Resources Management Authority, Ministry of Land, Housing and Urban Development, Ministry of Industrialization and Enterprise Development other relevant Authorities.

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