

How Does the Atomic Energy Council Protect You?

The Atomic Energy Council (AEC) works to keep the society and the environment safe by:

1. Licensing facilities that use radiation sources.
2. Ensuring that persons who prescribe, administer or operate the equipment are qualified
3. Ensuring that radiation devices are operating within safety limits.
4. Ensuring that each facility has work procedures.
5. Monitoring and maintaining an inventory of radiation sources throughout Uganda.
6. Educating the public about radiation safety.



An AEC inspector conducting and inspection on a mobile X-ray machine



An AEC inspector conducting and inspection on one of the oil well logging tools



Have questions or want to report a suspected radiation hazard?

Contact Atomic Energy Council

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Phone: +256 417101700

Email: admin@atomiccouncil.go.ug

Website: www.atomiccouncil.go.ug

Social Media: @AECUganda (Twitter/
Facebook)



Atomic Energy Council

Protecting people and the environment from the harmful effects of radiation



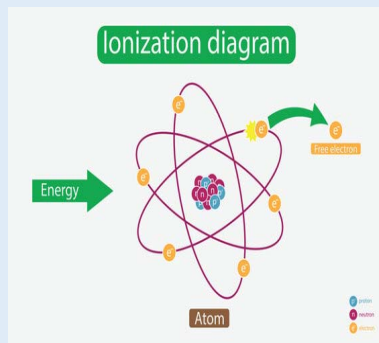
UNDERSTANDING IONIZING RADIATION

What it is • Where it is used • How to stay safe

What is Ionizing Radiation?

Ionizing radiation is a form of energy released by certain atoms that has enough energy to remove electrons from atoms, creating ions. This radiation can pass through matter and is used in many fields, including medicine, industry, agriculture, and scientific research.

Examples of ionizing radiation include: X-rays, Gamma rays, Alpha particles, Beta particles, Neutrons



What Are the Main Sources of Ionizing Radiation?

Ionizing radiation comes from two main sources:

1. Ionizing radiation comes from:

Natural sources such as cosmic radiation from space, rocks and soil.



A uranium ore containing radioactive material

2. Man-made sources such as X-ray machines, cancer treatment equipment, and industrial devices.



A moisture density gauge used in road construction

Where Is Ionizing Radiation Applied in Uganda?

Uganda uses ionizing radiation in several sectors:



A CT Scanner for diagnosis



An Iridium-192 source in non destructive testing for oil pipelines



3. Security: Baggage and cargo scanners

A baggage scanner

4. Agriculture: Research on improved crop varieties, Pest control techniques.

5. Scientific research: In universities

Is It Dangerous?

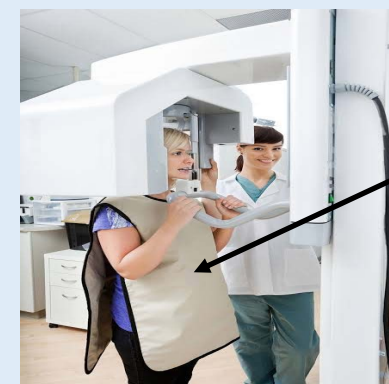
Ionizing radiation can be harmful if people are exposed to too much of it or if it is not used properly. It may damage body tissues and increase the risk of diseases such as cancer. However, when used correctly by trained professionals, it is safe and provides many important benefits.



How Can We Stay Safe?

Radiation risks can be reduced by:

1. Only get medical X-rays when prescribed by a qualified doctor.
2. Using protective shields and safety equipment as guided.
3. Obey warning signs and do not enter restricted zones.



A lead apron being worn during a dental X-ray procedure