



MINISTRY OF ENERGY AND MINERAL DEVELOPMENT

NUCLEAR ENERGY DEPARTMENT

Nuclear Energy Development – Establishment

1. BACKGROUND

Uganda became a member of International Atomic Energy Agency (IAEA) in 1967. Since then, nuclear science and technology has played a significant role in improving the socio-economic wellbeing of humanity through improving human health, water resources management, supporting industry and research. In line with the above, the IAEA continues to provide support to Uganda in form of supply of specialized equipment and training of human resources in uranium exploration, nuclear power development, treatment and diagnosis of diseases, water resources management and agriculture. The cooperation of Uganda with IAEA is coordinated by the Nuclear Energy Department as the National Liaison Office under Ministry of Energy and Mineral Development.

Notably, the increase in Uganda's population and economic activities resulted into an increase in the need for nuclear technology services in diagnosis and treatment of diseases, cancer management, improving agricultural productivity, quality control in construction, animal disease surveillance and electricity generation, thus the Energy Policy, 2002 guided the establishment of a legal framework for the peaceful use of nuclear energy in Uganda. To this end, Government enacted the Atomic Energy Act, 2008.

Section 53 of the Atomic Energy Act, 2008 established the Nuclear Energy Unit (NEU) in Ministry of Energy and Mineral Development to promote and develop nuclear energy for power generation and other peaceful purposes. As of September 2019, the Nuclear Energy Unit was transformed into the Nuclear Energy Department.

The Vision 2040 indicates that Uganda will need 3500 MW by 2025 and 41,738 MW by 2040. Pre-feasibility studies for launching the first 2000 MW nuclear power plant in Uganda were conducted and these studies confirmed that the generation potential from hydroelectric power, if fully developed, cannot meet the Uganda's future energy needs. Therefore, to meet the energy deficit, Government needs to expedite the integration of Nuclear Energy into the future electricity generation mix. Potential sites for nuclear energy development have been identified Buyende, Lamwo, Nakasongola, Mubende and Kiruhura Districts.

2. MANDATE OF THE DEPARTMENT

The mandate of the Nuclear Energy Department is to promote, develop and manage nuclear fuel resources, nuclear power infrastructure and programmes on applications of nuclear science and technology in health, industry and research.

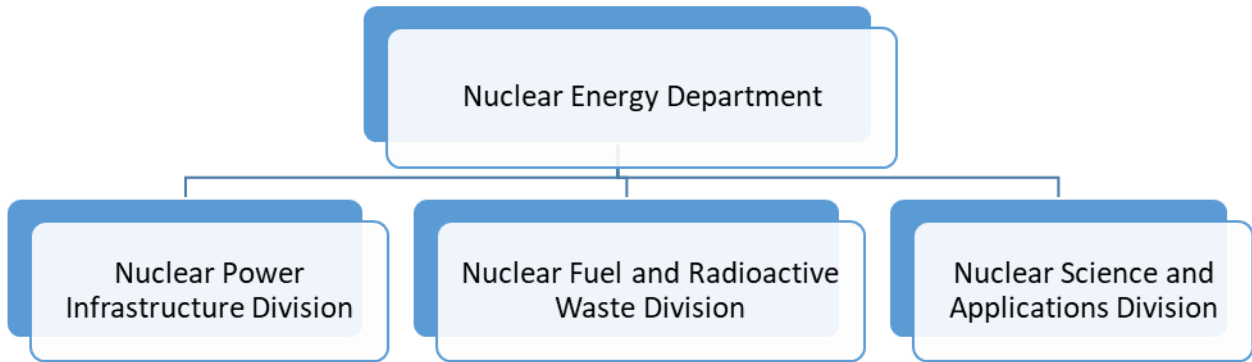
3. FUNCTIONS

The functions of the Nuclear Energy Department are:-

- i) Formulate, review and implement policies, and laws on nuclear power generation, nuclear fuel resources, and other peaceful purposes;
- ii) Develop nuclear infrastructure for power generation and other peaceful purposes;
- iii) Monitor the processing and development of uranium and other nuclear fuel resources;
- iv) Liaise with prospective investors in the nuclear industry with a view of promoting investment in the industry;
- v) Promote national participation in the use of nuclear energy for power generation and other peaceful purposes;
- vi) Coordinate the Technical Cooperation Programme between the Government of Uganda and International Atomic Energy Agency (IAEA) including other development partners;
- vii) Promote the management of radioactive waste from all applications of nuclear technology and support the decommissioning of nuclear installations;
- viii) Conduct and support research on the use of nuclear energy for power generation and other peaceful purposes; and
- ix) Create awareness on the use of nuclear energy in power generation and other peaceful purpose.

4. ORGANIZATION STRUCTURE

The Nuclear Energy Department has three Divisions: - Nuclear Power Infrastructure Division, Nuclear Fuel and Radioactive Waste Division, and Nuclear



4.1 Nuclear Power Infrastructure Division

4.1.1 Mandate

To promote and develop nuclear power infrastructure in Uganda

4.1.2 Functions

- i) Promote and coordinate the planning, construction and operation of nuclear power plants and the support infrastructure;
- ii) Promote national participation in the nuclear power infrastructure development;
- iii) Coordinate collaboration with the relevant national, regional and international institutions in nuclear power infrastructure.
- iv) Conduct research on nuclear power infrastructure development in line with international best practices; and
- v) Create awareness on the use of nuclear energy for the power generation.

4.2 Nuclear Fuel and Radioactive Waste Division

4.2.1 Mandate

To promote and manage programmes for sustainable nuclear fuel supply, decommissioning of nuclear facilities and radioactive waste management.

4.2.2 Functions

- i) Monitor the exploration, evaluation and development of uranium and other nuclear fuel resources;
- ii) Promote the establishment of national radioactive waste management facilities in accordance with existing regulatory guidelines;
- iii) Monitor the prices of uranium and other nuclear fuel materials on the international market;

- iv) Conduct research on uranium processing, nuclear fuel performance, decommissioning and radioactive waste management;
- v) Coordinate collaborations with the relevant national, regional and international institutions on nuclear fuel supply, decommissioning of nuclear facilities and radioactive waste management; and
- vi) To create awareness on nuclear fuel development, decommissioning and safe management of radioactive waste.

4.3 Nuclear Science and Applications Division

4.3.1 Mandate

To promote and develop nuclear science and applications in health, industry and research

4.3.2 Functions

- i) Coordinate the development of infrastructure for nuclear research, production of radioisotopes and radiopharmaceuticals;
- ii) Coordinate collaborations with the relevant national, regional and international institutions in applications of nuclear science and technology in health, industry and research;
- iii) Conduct research on peaceful applications of nuclear science and technology in the health, environment, agriculture and industry;
- iv) Support Government Departments and Agencies to acquire of specialized nuclear equipment and training to facilitate technology transfer; and
- v) To create awareness on peaceful uses of nuclear science and technology in health, industry and research.