EAST AFRICAN
CRUDE OIL
PIPELINE

THE WORLD'S MOST INNOVATIVE AND SMART PIPELINE SYSTEM

The East African Crude Oil Pipeline (EACOP)

The East African Crude Oil Pipeline (EACOP) is a project designed to transport crude oil from Uganda's oil fields in the Albertine Graben to the Tanzanian port of Tanga on the Indian Ocean. Spanning a distance of 1,447kms.

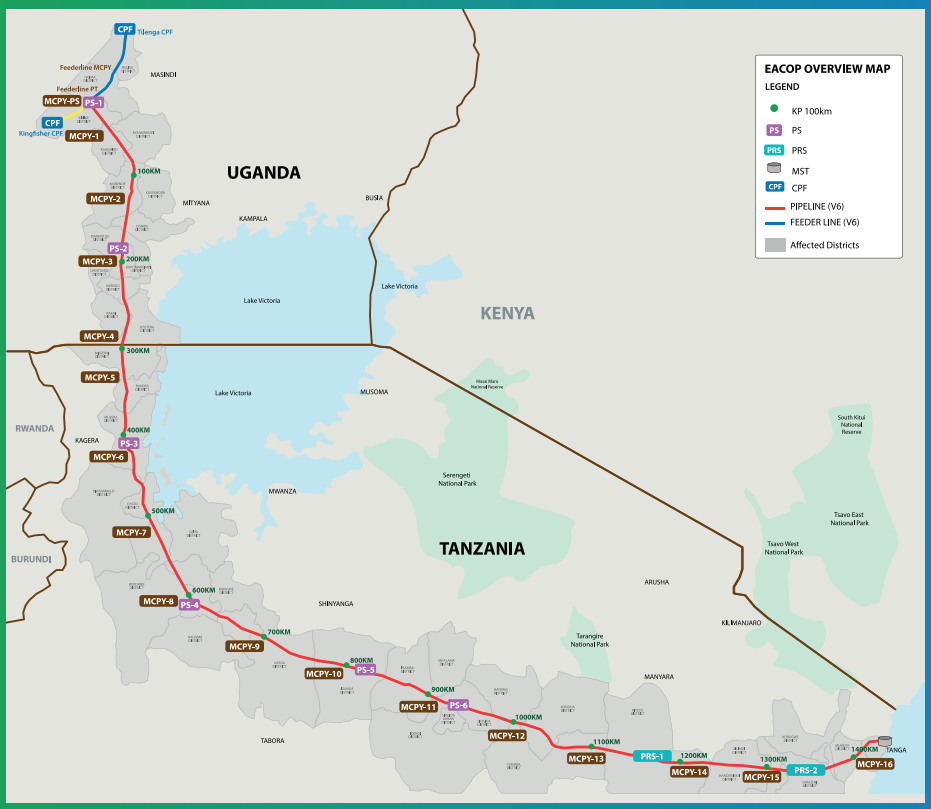
The project is a collaboration between the governments of Uganda and Tanzania, alongside private sector partners, to unlock the region's oil potential while adhering to the highest environmental and social standards. The pipeline's design ensures minimal environmental impact, with extensive measures taken to safeguard local ecosystems, communities, and water resources.

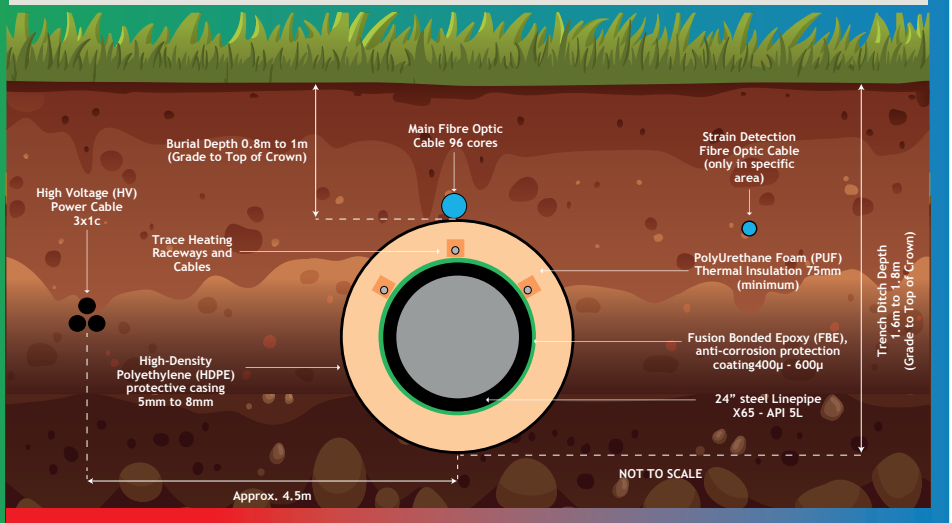
The EACOP pipeline, that is buried such that the top of the pipe is at least 1m depth on its entire length, has a diameter of 24 inches, optimized to efficiently transport waxy crude oil, which solidifies at ambient temperatures. To maintain the oil in a fluid state, the pipeline is insulated like a thermos flask, to conserve the warmth of the oil that enters from the Upstream Facilities. It is also equipped with an 'top up' electrical heating system able to keep the oil at approximately 50°C.

The cross-section of the pipeline reveals a multi-layered design, including carbon steel pipe for structural integrity, a corrosion-resistant external coating, insulation layers to maintain temperature, and an outer protective coating to prevent external damage and water penetration.

The selected route begins in Kabaale - Hoima, in Uganda and extends South to the Chongoleani Peninsula near Tanga Port in Tanzania. The pipeline will start near Hoima, close to Lake Albert, and will cross the Uganda - Tanzania border between Masaka and Bukoba, past Lake Victoria, following its western border, traversing Tanzania, passing close to Kahama, Singida, Kondoa, into Tanga.

In Uganda, the pipeline, 298km long, will traverse 10 districts and 25 sub-counties. In Tanzania, the pipeline, 1,149km long will traverse 8 regions and 25 districts.





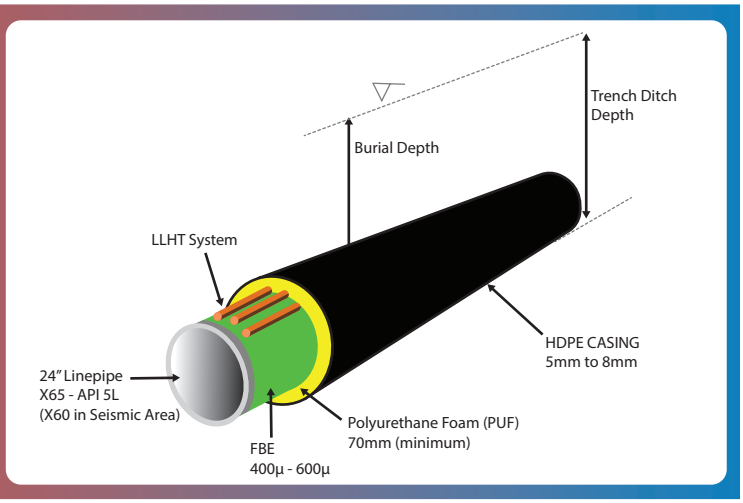
Cross Section of the Pipeline

Best in Class Technical Standards

EACOP has been designed to meet or exceed international best practices and technical standards. These standards ensure that the pipeline is designed to with-stand various environmental and operational stresses, including potential seismic activity, temperature variations, and mechanical forces. The project also prioritizes safety, with rigorous testing and quality control measures implemented throughout the construction process.

Use of Fibre Optic Cables

EACOP integrates advanced fibre optic technology along the entire length of the pipeline. These cables serve multiple purposes, including real-time monitoring of the pipeline's operational parameters, such as temperature, pressure, and flow rate. The fibre optic system also enhances communication across the pipeline's length, facilitating rapid response in case of anomalies or emergencies. Additionally, the technology supports the pipeline's security by enabling continuous surveillance and intrusion detection, ensuring the integrity of the pipeline and the safety of surrounding communities.



Advanced Detection and Analytical System

The EACOP pipeline is equipped with state-of-the-art detection and analytical systems designed to ensure operational safety and efficiency. These systems include real-time leak detection technology, which utilizes acoustic, temperature sensing and pressure monitoring to identify any irregularities along the pipeline. Additionally, the pipeline once in operation will use smart pigging technology, where robotic devices travel through the pipeline to inspect its condition, detect corrosion, and assess structural integrity.



Horizontal Directional Drilling (HDD)

Horizontal Directional Drilling (HDD) is a construction technique used in the EACOP project to minimize environmental disruption at the two major river crossings, Kagera (due to its depth and breadth) and Sigi river (due to it steep cliff) in Tanzania.

HDD allows the pipeline to be installed beneath these obstacles without the need for open trenching, preserving the natural landscape and reducing the impact on wildlife habitats. This method involves drilling a horizontal borehole along a predetermined path and then pulling the pipeline through the hole.

