

MINISTRY OF ENERGY (MOE)

Is mainly responsible for policy formulation and granting and revoking generation and distribution licenses upon recommendation of the Energy Regulatory Commission (ERC); and settlement of disputes arising from parties aggrieved by ERC's decision(s).

NATIONAL ENERGY POLICY

This broadly articulates the Government's strategies for the energy sector generally and the power sub-sector specifically.

NATIONAL GRID

The network of electricity transmission and distribution cables used in the conveyance of electricity.

NETWORK

A system of transmission and distribution lines cross-connected and operated to permit multiple power supply to any principal point on it.

NON - TECHNICAL LOSSES

Non-technical losses are caused by actions external to the power system and consist primarily of electricity theft, non-payment by customers, and errors in accounting and record-keeping.

OFF-GRID POWER SYSTEM

A stand - alone electricity generation, transmission and distribution network serving a confined part of a country or region. Kenya's more remote regions have isolated or off-grid power systems.

OFF - PEAK ENERGY

Power supplied during hours when power demand is usually low.

ON - PEAK ENERGY

Power supplied during periods of relatively high system demands.

OUTAGE

The period during which a generating unit, transmission system, or distribution line is out of service.

OVERLOAD

To put too much electricity through an electrical system or piece of equipment. .

PEAK DEMAND

The maximum amount of power necessary to supply all customers at peak time.

PHASE

One of the characteristics of electric services supplied or the equipment used. Most residential customers have single-phase service. Large commercial and industrial customers have either two-phase or three-phase service.

PLANNED ELECTRIC OUTAGE

An interruption of service to electric lines to permit work that cannot be performed while the lines are live with electric current. Whenever possible, affected customers are notified beforehand.

POWER

The time rate of using electric energy, usually expressed in kilowatts.

POWER GRID

A network of power lines and associated equipment used to transmit and distribute electricity over a geographic area.

POWER POOL

Power pool consists of two or more utilities who combine their resources to better meet their individual needs.

POWER PURCHASE AGREEMENT

The negotiated bulk power tariff between Kenya Power and the power generating companies, including other related contractual agreements between Kenya Power and those entities.

POWER RATIONING

A deliberate action to allocate different hours of electric service to customers in respective locations in response to a power shortage.

POWER SUB-SECTOR

The part of the energy sector concerned with the electricity business.

PREPAID METERS

Devices used to access electricity that has been paid for in advance.

RURAL ELECTRIFICATION AUTHORITY (REA)

Rural Electrification Authority (REA) was established by the government to speed up the implementation pace of the rural electrification programme.

SOUTHERN AFRICA POWER POOL (SAPP)

An integrated network of electricity transmission lines linking several Eastern and Southern Africa countries.

SUBSTATION

A small building or fenced - in yard containing switches, transformers, and other equipment and structures for the purpose of adjusting voltage, monitoring circuits and other service functions. As electricity gets closer to where it is to be used, it goes through a substation where the voltage is lowered so it can be used by homes, schools and factories.

SYSTEM LOSSES

The proportion of electricity lost in the process of transmission and distribution.

TARIFF

The charge levied by Kenya's Power sector for development, operations and maintenance of the power system. The entire power sector is financed from the total revenue collected by Kenya Power from its retail tariff which is set and approved by the ERC.

TECHNICAL LOSS

Technical losses occur naturally and consist mainly of power dissipation in electricity system components such as transmission and distribution lines, transformers, and measurement systems.

THERMAL ENERGY

Thermal electricity is generated from the heat produced by the burning of fossil and renewable fuels.

TRANSFORMER

A transformer is a device used to change the voltage level of electric current. Transformers can either increase or decrease voltage.

TRANSIENT FAULT

A temporary introduction of a foreign element that causes a momentary interruption of services to electric lines such as a tree branch touching a line during a wind storm.

TRANSMISSION LINES

Heavy wires that carry large amounts of electricity over long distances from a generating station to places where electricity is needed. Transmission lines are held high above the ground on tall towers called transmission towers.

TRIP

The switching "off" of a circuit breaker due to a fault in the electric circuit or power equipment.

TURBINE

An enclosed rotary wheel turned by water or steam. It then turns a generator to make electricity.

UNBUNDLED UTILITY SERVICE

Generation (electricity), transmission, and distribution (delivery) services provided by different entities. Kenya operates an unbundled electricity service with several public and private players.

UNDERGROUND CABLE

An electrical conductor installed below the surface of the earth

UNPLANNED ELECTRIC OUTAGE

Any interruption in the generation, transmission, or distribution of electricity systems which is not scheduled

UTILITY

A company that performs a public service; subject to government regulation. Telephone, water and electric companies are utilities.

VOLT

The unit used in measuring the force driving electricity through a circuit, or the strength of an electric current.

VOLTAGE

The rate at which energy is drawn from a source that produces a flow of electricity in a circuit. It is measured in volts.

WATT

A measure of how much electric power an appliance needs. This term is commonly used to rate appliances using relatively small amounts of electricity.

WAYLEAVES

Right of way granted to a utility to erect equipment in the course of service delivery. Way leaves may be granted by individuals, the government or its institutions.

COMMON TERMINOLOGIES



Common terminologies in the electricity sub-sector

AMPERE

The unit of measure of an electric current. Ampere is a measure of the amount of electric charge passing a point in an electric circuit per unit time.

ALTERNATING CURRENT (AC)

AC current is a specific type of electric current in which the direction of the current's flow is reversed, or alternated, on a regular basis.

AUTOMATIC METER READING SYSTEM

It is the technology of automatically collecting data from electric metering devices and transferring that data to a central database for billing, troubleshooting, and analysing.

AUTOMATED DISTRIBUTION

Describes a system of intelligent control over electrical power grid functions to the distribution level and beyond. Its goal is real-time adjustment to changing loads, generation, and failure conditions of the distribution system, usually without operator intervention.

BASE LOAD

This is the minimum amount of power that a utility or distribution company must make available to its customers, or the amount of power required to meet minimum demands based on customer requirements.

BILLING

A charge applied to an electricity customer for energy reserved or made available explicitly for that customer. This charge is levied whether or not the customer actually uses the energy made available for them.

BLACKOUT

A blackout is a complete interruption of power in a given service area. Blackouts come without warning, last for unstipulated periods, and are typically caused by faults, acts of vandalism, equipment failure or severe weather.

BROWNOUT

A brownout is a partial, temporary reduction in system voltage or total system capacity. Although service is not disrupted completely, a brownout will cause a dimming of lights and may result in a loss of load.

BUNDLED UTILITY SERVICE

Refers to energy provision in which all

needed electric services (generation of energy, transmission of electricity, distribution from the transmission system, metering and billing, and support functions required to maintain consistent supply) are provided as a single package, usually by a single provider.

BUS (or BUSBAR)

A strip or bar that conducts electricity within a switchboard, distribution board, substation, battery bank or other electrical apparatus.

CAPACITOR

A capacitor is an electronic component typically used to "clean up" the flow of electricity by ensuring steady, consistent wattage through a circuit or part of a circuit. It also improves the efficiency of the electrical system.

CAPACITY

The maximum amount of power, normally expressed in megawatts, that a given system or subsystem can carry or produce at a particular moment, and is typically used to represent the real production capability rating of a generation or transmission system.

CAPITAL INTENSIVE

A business process or an industry that requires large amounts of money and other financial resources to produce a good or service. The electric utility industry is one of the most capital intensive of all industries.

CIRCUIT (ELECTRIC)

A complete path through which electricity flows.

CIRCUIT BREAKER

A type of switch designed to automatically interrupt power when more power is flowing through the circuit than the circuit is designed to handle.

CABLE

A cable is most often two or more wires running side by side and bonded, twisted or braided together to form a single assembly. Electrical cable is the wire plus all other materials required by the wire for practical use (e.g. insulation and sheathing).

COGENERATION

Cogeneration is the simultaneous generation of electrical and thermal energy where both forms of energy are put to productive use.

COMPACT FLUORESCENT LAMP (CFL)

A Compact Fluorescent Lamp (CFL) is a type of energy saving lamp, also known as Compact Fluorescent Light.

CONDUCTOR

Any substance or object able to transmit electricity, or which is intended for use as a carrier for electricity.

CURRENT

Current is the flow of electricity. The amount of current which can be carried by an electrical system is measured in watts.

DEMAND-SIDE MANAGEMENT

The management of demand for energy. It is a service offered by utilities, energy suppliers or private companies as a value-added service to assist the customer with getting the best value from their energy expenses.

DIRECT CURRENT (DC)

Electricity that flows continuously in one direction at all times.

DISTRIBUTION SYSTEM

Usually refers to the combination of the physical hardware required to deliver energy between high-voltage transmission lines and end-use customers, and the procedures and processes used to perform the actual delivery.

ELECTRICITY

It is the energy made available by the flow of electric charge through a conductor.

ENERGY SECTOR

This sector includes companies involved in the exploration and development of oil or gas reserves, oil and gas drilling, alternative energy sources, or integrated power firms.

FAULT

A failure or interruption in an electric circuit.

FEEDER

An electrical line that feeds energy to the next level of distribution. A distribution feeder is an underground or overhead line connected to a transmission system which carries power into the distribution network where it is delivered to end-use customers.

FOSSIL FUEL

Literally, fuel from fossils. A naturally occurring non-renewable organic energy source that comes from fossilized plants

and animals, such as coal, crude oil, and natural gas.

FUEL COST ADJUSTMENT

Refers to a change made to the price of electricity based on changes in the market price of fuel used to generate it.

FUSE

A safety device that protects an electric circuit from becoming overloaded. Fuses contain a length of thin wire (usually of a metal alloy) that melts and breaks the circuit if too much current flows through it.

GENERATION OF ELECTRICITY

To make electricity. A generating station is a building where electricity is made.

GENERATION RESOURCES

The various means available for generation of electricity. Electricity in Kenya is generated mainly from hydro, geothermal and thermal sources. There are efforts to generate electricity on a wide scale from wind and solar.

GEOTHERMAL ENERGY

Is energy generated by heat stored beneath the Earth's surface or the collection of absorbed heat in the atmosphere and oceans.

GIGAWATT

A watt is a unit of power, especially of heat or light. A Gigawatt is equal to a billion watts or one thousand megawatts.

GROUND

A conducting connection, intentional or accidental, between an electrical circuit or equipment and the earth providing a complete current path.

HYDROELECTRIC

The production of electrical power through the use of the gravitational force of falling or flowing water.

INCANDESCENT LAMP

A lighting device in which light is produced using electrical current to heat a thin filament (thread) or metal to a temperature where it gives off light.

INDEPENDENT POWER PRODUCER (IPP)

Refers to a producer of electrical energy which is not a public utility but which makes electric energy available for sale to utilities or the general public.

INSTANTENOUS PEAK

The demand at the instant of greatest load, usually determined from the readings of indicating or graphic meters.

INSULATOR

A material or an object that does not easily allow heat, electricity, light, or sound to pass through it.

INSTALLED CAPACITY

Describes the maximum capacity that a system is designed to run at.

INTERCONNECTED SYSTEM

A system consisting of one or more individual power systems, normally operating with the interconnecting transmission lines. The Kenyan power system and the Ugandan Power system form an interconnected system.

KENYA ELECTRICITY GENERATING COMPANY (KenGen)

A company that generates electricity from all publicly owned generating plant and sells power in bulk to Kenya Power. It is also the single largest supplier of electrical energy in the country.

KENYA POWER

This is a limited liability company which transmits, distributes and retails electricity to customers throughout Kenya. The Company, quoted at the Nairobi Securities Exchange, buys power in bulk from power generators, which it then transmits, distributes and retails to consumers.

KENYA POWERNATIONAL CONTACT CENTRE

The National Contact Centre was established to allow customers interact with the Company via all communication channels including telephone, email and social media.

KILOVOLT (KV)

1 Kilovolt (Kv) =1,000 Volts

KILOWATT (KW)

1 Kilowatt (KW) = 1,000 Watts. A kilowatt – hour (KWH) is the basic unit of electrical energy equal to 1 Kilowatt or 1,000 Watts of power used for one hour. The amount of power the customer uses is measured in kilowatt hours (kWh).

POWER LINE

A system of high tension cables by which electrical power is distributed to electricity customers.

LINE CREWS

A team of trained, skilled maintenance and repair workers who service transmission and distribution lines, and equipment.

LOAD

A load is the amount of power delivered, as required, at any point or points in the system. A load is created by the power demands of customer equipment.

LOAD FACTOR

The average power divided by the peak power over a period of time.

LOAD SHEDDING

The act or practice of temporarily reducing the supply of electricity to an area to avoid overloading the generators. Load shedding is most often applied to ensure continuity to a smaller number of costumers when demand for electricity exceeds supply.

LONG RUN MARGINAL COSTS

The nature of the power industry is long term in nature due to the nature of investments that support power supply. Hence, there is need to plan for the future in a consistent manner in order to safeguard security of supplies efficiently. Kenya's power tariff is based on long run marginal costs, which deal with future costs over a long period of e.g. five to ten years, so that the resulting tariff prices in constant terms tend to be quite stable over time.

MAXIMUN PEAK

The greatest demand that occurred during a specified period of time.

MEGAWATT

One million Watts or 1,000 Kilowatts.

METER BOARD

The board on which the meter and main switch, and associated equipment are mounted.

METER INSPECTION

The examination of the meter for various reasons including verifying, readings, determining accuracy and checking for malfunction.

METER TAMPERING

Deliberate interference with the power measuring device in premises, usually for purpose of showing lower or no consumption.