

REGIONAL INTERCONNECTIONS

- Kenya's geographical position makes it an ideal hub for regional power interconnections in the region
- GOK through KETRACO is therefore involved in all the regional initiatives and is currently undertaking the following:
 - **Eastern Africa Power Interconnector;**
 - **Lessos-Tororo NELSAP Project; and**
 - **Kenya-Tanzania**

Eastern Africa Interconnector

- The proposed 500 kV HVDC line with a power transfer capacity of 2000MW will originate from Wolayta-Sodo in Ethiopia and terminate at Suswa in Kenya.
- The total length of the proposed transmission line is approximately 1045 km, out of which approximately 433 km will be in Ethiopia and 612 km in Kenya.

Eastern Africa Interconnector

- The routing in Ethiopia is in a southerly direction along Lakes Abaya and Chamo, via Konso to the Ethiopia - Kenya border.
- It will cross the border approximately 90 km West of Moyale town and traverse Marsabit, Samburu, Isiolo, Laikipia, Nyandarua and Nakuru Counties of Kenya.

Eastern Africa Interconnector

- **Converter substations**
- The Substations at both ends of the line will have:
 - 2 x 1000 MW HVDC converters at Wolayta/Sodo and Suswa
 - and
 - 400/220 kV AC substations

Eastern Africa Interconnector

Project Status

- The project is currently at the stage of bid document preparation.
- Financing by World Bank, African Development Bank and the French Development Agency has been confirmed and construction is expected to start by 2013 and commissioning in 2016
- KPLC and EEPSCO have signed a power purchase agreement for an initial 400 MW which will be increased as demand grows.

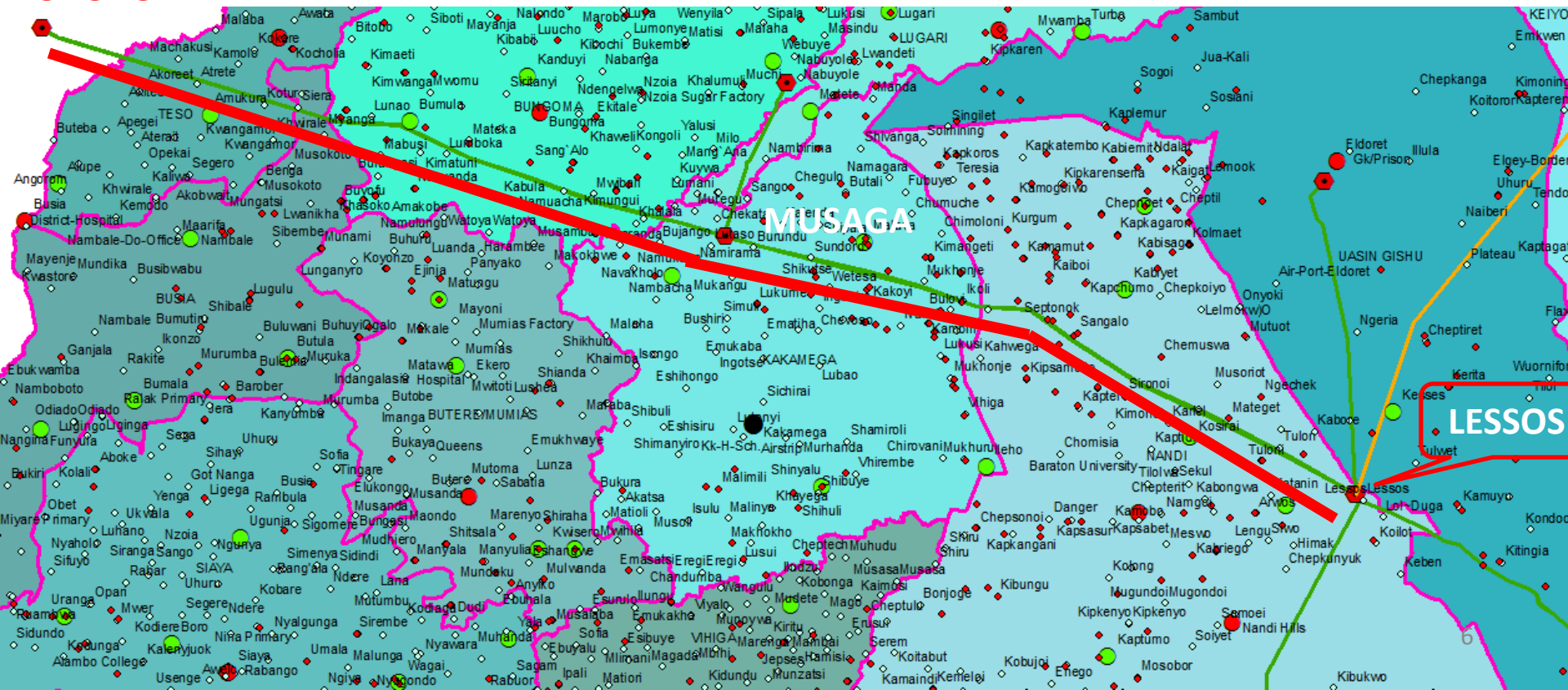
LESSOS-TORORO: Project Scope

127 km of 220 kV double circuit transmission line
Additional transformers and reactors at Lessos

Line route along alignment of existing 132 kV Jinja-Nairobi line

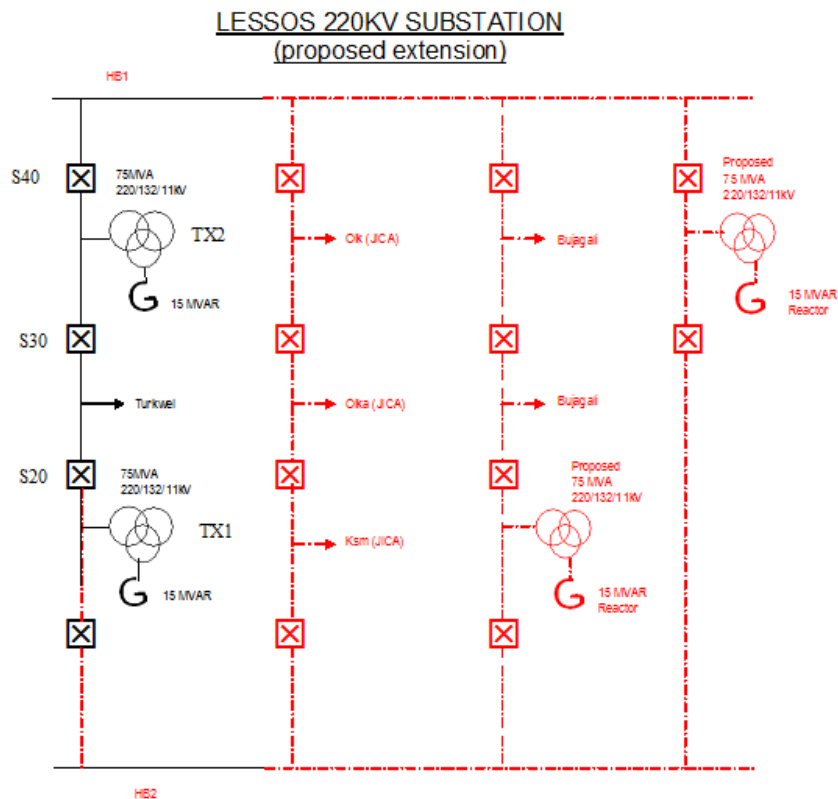
300 MW transfer capacity with existing 132 kV line

TORORO



Lessos Substation

S/S Arrangement



Scope

Works include:

- Extension of the existing 220 kV bus and addition of three more
- Two 90 MVA transformers
- Compensation reactors

LESSOS-TORORO: STATUS

- The project is fully funded by the African Development Bank.
- Construction is scheduled to start in late 2012 and commissioning in late 2014.

Olkaria-Lessos-Kisumu

A 300 km double circuit 220 kV line from Olkaria-Lessos-Kisumu will integrate this project into the Kenya Grid. New 220 kV lines from Olkaria to Nairobi

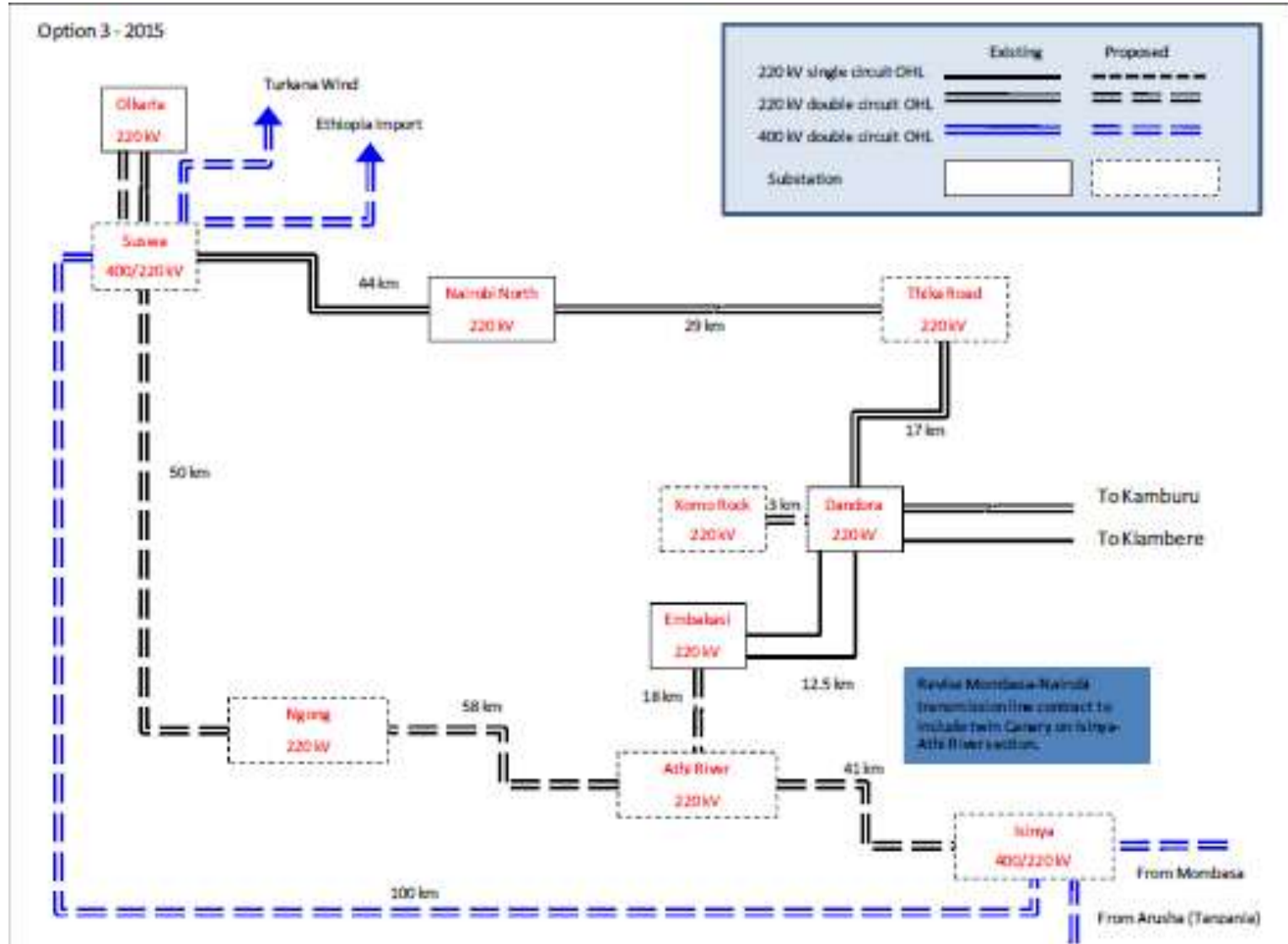


Olkaria - Lessos - Kisumu

STATUS:

- The project is fully funded through JICA
- Construction is expected to start in late 2012 and commissioning in 2015

Nairobi Ring



Nairobi Ring

Scope: 100km, 400kV, Double Circuit Transmission Line; Suswa – Isinya, & Substations.

The Nairobi Ring will connect the proposed substations of Suswa and Isinya to form an outer 400 kV system around the Nairobi metropolis

It will also integrate the regional interconnections into the national grid.

Nairobi Ring

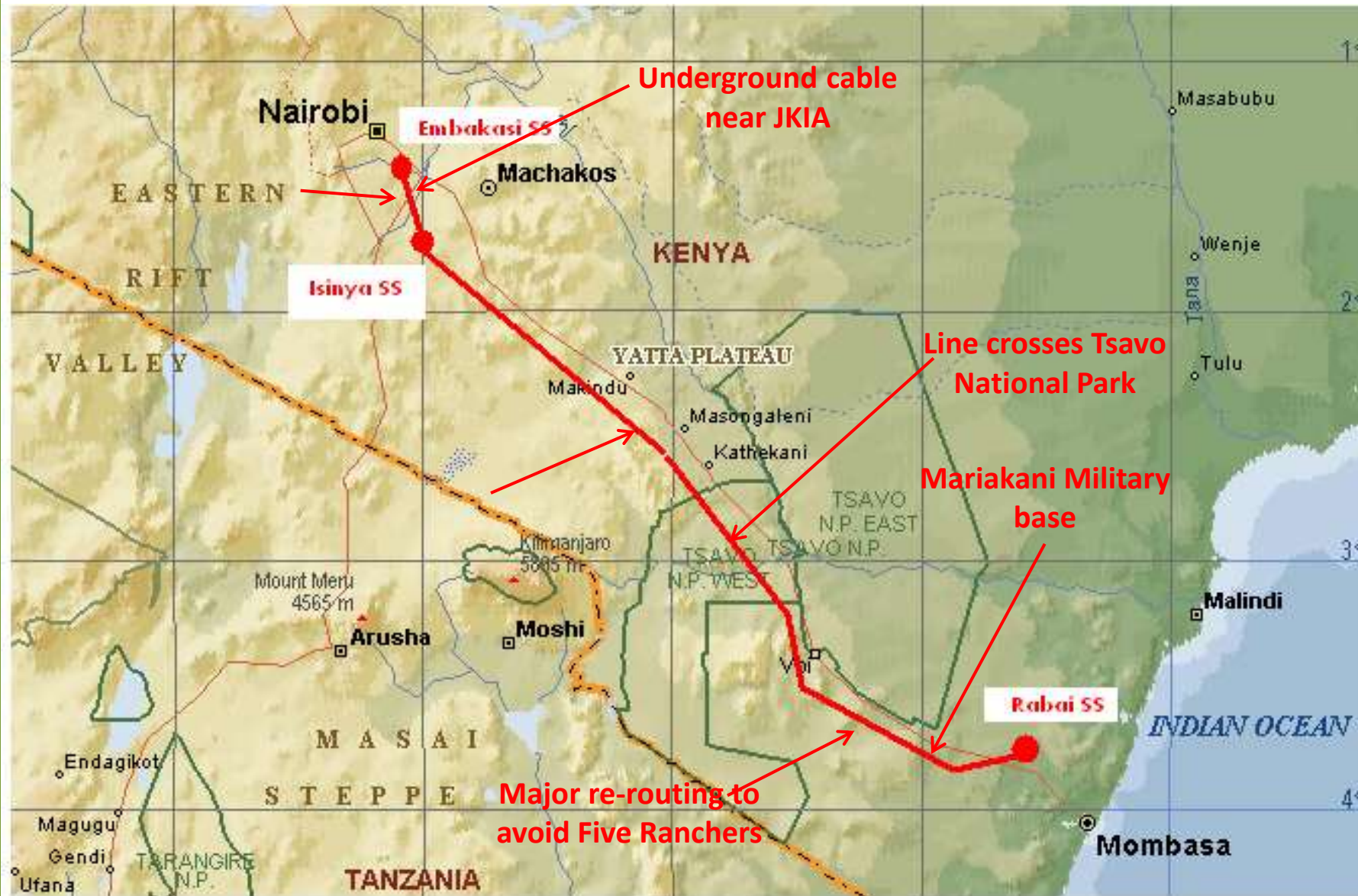
- It will take in supplies from the geothermal fields, wind power from Lake Turkana and power from Ethiopia at Suswa.
- At Isinya, it will connect to the Mombasa 400 kV line and Kenya Tanzania interconnection.
- Bid documents for the first phase of the project are being processed and construction will start shortly.

Zambia – Tanzania - Kenya Interconnector

Kenya - Tanzania

- The Kenya Tanzania power interconnection will link the Isinya substation to the Tanzanian power system at Arusha through a 400 kV line that will continue to Singida in central Tanzania, firmly connecting the Kenya and Tanzania systems.
- Another line will continue south from Singida to Zambia, thus linking East Africa with the South African Power Pool.

Mombasa – Nairobi



Mombasa – Nairobi

Scope: 475km, 2400kV Double Circuit Transmission Line & Substation works at Rabai and Embakasi .

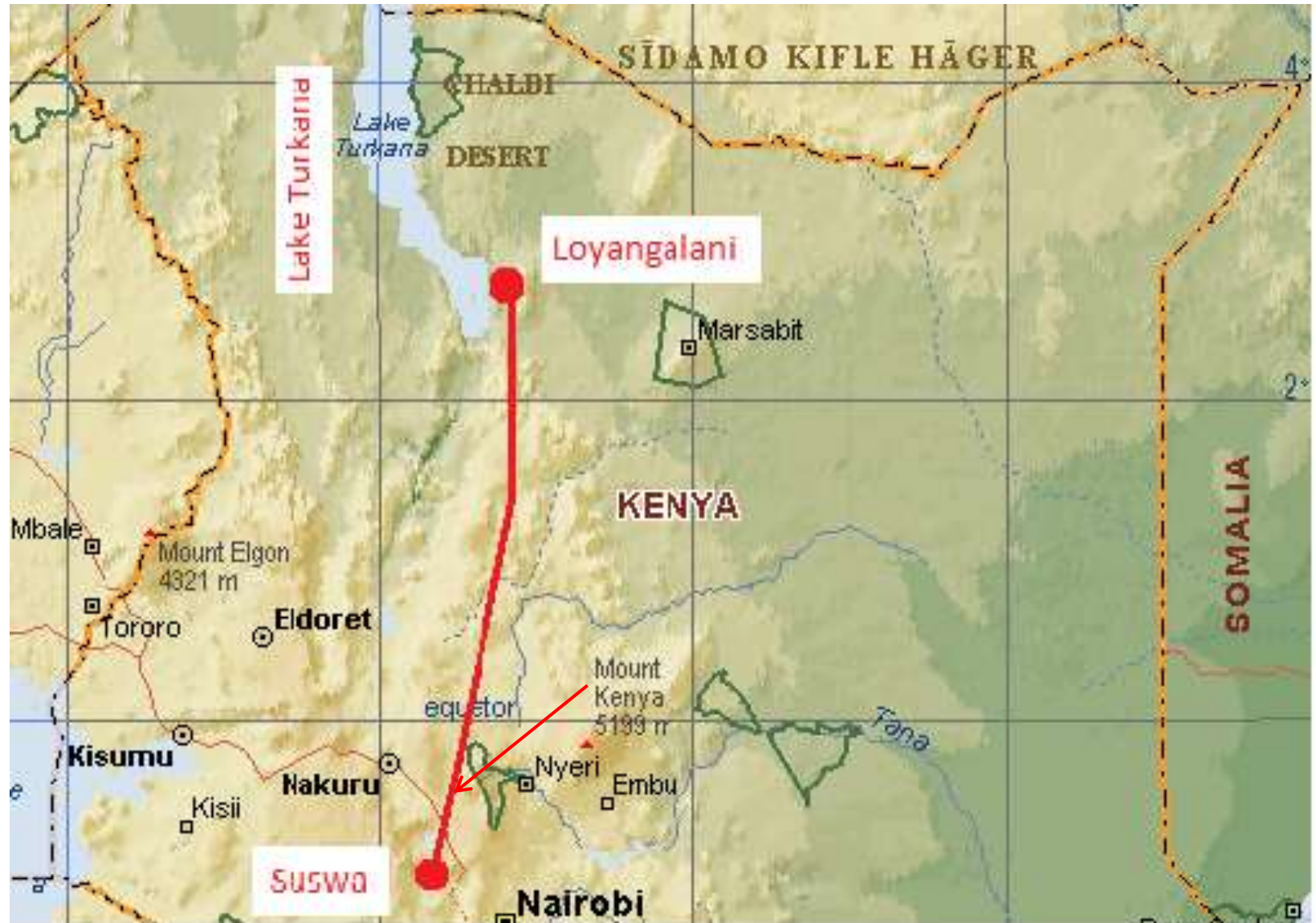
Purpose: To increase power transfer capacity between the Coast and Nairobi

Financier: ADB, AFD, EIB and GoK

Commencement: 2010 and **Completion:** 2012

The project is under construction

Loiyangalani - Suswa



Loiyangalani - Suswa

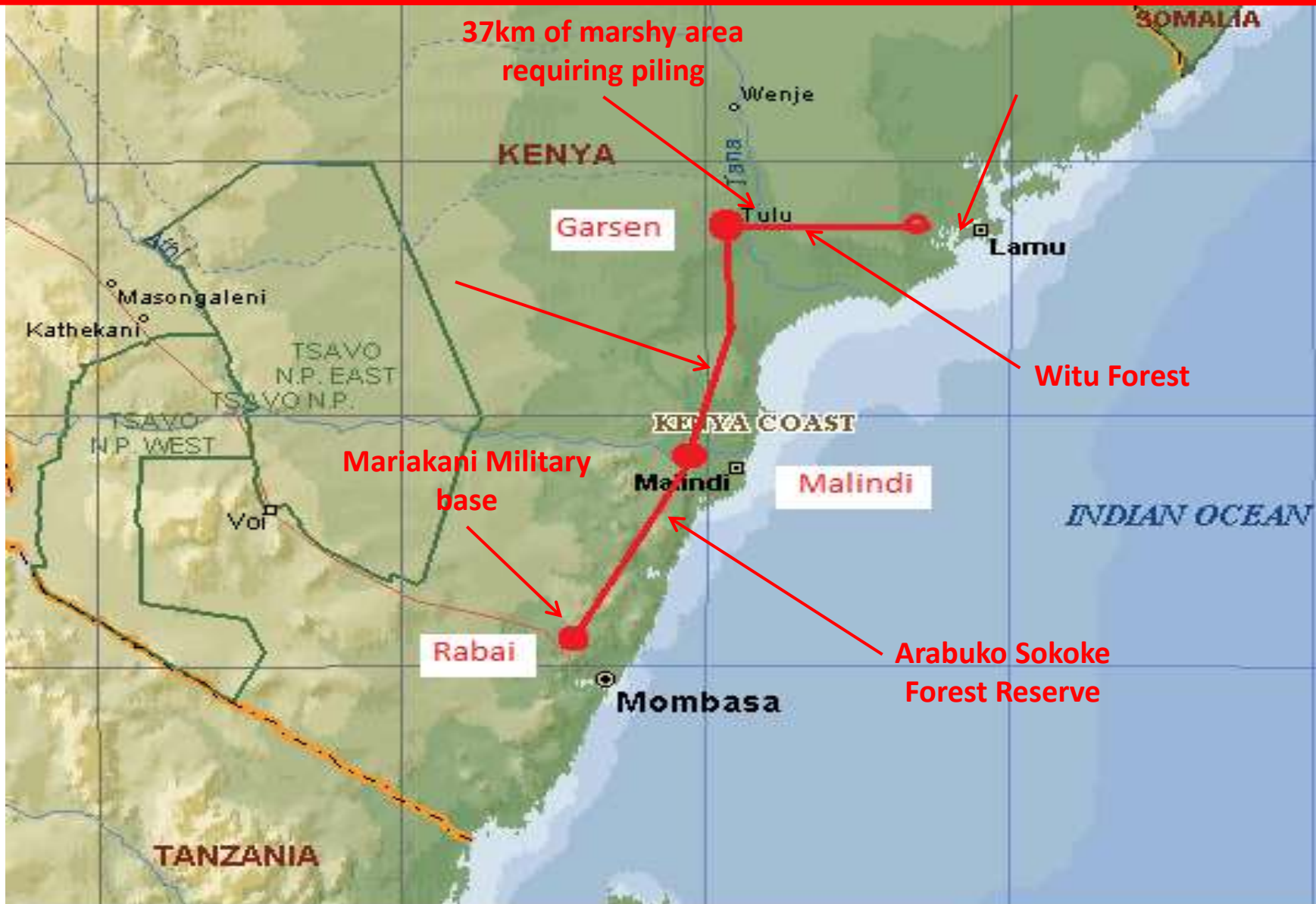
Scope: 430km, 400kV, Double Circuit Transmission Line & Substations.

Purpose: To evacuate power from the proposed wind power plant in Lake Turkana region

Financier: Spanish and Kenya Governments.

Commencement: Estimated June 2011 and **Completion:** May 2013

Rabai-Malindi-Garsen- Lamu



Rabai-Malindi-Garsen- Lamu

Scope: 320km, 220kV Single Circuit Transmission Line & 2 No. 23 MVA sub-stations

Purpose: To connect Lamu Port to the National Grid and strengthen supply to North Coast

Commencement: 2010 and **Completion:** 2012

The project is under construction

A nighttime photograph of a city skyline, likely Chicago, with numerous skyscrapers illuminated. A bright lightning bolt is visible on the left side of the frame. The sky is dark and cloudy. The foreground shows a park area with trees and a body of water reflecting the city lights.

Thank You