

Kenya: Some Facts



- Location: Eastern part of Africa
- Area: 582,646 Km²
- Population: 42.5 million
- Economy: Agriculture, Tourism, Services, Industry, Mining
- Energy: Imports petroleum, electricity inadequate (35% of households).
- Target is universal access of electricity¹

Energy Sector Investment Policy

- Private sector involved in commercial power generation since power sector was liberalized in 1997
- Role of the private sector expected to grow over time in power generation
- Many opportunities exist especially in the electricity generation from renewable sources

GENERATION MIX

The total installed effective capacity under average hydrology is 1,783.1 MW of which 1,161.1 MW or 65.1% is generated by KenGen, 503 MW or 28.2% by Independent Power Producers and 120 MW or 6.7% is Emergency Power. With a peak demand of 1,300MW, the reserve margin under dry hydrology is negative

Generation mix is provided as follows:

	Hydro	Geothermal	Thermal	Co-gen	Wind	Total	Proportion
KenGen	770	150	236		5.1	1,161.1	65.1%
IPPs		91	386	26	-	503	28.2%
Emergency			120			120	6.7%
Total	770	241	741	26	5.1	1783.1	100%
Contribution	43.18%	13.51%	41.55%	1.45%	0.29%	100%	

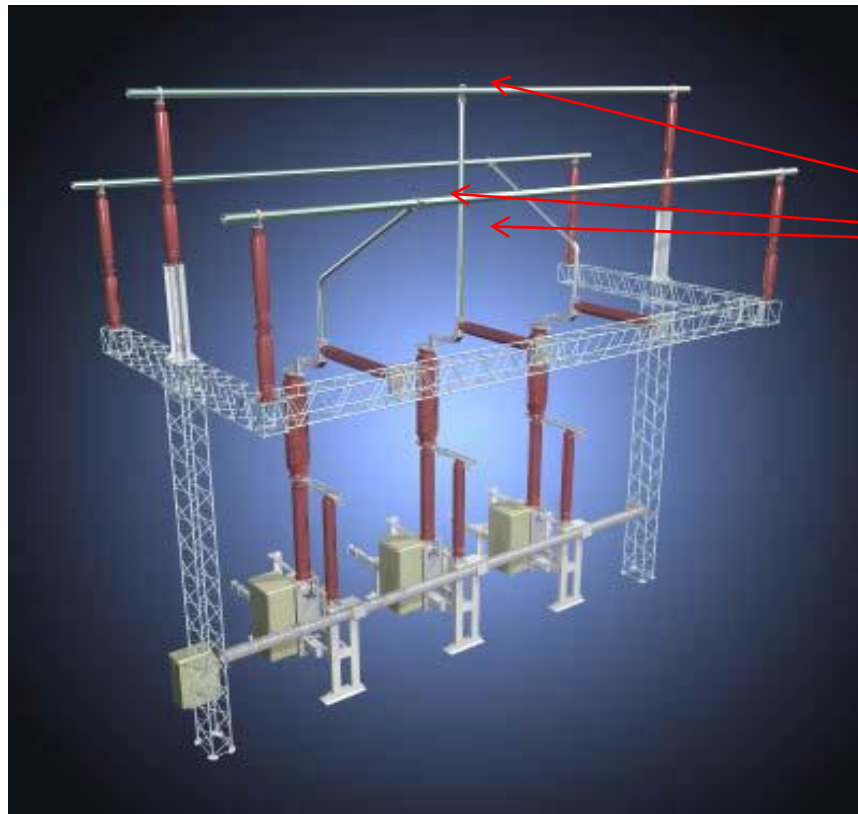
ELECTRICITY SITUATION

- 43.18% of generation is from hydropower. Erratic rainfall causing shortfall in power available from hydro resources. The imbalance is largely addressed through importation of very expensive Emergency Power, of which currently the existing capacity is 120MW.
- Only 35% of Kenya's population are supplied with electricity.
- More than 200,000 additional customers need to be connected annually.
- Customer expansion expected to increase current peak power demand from 1,300 MW to 5,000 MW by 2030.
- Country target to have a reserve margin of 30% by 2015.

Components are in Demand in Kenya and within East Africa

- A - Busbar
- B - Disconnecter
- C - Circuit Breaker
- D - Current Transformer
- E - Voltage Transformer
- F - Earthing Switch
- G - Surge Arrestor

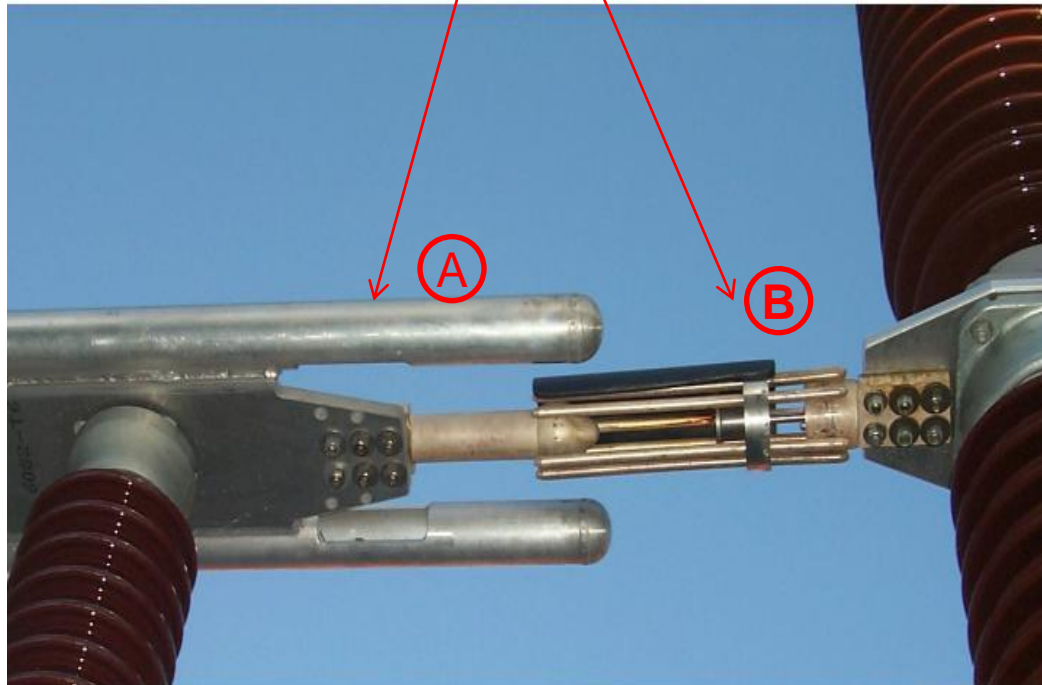
A. BUSBAR



Busbars
(long heavy
tube type)

B. DISCONNECTS

Disconnect Switch
(moving contact rod (A) &
contacts with flexible
fingers (B))



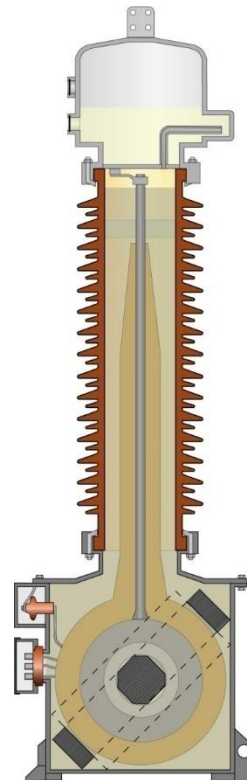
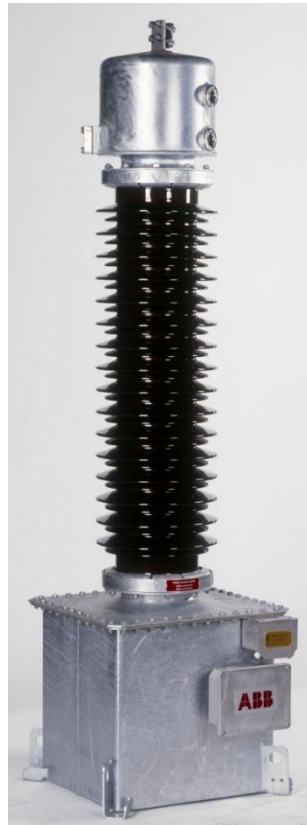
C. CIRCUIT BREAKER



D. CURRENT TRANSFORMER

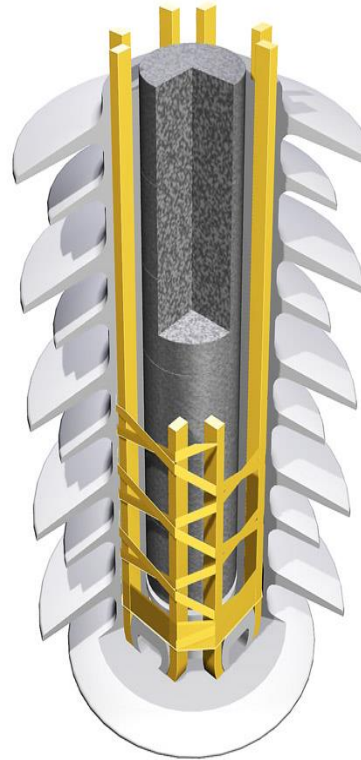


E. VOLTAGE TRANSFORMER

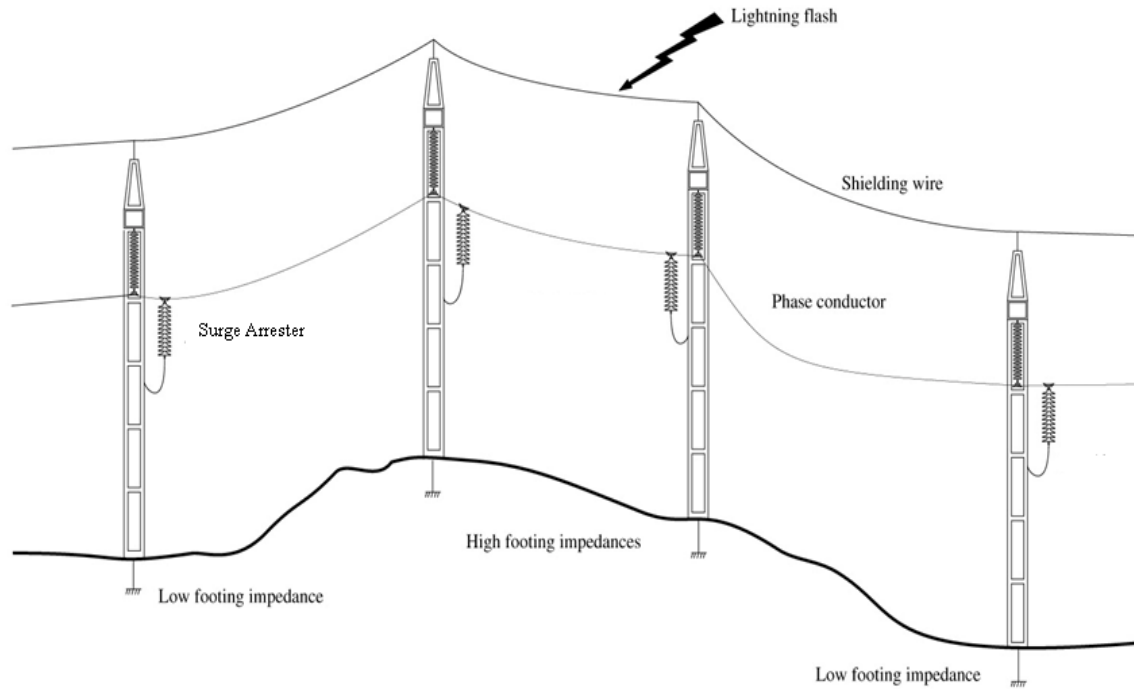


F. EARTHING SWITCH

G. SURGE ARRESTOR



OVERHEAD GROUND WIRE



Projects are big Opportunities



Transmission line 220/420



Distribution Transformers



Substations

Real state Opportunity

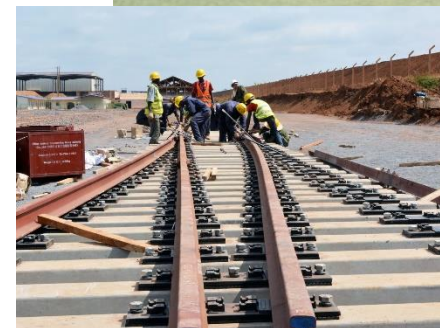
- HIGH-RISE BUILDINGS
- Shopping Malls
- New / Satellite Cities
- Multi Stories Residential Buildings
- Hospitality Industries



- NOTE :
FOR ALL ABOVE LIFTS AND ESCALATORS ARE
MANADATORIES BY GOVERNMENT LAW

Railway Transport

- Rail transport will be future business in Africa not only Kenya
- Vision 2030 Kenya has several Railway lines projection to connect Counties.
- East Africa communities has agreed to connect the countries using railway transports.



SECURITY AND AUTOMATION IN BUILDINGS

- Every New Building Must have Automation and Security
- All cities and towns are on security surveillance
- Private industries and corporate business must have these.



CHALLENGES

- Growth in installed capacity not matching demand, mainly due to delays in implementing
- Requirement by Lenders for payment guarantees
- Frequent weather variability affective energy available from Hydropower sources
- Inadequate human capacity
- Community issues (Compensation, Benefit Sharing)
- National/County Governments (Devolution, Revenue Sharing)
- Long process for IPPs (Feasibility Studies, Cover, Financing)
- Weak balance sheets of sugar companies
- Budgetary constraints (Adequacy, Loan Processing, Disbursement)
- Power system instability

INCENTIVES

- **Duty** on power generation equipment's waived
- Government offering **letters of comfort** to IPPs
- **Resource Assessment** -GoK will continue to undertake resource assessment and feasibility studies to be availed to Private Investors.
- Other **incentives**, as proposed in the Sessional Paper No.4 on Energy, to be operationalized gradually to attract investment in green energy
- Mainly deal with **tax and income holidays**, and facilitative roles

Kenya Government Support

- Opportunities for investment in green energy development exist
- Kenya Government has put necessary policy and regulatory frameworks to encourage and facilitate private investment
- Kenya Government welcomes Private firms to invest in Kenya's Energy Sector



Thank you very much!