Nigerian Electricity Regulatory Commission

Health and Safety Code for the Nigerian Electricity Supply Industry

HEALTH & SAFETY CODE FOR THE NIGERIAN ELECTRICITY SUPPLY INDUSTRY

The common seal of the Nigerian Electricity Regulatory Commission was affixed pursuant to the order of the Commission.

On this 17TH **day of** MARCH **2026.**

Musiliu O. Oseni, Ph.D.
Chairman

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PURPOSE

This Code is designed to save lives and equipment and the provisions of this Code will be enforced by the Commission. The practices specified in this Code are legal obligations. Each employer in the Nigerian Electricity Supply Industry ("NESI") has a legal obligation to ensure that a safe work environment is provided to all employees, both regular and non-regular. Contractors working at distribution stations, transmission stations, power stations or engaging in any work activities involving power generation, transmission, distribution, and servicing are also required to follow the best practices and safety standards defined in this Code.

ABSTRACT

This Code contains the basic provisions for safeguarding of persons from hazards arising from the installation, operation, or maintenance of equipment in power generation stations, transmission and distribution networks with overhead or underground electric supply and communication facilities. It also includes work safety rules, processes and procedures for the construction, maintenance, and operation of electric supply and communication facilities from end to end. The standard is applicable to the systems and equipment operated by utilities, or similar systems and equipment of an industrial establishment and other end users under the control of qualified persons.

This Code comprises the introduction, definitions, grounding rules, list of referenced and bibliographic documents and Parts I, II, III, IV, V, and VI. The major referenced document is the Nigerian Electricity Health and Safety Standards Manual and other accepted International Standards.

FOREWORD BY THE CHAIRMAN

The revised Health and Safety Code for the Nigerian Electricity Supply Industry is a practical document crafted with industry best practices to meet the health and safety standards outlined in sections 34(1)(e) and 34(2)(b) of the Electricity Act 2023.

This Code has been meticulously examined, and its content has been updated to ensure that it aligns with the most current standard practice. The review, which was done by a broad industry-wide panel led by the Nigerian Electricity Regulatory Commission, has successfully undergone all Regulatory Consultation Processes in strict adherence to the rule making process of the Commission. The panel's membership spans across the generation, transmission, and distribution segments of NESI, along with other relevant stakeholders.

The Health and Safety Code for the Nigerian Electricity Supply Industry applies to all NERC licensees and any individual within the electricity value chain operating an electrical premises. Under the circumstances outlined in this Code, such persons bear the responsibility of ensuring the health and safety of workers, equipment, and the public. Codes of practice, similar to regulations, address specific issues and may not cover all potential hazards or risks that could arise.

The revised Code clarifies the compensation framework for accidents in the Nigeria Electricity Supply Industry (NESI). It also includes sections on clearing buildings from power line right-of-way and stringent measures to enforce discipline and mitigate workplace accidents.

It is crucial to highlight that the Commission had previously developed and approved a comprehensive Health & Safety Standards Manual, incorporating industry best practices as a guiding document for Industry Operators. This Manual is a Schedule to the Health and Safety Code for the Nigerian Electricity Supply Industry. The Code explicitly outlines compliance requirements and penalties, and adherence is mandatory for all industry participants. The Commission holds the authority to impose administrative penalties, though penalties involving jail terms or imprisonment would necessitate action by a competent Court of jurisdiction for execution.

The Commission, in accordance with the provisions of the Electricity Act 2023, is empowered with the authority to conduct inspections of undertakings and carry out accident investigations. These activities align with the guidelines outlined in the Health & Safety Code and Manual. An Inspector appointed by the Commission is obligated to consult the approved Health and Safety Code for the Nigerian Electricity Supply Industry and Manual when issuing an improvement or prohibition notice.

I genuinely hope that Licensees and individuals managing electrical facilities in Nigeria view this code as a constructive step forward. I have confidence that they will adopt each provision willingly to improve health and safety standards for workers, equipment, and the public, eliminating the need for the Commission to enforce compliance.

Musiliu O. Oseni, Ph.D.

LETTER SYMBOLS FOR UNITS

This Code uses standard symbols for units. They have the following meanings:

A	ampere
°C	degree Celsius
ft	foot
ft^2	square foot
ft^3	cubic foot
°F	degree Fahrenheit
g	gram
Hz	hertz
h	hour
in	inch
in^2	square inch
k	kilo (10^3)
kg	kilogram
kPa	kilopascal
km^2	square kilometer
kV	kilovolt (1000 volts)
kVA	kilovoltampere
kW	kilowatt
m	meter
m^2	square meter
m^3	cubic meter
m	milli (10^{-3})
mA	milliampere
mi	mile (international)
mm	millimeter
min	minute (time)
N	newton
Pa	pascal
lb	pound
s	second (time)
V	volt
W	watt

ABBREVIATIONS

AC: Alternating Current (electricity; physics)
ACGIH: American Conference of Governmental Industrial Hygienists
AED: Automated External Defibrillator
AFFF: Aqueous Film Forming Foam
AFS: American Foundry Society
AIHI: American Industrial Hygiene Association
ANSI: American National Standards Institute
ASCE: American Society of Civil Engineers
ASME: American Society of Mechanical Engineers
ASTDR: Agency for Toxic Substances and Disease Registry
ASTM: American Society for Testing and Materials
ATB: Anti-Two-Block
AU: Absorption Units
C: Celsius
CaF: Calcium Fluoride
CDC: Center for Disease Control
CERCLA: Comprehensive Environmental Response Compensation and Liability Act
CGA: Compressed Gas Association
CGI: Combustible Gas Indicators
CISD: Critical Incident Stress Debriefing
Cm: Centimetres
CNC: Condensation Nucleus Counter
CO: Carbon monoxide
CO_2: Carbon Dioxide
CPR: Cardiopulmonary Resuscitation
CSA: Construction Safety Association
CSHO: Compliance Safety and Health Officer
dB: Decibels
DC: Direct Current (electricity)
DUTs: Devices Under Test
EA: Electricity Act
EAR: Expired Air Resuscitation
EHSS: Environmental Health and Safety Services
EHV: Extra High Voltage
EMS: Emergency Medical Services
EPA: Environmental Protection Agency
EPS: Electric Power Systems
EPSR: Electric Power Sector Reform
ESCBA: Escape Self-Contained Breathing Apparatus
ESLI: End of Service Life Indicator
FID: Flame Ionization Detector
FME: Federal Ministry of Environment
FMIS: Facilities Management Information System
GFCI: Ground Fault Circuit Interrupter
GHz: Gigahertz (thousands of MHz)
GM: Geiger-Muller

H_2S: Hydrogen Sulphide
HASPs: Health and Safety Plans
HAZWOPER: Hazardous Waste Operations and Emergency Response
HEPA: High Efficiency Particulate Air
Hg: Mercury
HR: Human Resource
HRT: Health Response Team
HSC: Health and Safety Coordinator
HSE: Health Safety and Environment
HSO: Health and Safety Officer
HV: High Voltage
Hz: Hertz
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
IDLH: Immediately Dangerous to Life and Health
IEC: International Electrotechnical Commission
IEEE: Institute of Electrical and Electronic Engineers
IMO: International Maritime Organisation
ISO: International Organization for standardisation
ISPON: Institute of Safety Professionals of Nigeria
Kg: Kilograms
kHz: Kilohertz (1000 Hertz)
kPa: Kilo Pascal
LEL: Lower Explosive Limit
LFL: Lower Flammable Limit
LiF: Lithium Fluoride
LMI: Load Moment Indicators
m: Meters
MeV: Mega Electron Volt
MHz: Megahertz (million Hertz)
mR/hr: Milliroentgen Per Hour
MRLS: Minimal Risk Levels
MSDS: Material Safety Data Sheets
MUC: Maximum Use Concentration
MW: Molecular Weight
NAPTIN: National Power Training Institute of Nigeria
NEMSA: Nigerian Electricity Management Services Agency
NEHSSM: Nigerian Electricity Health & Safety Standards Manual 2008 Version 1
NERC: Nigerian Electricity Regulatory Commission
(N.E.R.C.): North American Electric Reliability Corporation
NESI: Nigerian Electricity Supply Industry
NESREA: National Environmental Standards and Regulations Enforcement Agency
NFPA: National Fire Protection Agency
NHCA: National Hearing Conservation Association
NIOSH: National Institute of Occupational Safety and Health
NO: Nitric Oxide
NRR: Noise Reduction Rating
NRTL: Nationally Recognised Testing Laboratories

NTOF: National Traumatic Occupational Facilities
O_3: Ozone
OH&S: Occupational Health and Safety
OSHA: Occupational Safety and Health Administration
Pa: Pascal
PAPR: Powered Air Purifying Respirator
PEL: Permissible Exposure Limits
PID: Photo Ionisation Detectors
PM: Particulate Matter
PPE: Personal Protective Equipment
ppm: Parts Per Million
PVC: Polyvinyl Chloride
QLFT: Qualitative Fit Test
QNFT: Quantitative Fit Test
RCRA: Resource Conservation and Recovery Acts
REL: Recommended Exposure Limits
RF: Radiated Frequency
RFC: Reference Concentration
RFD: Reference Dose
R/hr: Roentgens Per Hour
RH: Relative Humidity
SA: Spectrum Analyzer
SAR: Supplied Air Respirator
SARA: Superfund Amendments and Reauthorisation Act
SCBA: Self-Contained Breathing Apparatus
SHELS: Significant Human Exposure Levels
SLTC: Salt Lake Technical Center
SO_2: Sulphur Dioxide
SPL: Sound Pressure Level
STEL: Short-Term Exposure Limits
SVOCs: Semi-Volatile Organic Compounds
TCN Transmission Company of Nigeria
TD: Thermal Desorption
TICs: Toxicity Identified Compounds
TLD: Thermoluminescent Dosimeters
TLV: Threshold Limit Value
TWA: Time Weighted Average
UEL: Upper Explosive Limits
U.K: United Kingdom
U.S: United States
UV: Ultraviolet
VOCs: Volatile Organic Compound
VOM: Volt-Ohm-Meter
VSA: Vector Signal Analyzer
WHO: World Health Organisation

DEFINITIONS OF SPECIAL TERMS

In this Code, unless the context otherwise requires -

"Act" means the Electricity Act 2023 or any subsequent amendment in respect thereof.

"Administrative authority" means the governmental authority exercising jurisdiction over the application of this Code which in this case is Nigerian Electricity Regulatory Commission ("NERC" or the "Commission").

"Ampacity" means the current-carrying capacity, expressed in amperes, of an electric conductor under stated thermal conditions.

"Anchorage" means a secure point of attachment to which the fall protection system is connected.

"Automatic" means self-acting, operating by its own mechanism when actuated by some impersonal influence, for example, a change in current strength; not manual; without personal intervention. Remote control that requires personal intervention is not automatic, but manual.

"Bonding" means the electrical interconnecting of conductive parts, designed to maintain a common electrical potential.

"Cable" means a conductor with insulation, or a stranded conductor with or without insulation and other coverings (single-conductor cable), or a combination of conductors insulated from one another (multiple-conductor cable).

"Cable jacket" means a protective covering over the insulation, core, or sheath of a cable.

"Cable sheath" means a conductive protective covering applied to cables.
NOTE: A cable sheath may consist of multiple layers, of which one or more is conductive.

"Cable terminal" means a device that provides insulated egress for the conductors. Syn: **termination**.

"Circuit" means a conductor or system of conductors through which an electric current is intended to flow.

"Circuit breaker" means a switching device capable of making and breaking currents under normal and abnormal circuit conditions, such as short circuit.

"Citation" means a reference to a section of the Health and Safety Code for the Nigerian Electricity Supply Industry which has been violated. Citation is a warning.

"Clearance" means the clear distance between two objects measured from surface to surface.

"Climbing" means the vertical movement (ascending and descending) and horizontal movement to access or depart the worksite.

"Code" means the Health and Safety Code for the Nigerian Electricity Supply Industry unless otherwise specified.

"Common use" means simultaneous use by two or more utilities of the same kind.

"Commission" means Nigerian Electricity Regulatory Commission.

"Competent person" means a person with a minimum of General HSE certificate, HSE Level 3 certificate and minimum of 5 years working experience in the safety profession and must be a member of a Safety professional body.

"Conductor" means –

1. **A material**, usually in the form of a wire, cable, or bus bar, suitable for carrying an electric current.
2. **Bundled Conductor -** An assembly of two or more conductors used as a single conductor and employing spacers to maintain a predetermined configuration. The individual conductors of this assembly are called sub-conductors.
3. **Covered Conductor -** A conductor covered with a dielectric having no rated insulating strength or having a rated insulating strength less than the voltage of the circuit in which the conductor is used.
4. **Grounded Conductor -** A conductor that is intentionally grounded, either solidly or through a non-interrupting current-limiting device.
5. **Grounding Conductor -** A conductor that is used to connect the equipment or the wiring system with a grounding electrode or electrodes.
6. **Insulated Conductor -** A conductor covered with a dielectric (other than air) having a rated insulating strength equal to or greater than the voltage of the circuit in which it is used.
7. **Lateral Conductor -** A wire or cable extending in a general horizontal direction at an angle to the general direction of the line conductors, and entirely supported on one structure.
8. **Line Conductor -** (Overhead or underground supply lines.) A wire or cable intended to carry electric current, extending along the route of the line, supported by poles, towers, or other structures, but not including vertical or lateral conductors.

9. **Open Conductor -** A type of electric supply or communication line construction in which the conductors are bare, covered, or insulated and without grounded shielding, individually supported at the structure either directly or with insulators. Syn: **open wire.**

"Conductor Shielding" means an envelope that encloses the conductor of a cable and provides an equipotential surface in contact with the cable insulation.

"Conduit" means a structure containing one or more ducts. Conduit may be designated as iron-pipe conduit, tile conduit, etc. If it contains only one duct, it is called a single-duct conduit; if it contains more than one duct, it is called a multiple-duct conduit, usually with the number of ducts as a prefix, e.g., two-duct multiple conduits.

"Conduit System" means any combination of ducts, conduits, manholes, hand-holes, and/or vaults joined to form an integrated whole.

"Continuous violation" means where the defaulter refuses to desist from violation after 30 days of citation (warning).

"Current-carrying Part" means a conducting part intended to be connected in an electric circuit to a source of voltage. Non-current-carrying parts are those not intended to be so connected.

"De-energised" means disconnected from all sources of electrical supply by open switches, disconnectors, jumpers, taps, or other means. De-energized conductors or equipment could be electrically charged or energised through various means, such as induction from energised circuits, portable generators, lighting, etc.

"Designated Person" means a qualified person designated to perform specific duties under the conditions existing. Syn: **designated employee.**

"Disconnecting or Isolating Switch" means a mechanical switching device used for changing the connections in a circuit or for isolating a circuit or equipment from a source of power. Please note, it is required to carry normal load current continuously as well as abnormal or short-circuit current for short intervals, as specified. It is also required to open or close circuits either when negligible current is broken or made, or when no significant change in the voltage across the terminals of each of the switch poles occurs. Syn: **Disconnector, Isolator.**

"Distribution Company" or "DisCo" means a holder of a distribution licence who operates a distribution network that is connected to the transmission system operated by the system operation licensee.

"Duct" means a single enclosed raceway for conductors or cables.

"Effectively Grounded" means intentionally connected to earth through a ground connection or connections of sufficiently low impedance and having sufficient current-carrying capacity to limit the build-up of voltages to levels below that which may result in undue hazard to persons or to connected equipment.

"Electric Supply Equipment" means equipment that produces, modifies, regulates, controls, or safeguards a supply of electric energy. Syn: **supply equipment.**

"Electric Supply Station" means any building, room, or separate space within which electric supply equipment is located and the interior of which is accessible, as a rule, only to qualified persons. This includes generating stations and substations, including their associated generator, storage battery, transformer, and switchgear rooms or enclosures but does not include facilities such as pad-mounted equipment and installations manholes and vaults.

1. **Generating Station -** A plant wherein electric energy is produced by conversion from some other form of energy (e.g., chemical, nuclear, solar, mechanical, or hydraulic) by means of suitable apparatus. This includes all generating station auxiliaries and other associated equipment required for the operation of the plant.
2. **Substation -** An enclosed assemblage of equipment, e.g., switches, circuit breakers, buses, and transformers, under the control of qualified persons, through which electric energy is passed for the purpose of switching or modifying its characteristics.

"Employee" means a staff employed by a licensee of the Commission.

"Employer" means a licensee or any entity operating an electricity undertaking pursuant to a licence issued by the Commission under the Electricity Act 2023.

"Enclosed" means surrounded by case, cage, or fence designed to protect the contained equipment and limit the likelihood, under normal conditions, of dangerous approach or accidental contact by persons or objects.

"Energised" means electrically connected to a source of potential difference, or electrically charged to have a potential significantly different from that of the earth in the vicinity. Syn: **live.**

"Equipment" means a general term including fittings, devices, appliances, fixtures, apparatus, and similar terms used as part of or in connection with an electric supply or communications system.

"Exposed" means not isolated or guarded.

"Fall Arrest System" means the assemblage of equipment, such as a line worker's body belt, aerial belt, full body harness, safety net, etc in conjunction with a connecting means, with or without an energy absorbing device and an anchorage to limit the forces a worker can experience during a fall.

"Fall Prevention System" means a system, which may include a positioning device system, intended to prevent a worker from falling from an elevation.

"Fall Protection Program" means a program intended to protect workers from injury due to falls from elevations.

"Fall Protection System (hardware)" means consisting of either a fall prevention system or a fall arrest system.

"First Degree": means burns which cause minimal skin damage and are considered superficial since they affect the top layer of the skin. A mild sunburn is an example of this type of burn, where the burn site is red, painful, dry and without blister.

"Fourth Degree" means burns in which all skin layers are affected, and there is also potential for damage to muscle, tendons, and bone. Skin grafts do not work on these severe burns, so much so that fourth-degree burns may require amputation if injury occurs in a limb or extremity.

"Functional safety" means part of the overall safety relating to the equipment under control (EUC) and the EUC control system which depends on the correct functioning of the Electrical/Electronic/Programmable Electronic Safety-related Systems (E/E/PE, or E/E/PES) safety-related systems, other technology safety-related systems and external risk reduction facilities.

"Generating station" means the same as the definition of "generation station" as provided under **electric supply station**.

"GenCos" means Generation Companies.

"Grounded" means connected to or in contact with earth or connected to some extended conductive body that serves instead of the earth.

"Grounded effectively" means the same as the definition provided for **"effectively grounded"**.

"Grounded system" means a system of conductors in which at least one conductor or point is intentionally grounded, either solidly or through a non-interrupting current-limiting device.

"Guarded" means Covered, fenced, enclosed, or otherwise protected, by means of suitable covers or casings, barrier rails or screens, mats, or platforms, designed to limit the likelihood, under normal conditions, of dangerous approach or accidental contact by persons or objects.
NOTE: Wires that are insulated but not otherwise protected are not normally considered to be guarded. See exceptions under applicable rules.

"Hand hole" means an access opening, provided in equipment or in a below-the-surface enclosure in connection with underground lines, into which personnel reach but do not enter, for the purpose of installing, operating, or maintaining equipment or cable or both.

"Harness" means a component with a design of straps that are fastened about the worker in a manner to contain the torso and distribute the fall arrest forces over at least the upper thighs, pelvis, chest, and shoulders with means for attaching it to other components and subsystems.
NOTE: Wherever the word harness is used in this Code, it refers to full body harness.

"In Service" means the lines and equipment when connected to the system and intended to be capable of delivering energy or communication signals, regardless of whether electric loads or signalling apparatus are presently being served from such facilities.

"Insulated" means separated from other conducting surfaces by a dielectric (including air space) offering a high resistance to the passage of current.
NOTE: When any object is said to be insulated, it is understood to be insulated for the conditions to which it is normally subjected. Otherwise, it is, within the purpose of these rules, uninsulated.

"Insulation" (as applied to cable) means that which is relied upon to insulate the conductor from other conductors or conducting parts or from the ground.

"Insulation shielding" means an envelope that encloses the insulation of a cable and provides an equipotential surface in contact with the cable insulation.

"Insulator" means insulating material in a form designed to support a conductor physically and electrically separates it from another conductor or object.

"Isolated" means not readily accessible to persons unless special means for access are used.

"Isolator" means the same as the definition provided for "disconnecting or isolating switch".

"Jacket" means a protective covering over the insulation, core, or sheath of a cable.

"Joint Use" means simultaneous use by two or more kinds of utilities.

"Land Use Act" means the Land Use Act 1978, Laws of the Federation of Nigeria

"Lanyard" means a flexible line or webbing, rope, wire rope, or strap that generally has a connector at each end for connecting the line worker's body belt, aerial belt, or full body harness to an energy-absorbing device, lifeline, or anchorage.

"Lines" means –

1. **Communication Lines -** The conductors and their supporting or containing structures that are used for public or private signal or communications service, and which operate at potentials not exceeding 400V to ground or 750V between any two points of the circuit, and the transmitted power of which does not exceed 150W. When operating at not more than 90V ac or 150V dc, no limit is placed on the transmitted power of the system. Under specified conditions, communication cables may include communication circuits exceeding the preceding limitation where such circuits are also used to supply power solely to communications equipment.

   NOTE: Telephone, telegraph, railroad signal, data, clock, fire, police alarm, cable television, and other systems conforming to the above are included. Lines used for signalling purposes, but not included under the above definition, are considered as supply lines of the same voltage and are to be so installed.

2. **Electric Supply Lines -** Those conductors used to transport electric power and their necessary supporting or containing structures. Signal lines of more than 400V are always supply lines within the meaning of the rules, and those of less than 400V may be considered as supply lines, if so run and operated throughout. Syn: **supply lines.**

"Line-worker's body belt" means a belt that consists of a belt strap and D-rings, which may include a cushion section or a tool saddle.

Live: See: **energised.**

"Manhole" means a subsurface enclosure that personnel may enter used for the purpose of installing, operating, and maintaining submersible equipment and cable.

"Manhole Cover" means a removable lid that closes the opening to a manhole or similar subsurface enclosure.

"Manhole Grating" means a grid that provides ventilation and a protective cover for a manhole opening.

"Manual" means capable of being operated by human intervention.

"Minimum Approach Distance" means the closest distance a qualified employee is permitted to approach either an energised or a grounded object, as applicable to the work method being used.

"Multi-grounded" or "Multiple Grounded System" means a system of conductors in which a neutral conductor is intentionally grounded solidly at specified intervals. A multi-grounded or multiple-grounded system may or may not be effectively grounded. See: **effectively grounded.**

"Networks (Electricity)" means any connection of cables, conductors and electrical apparatus/equipment used to transport electrical power.

"Neutral Conductor" means a system conductor other than a phase conductor that provides a return path for current to the source. Not all systems have a neutral conductor. An example is an ungrounded delta system containing only three energised phase conductors.

"Operating Companies" means companies licensed by the Commission to generate, transmit, distribute and trade in electricity in accordance with the provisions of part IV sections (64), (65), (66), (67), (68) and (69) of the Electricity Act, 2023.

"Out of Service" means when lines and equipment are disconnected from the system and when not intended to be capable of delivering energy or communications signals.

Overhead Ground Wire means the same as definition provided for **"Shield Wire".**

Overvoltage: Voltage between two points of a system that is greater than the highest value appearing between the same two points under normal service conditions. Over-voltages include but are not limited to, switching impulse (switching surge) over-voltages and temporary (transient) over-voltages.

"Pad-Mounted Equipment" means enclosed equipment, the exterior of which enclosure is at ground potential, positioned on a surface-mounted pad.

"Parties" means the licensees, the Regulator (NERC) or an appointee of NERC and any person involved or his/her representative.

"Positioning Device System" means a system of equipment or hardware that, when used with its line worker's body belt or full body harness, allows a worker to be supported on an elevated vertical surface, such as a pole or tower, and work with both hands-free.

"Positioning Strap" means a strap with snap hook(s) to connect to the D-rings of a line-worker's body belt or full-body harness.

"Pre-stressed-concrete structures" means concrete structures that include metal tendons that are tensioned and anchored either before or after the curing of the concrete.

"Pulling Iron" means an anchor secured in the wall, ceiling, or floor of a manhole or vault to attach rigging used to pull cable.

"Pulling tension" means the longitudinal force exerted on a cable during installation.

"Qualified Person" means having been trained in and having demonstrated adequate knowledge of the installation, construction, or operation of lines and equipment and the hazards involved, including identification of and exposure to electric supply and communication lines and equipment in or near the workplace. An employee who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training, and who is under the direct supervision of a qualified person, is considered to be a qualified person for the performance of those duties.

"Qualified Climber" means a worker who, by reason of training and experience, understands the methods and has routinely demonstrated proficiency in climbing techniques and familiarity with the hazards associated with climbing.

"Raceway" means any channel designed expressly and used solely for holding conductors.

"Random Separation" means installed with no deliberate separation.

"Remotely Operable" (as applied to equipment): means capable of being operated from a position external to the structure in which it is installed or from a protected position within the structure.

"Sag" means -

1. The distance measured vertically from a conductor to the straight line joining its two points of support. Unless otherwise stated in the rule, the sag referred to is the sag at the midpoint of the span.

2. **Initial Unloaded Sag -** The sag of a conductor prior to the application of any external load.

3. **Final Sag -** The sag of a conductor under specified conditions of loading and temperature applied, after it has been subjected for an appreciable period to the loading prescribed for the clearance zone in which it is situated, or equivalent loading, and the loading removed. The final sag shall include the effect of inelastic deformation.

4. **Final Unloaded Sag -** The sag of a conductor after it has been subjected for an appreciable period to the loading prescribed for the clearance zone in which it is situated, or equivalent loading, and the loading removed. The final unloaded sag shall include the effect of inelastic deformation.

5. **Total Sag -**The distance measured vertically from the conductor to the straight line joining its two points of support, under conditions of ice loading equivalent to the total resultant loading for the clearance zone in which it is located.

6. **Maximum Total Sag -** The total sag at the midpoint of the straight line joining the two points of support of the conductor.

7. **Apparent Sag of a Span -** The maximum distance between the wire in a given span and the straight line between the two points of support of the wire, measured perpendicularly from the straight line.

8. **Sag of a Conductor at any point in a Span -** The distance measured vertically from the particular point in the conductor to a straight line between its two points of support.

9. **Apparent Sag at any point in the Span -** The distance, at the particular point in the span, between the wire and the straight line between the two points of support of the wire, measured perpendicularly from the straight line.

"Second Degree" means the damage from a burn which extends beyond the top layer of the skin and can often cause the skin to blister or become extremely red and sore.

"Separation" means the distance between two objects, measured surface to surface, and usually filled with a solid or liquid material.

"Service Drop" means the overhead conductors between the electric supply line and the building or structure being served.

"Service Point" means the point of connection between the facilities of the serving utility and the premises wiring.

"Shield Wire" (also referred to as overhead ground wire, static wire, or surge-protection wire) means a wire or wires, which may or may not be grounded, strung parallel to and above phase conductors to protect the power system from lightning strikes.

"Significant incident" means any actual or alleged event or situation that creates a significant risk of substantial or serious harm to an individual or property.

"Single-grounded System" or "Uni-grounded System" A system of conductors in which one conductor is intentionally grounded solidly at a specific location, typically at the source.

"Span Length" means the horizontal distance between two adjacent supporting points of a conductor.

"Span Wire" means an auxiliary suspension wire that serves to support one or more trolley contact conductors or a light fixture and the conductors that connect it to a supply system.

"Static Wire" means the same as the definition provided for "**Shield Wire".**

"Structure Conflict" means a line so situated with respect to a second line that the overturning of the first line will result in contact between its supporting structures or conductors and the conductors of the second line, assuming that no conductors are broken in either line.

"Substation" means the same as the definition of "substation" **provided** under "**Electric Supply Station".**

"Supply Equipment" means the same as the definition provided for "**Electric Supply Equipment".**

Supply Station means the same as the definition provided for "**Electric Supply Station".**

"Supporting Structure" means the main supporting unit (usually a pole or tower) is used to support supply and/or communication conductors, cables, and equipment.

1. **Readily Climbable -** A supporting structure having sufficient handholds or footholds so that the structure can be climbed easily by an average

person without using a ladder, tools or devices, or extraordinary physical effort.

2. **Not readily Climbable -** A supporting structure not meeting the definition of a readily climbable structure, including but not limited to the following –

   a. Supporting structures, including poles and tower legs, with handholds or footholds arranged so that there is not less than 2.45 m (8 ft) between either-
      i. the lowest handhold or foothold and ground or another accessible surface; or
      ii. the two lowest handholds or footholds. Diagonal braces on towers are not considered to be handholds or footholds except at their points of attachment.
   b. Guy/Stay Wires

"Surge-protection Wire" means the same as the definition provided for "**Shield Wire".**

"Switch" means a device for opening and closing or for changing the connection of a circuit. In these rules, a switch is understood to be manually operable, unless otherwise stated.

"Switchboard" means a type of switchgear assembly that consists of one or more panels with electric devices mounted thereon, and associated framework.

"Tag" means accident prevention tag (DANGER, PEOPLE AT WORK, etc.) of a distinctive appearance used for the purpose of personnel protection to indicate that the operation of the device to which it is attached is restricted.

"Termination" means the same as the definition provided for **"Cable terminal".**

"Third Degree" means burns which destroy both the epidermis and the dermis, and they can also go as deep as to destroy tissue underneath. These burns can appear white or charred.

"Transferring" (as applied to fall protection) means the act of moving from one distinct object to another (e.g., between an aerial device and a structure).

"Transformer vault" means an isolated enclosure either above or below ground with fire-resistant walls, ceiling, and floor, in which transformers and related equipment are installed or which is not continuously attended to during operation. See also: **vault.**

"Transitioning" (as applied to fall protection): means the act of moving from one location to another on an equipment or a structure.

"Ungrounded System" means a system of conductors in which no conductor or point is intentionally grounded, either solidly or through a non-interrupting current-limiting device.

"Uni-grounded System means the same as the definition provided for "**Single-grounded System/Uni-grounded System".**

"User(s)" means the definition of User as defined in the Grid or Distribution Codes.

"Unloaded Tension" means **–**

1. **Initial -** The longitudinal tension in a conductor prior to the application of any external load.
2. **Final -** The longitudinal tension in a conductor after it has been subjected for an appreciable period to the loading prescribed for the loading district in which it is situated, or equivalent loading and the loading removed. Final unloaded tension shall include the effect of inelastic deformation (creep).

"Utility" means an organisation responsible for the installation, operation or maintenance of electric supply or communication systems.

"Utility Interactive System" means an electric power production system that is operating in parallel with and capable of delivering energy to a utility electric supply system.

"Utilisation Equipment" means equipment, devices and connected wiring that utilise electric energy for mechanical, chemical, heating, lighting, testing or similar purposes and are not part of supply equipment, supply lines or communication lines.

"Vault" means a structurally solid enclosure, including all sides, top and bottom, above or below ground where entry is limited to personnel qualified to install, maintain, operate or inspect the equipment or cable enclosed. The enclosure may have openings for ventilation, personnel access, cable entrance and other openings required for the operation of equipment in the vault.

"Voltage means –

1. The effective (rms) potential difference between any two conductors or between a conductor and ground. Voltages are expressed in nominal values unless otherwise indicated. The nominal voltage of a system or circuit is the value assigned to a system or circuit of a given

voltage class for the purpose of convenient designation. The operating voltage of the system may vary above or below this value.

2. **Voltage of circuit not effectively grounded. -** The highest nominal voltage available between any two conductors of the circuit.

   NOTE: If one circuit is directly connected to and supplied from another circuit of higher voltage (as in the case of an autotransformer), both are considered to be of the higher voltage, unless the circuit of the lower voltage is effectively grounded, in which case its voltage is not determined by the circuit of higher voltage. Direct connection implies electric connection as distinguished from connection merely through electromagnetic or electrostatic induction.

3. **Voltage of a constant-current circuit -** The highest normal full-load voltage of the circuit.

4. **Voltage of an effectively grounded circuit -** The highest nominal voltage available between any conductor of the circuit and ground unless otherwise indicated.

5. **Voltage to ground of –**

   i. **a grounded circuit -** The highest nominal voltage available between any conductor of the circuit and that point or conductor of the circuit that is grounded.
   ii. **an ungrounded circuit.** The highest nominal voltage available between any two conductors of the circuit concerned.

6. **Voltage to ground of a conductor of –**

   i. **a grounded circuit -** The nominal voltage between such conductor and that point or conductor of the circuit that is grounded.
   ii. **an ungrounded circuit -** The highest nominal voltage between such conductor and any other conductor of the circuit concerned.

"Wire gauges" means throughout these rules, the American Wire Gauge (AWG), formerly known as Brown & Sharpe (B&S), and other similar standards are the specified gauge for copper, aluminium, and other conductors, except only steel conductors, for which the Steel Wire Gauge (Stl WG) is used.

"Worksite" (as applied to fall protection) means the location on the structure or equipment where, after the worker has completed the climbing (horizontally and vertically), the worker is in a position to perform the assigned work or task.

INTRODUCTION TO THE HEALTH & SAFETY CODE FOR THE NIGERIAN ELECTRICITY SUPPLY INDUSTRY

PURPOSE

The purpose of this Code is for the practical safeguarding of persons during the installation, operation, or maintenance of electric supply and associated equipment.

The Code has sets of rules that contain the basic provisions that are considered necessary for the safety of employees and the public under specified conditions. This Code is not intended as a design specification or as an instruction manual.

SCOPE

a. This Code covers electricity supply lines, equipment, and associated work practices employed by a public or private electric supply, or in the exercise of its function as a utility. It covers similar systems under the control of qualified persons, such as those associated with an industrial complex or utility interactive system.

b. The Health & Safety ("H&S") Code for the Nigerian Electricity Supply Industry covers utility facilities and functions up to the service point as well as the utilisation of electricity at end users point.

c. H&S Code for the Nigerian Electricity Supply Industry covers street and area lights (supplied by underground or overhead conductors) under the exclusive control of utilities, other bodies, and agencies (including their authorised contractors) or other qualified persons (such as those associated with an industrial complex).

d. H&S Code for the Nigerian Electricity Supply Industry does not cover installations in mines, marine (excluding floating barges), railway rolling equipment, aircraft, or automotive equipment, or the utilisation of electricity within these areas.

GENERAL RULES

a. Electricity supply and associated equipment shall be designed, constructed, operated and maintained to meet the requirements of these rules.

b. The utilities, authorised contractors, or other entities, as applicable, performing design, construction, operation, or maintenance tasks for electric supply lines or equipment covered by this Code shall be responsible for meeting applicable requirements.

c. For all provisions not specified in this Code, construction and maintenance should be done in accordance with accepted good practice for the given local conditions known at the time by those responsible for the construction or maintenance of the supply lines and equipment.

APPLICATION

A. New Installations and Extensions:

1. These rules shall apply to all new installations, extensions, modifications and upgrades except that they may be waived or modified by the Commission. When so waived or modified, safety shall be provided to suit such change(s).

   EXAMPLE: Alternative working methods, such as the use of barricades, guards, or other electrical protective equipment, may be implemented along with appropriate alternative working clearances as a means of providing safety when working near energised conductors.

2. Types of construction and methods of installation other than those specified in this Code may be used experimentally to obtain information if done where:

   a. Qualified supervision is provided;
   b. Equivalent or better safety consideration is provided; and
   c. Facilities are jointly used and affected parties in agreement.

B. Existing Installations:

1. Where an existing installation meets, or is altered to meet these rules, such installation is in compliance with this Code and is not required to comply with any previous edition.

2. Existing installations, including maintenance replacements, that currently comply with prior editions of the Code, are not required to be modified to comply with these rules except –

   a. as may be required for safety reasons by the Commission; or
   b. as required by the existing Nigerian Electricity Health and Safety Standards Manual.

3. Where conductors or equipment are added, altered, or replaced on an existing structure, the structure or the facilities on the structure need not be modified or replaced if the resulting installation will be in compliance with either –

   a. the rules that were in effect at the time of the original installation;

b. the rules in effect in a subsequent edition to which the installation has been previously brought into compliance; or
c. the rules of this edition in accordance with the Nigerian Electricity Health and Safety Standards Manual (the "Manual").

C. Inspection and Work Rules

Inspection and work rules in this H&S Code shall apply to the inspection of or work on all new and existing installations.

WAIVER

The person responsible for an installation may modify or waive rules in the case of emergency installations.

A. **Emergency installations**:

1. The clearances required in Part II Section 2.9 of the Manual may be decreased for emergency installations.

2. Emergency installations shall be removed, replaced, or relocated, as desired, as practicably possible.

B. **Temporary overhead installations**:

When an installation is temporary or where facilities are temporarily relocated to facilitate other work, the installation shall meet the requirements for non-temporary installation.

INTENT

A. The word **"shall"** indicate provisions that are mandatory.

B. The word "**should**" indicate provisions that are normally and generally practicable for the specified conditions. However, where the word "**should**" is used, it is recognised that, in certain instances, additional local conditions not specified herein may make these provisions impracticable. When this occurs, the difference in conditions shall be appropriately recognised and the general rules applied.

C. Exceptions to a rule have the same force and effect required or allowed by the rule to which the exception applies.

D. The word "**RECOMMENDATION**" indicates provisions considered desirable, but that are not intended to be mandatory.

E. The word "**NOTE**" or the word "**EXAMPLE**" used in a rule indicates material provided for information or illustrative purposes only. "**NOTES**" and "**EXAMPLES**" are not mandatory and are not considered to be a part of Code requirements.

F. A "**RECOMMENDATION**," "**EXCEPTION**," or "**NOTE**" applies to all texts in that rule above its location that is indented to the same level.

EFFECTIVE DATE

This Code shall come into force on the date that it is approved by a resolution of the Commission.

NOTE: A period of 90 days is allowed for utilities and regulatory authorities to acquire copies of the Health & Safety Code for the Nigerian Electricity Supply Industry and to make necessary changes for the implementation of this Code.

LIST OF TABLES

PART I
OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM

ARTICLE 1: ELECTRICAL BASED PREMISES

1. INTRODUCTION

Both employers and employees shall adhere to basic electrical standards. The prevention and mitigation of electrical risks necessitates a two-pronged approach by employers, encompassing both the direct implementation of controls and the cultivation of a sustainable HSE culture that prioritises the safety and well-being of personnel and facilities.

Full compliance with this Code, other international safety standards and best practices is fundamental. The Occupational Health and Safety management system shall include various programmes aimed at ensuring the safety of the employees, facilities, and protection of the environment.

All parties including employers, employees and third parties have shared responsibilities of ensuring safety in electrical based premises.

1.1 SCOPE

The scope of the OHS management programme shall cover all aspects of safety requirements applicable to the Licensees which include external and internal issues related to all forms and types of electricity generation including embedded and captive generation, transmission, and distribution including independent electricity distribution network, eligible customers, end users and general public. It also covers construction and workplace safety. This Code excludes nuclear power generation and coal mining safety.

All licensees are obligated to adhere to the following safety management techniques -

a. identification of the fundamental principles of safety management.
b. recognition of the key elements of safety management system.
c. determining roles and responsibilities of the employees, line management, supervisors, safety and health professionals, employees as well as third parties.
d. use of measurement tools to track the progress of the organisation's safety management system.
e. carrying out a comprehensive safety management audit.
f. creating an action plan to improve safety management in the organisation.

1.2. PROCESSES AND REQUIREMENTS

Every electrical based premises is required under the OHS Management system to-

a. Establish a good house-keeping program, train the employees to have adequate knowledge of effective housekeeping, ensure observance to eliminate hazards and promote good safety practices.

b. Provide a good housekeeping program that ensures an orderly organisation of stored materials and the movement from point of entry to exit. All storage areas shall be clearly marked.

c. Provide refuse bins at strategic locations and ensure a regular disposal or evacuation of same.

d. In complying with this section, every employer shall have recourse to the full provisions of Part 1 Section 1 (c) & (d) of the Manual. The Employer shall ensure that: -

   i. Compressed air shall not be used for removing dust, dirt or chips from equipment or work surfaces (except when necessary and under safety precaution).

   ii. Employers' facilities are adequate, clean, and well maintained and lockers are provided for storing employees' personal belongings.

   iii. Adequate washroom facilities are provided in line with Part I section I(c) (2)(ii) and Part III Section 3(f) (5-10) of the Manual.

   iv. Smoking, eating, or drinking in the work area is prohibited except at designated areas.

   v. Trapping chips, shavings and such other materials are cleaned up regularly to prevent accumulation of dirt and entrance ways shall have anti-slip flooring.

   vi. Light-coloured walls are in place to reflect light and shall avoid dirty or dark-coloured walls which absorb light. Also contrasting colours used as caution for physical hazards must be utilised and obstructions such as pillars must be properly marked.

   vii. Railings are properly highlighted, and no other safety equipment shall be used as substitute for guards. Every employer's housekeeping program shall outline the regulations and standards for colours as stipulated in Part III Section 3(h) (2-3) of the Manual.

   viii. Clean light fixtures are provided to improve lighting efficiency. A regular work environment should be properly illuminated as provided in section 1.3 of NESIS Regulations, 2015.

ix. Aisles are sufficiently wide to accommodate people and vehicular/equipment movement where applicable adequately and safely.

x. Steps to prevent spills by regularly cleaning and maintaining machines and equipment are in place. Used absorbents must be disposed of properly and safely.

xi. Workers regularly inspect, clean, and immediately remove any damaged or worn-out tools from service.

xii. A good waste management program for collection, grading, and sorting of waste materials for prompt and safe disposal is put in place.

xiii. All inflammable, combustible, toxic and other hazardous materials are stored in approved containers at designated areas that are appropriate for the different hazards that they pose. Storage of such materials shall be in accordance with the requirements specified in the Fire Codes and other regulations of environmental and occupational health and safety agencies within Nigeria.

1.3. ROLES AND RESPONSIBILITIES

Every licensee is under obligation to provide and demonstrate leadership and commitment with respect to occupational health and safety management system in line with best practices.

a. **Every Employer shall:**

i. Establish and maintain a comprehensive occupational safety program, including a written safety policy (duly signed by the MD/CEO) and an accident investigation program in line with Part I section I(b) of the Nigerian Electricity Health & Safety Standards Manual.

ii. Where section 1.3 (a)(i) above conflicts with the provision of any section of this Code, the provisions of the Code shall prevail.

iii. Provide a safe work environment for all employees, free from any hazard and complying with legal and recommended best practices defined under Part I Section I(b) of the Manual.

iv. Guarantee the health and safety of employees in the workplace and shall prevent work - related injury and disease.

v. Provide adequate training for employees on best practices to establish and maintain a safe work environment and keep records of such trainings.

vi. Provide every employee with the operational information, instructions and training they need to do their job safely and employees should be promptly informed of any changes made to it.

vii. Consult with employees (including those with disability) in formulating policies on health and safety and on matters affecting health and safety in the workplace.

viii. Monitor/ inspect its workplaces regularly, develop action plans to close out observed findings and keep proper records.

ix. Facilitate wide-spread employee communication and awareness through consultations on workplace safety by mobilizing support persons as well as interpreters for the employees that might need such assistance.

x. Ensure that Occupational Health and Safety (OH&S) procedures are implemented wherever work is being carried out in accordance with the Manual as the minimum requirements.

xi. Ensure that employees are trained on the Health and Safety policy during induction, given relevant training on any new equipment or machinery and employees are provided with regular information and updates on safety trainings, re-training, and certification programmes.

xii. Provide adequate training on safety procedures in appropriate formats, including evacuation and general emergencies.

xiii. Develop emergency preparedness and response plans (Fire, Flood, Pandemic, Epidemic, Insecurity, Electrocution etc.) and ensure training of employees and third parties.

xiv. Make available to employees, copies of Health & Safety Policy, all other relevant Policies and display Health and Safety Code for the Nigerian Electricity Supply Industry or Regulations and any other relevant regulations.

xv. Taking oversight function, responsibility, and accountability for prevention of work-related injury, ill health as well as provision of safe workplaces and activities.

xvi. Ensuring that there is an established OHS manual and policy related to OHS objective and compactible with the Health and Safety Code for the Nigerian Electricity Supply Industry and strategic direction of the company.

xvii. Ensure availability of resources needed to establish, implement, maintain, and improve OHS management system.

xviii. Ensure the hazard/risk register and aspect/impact register with their controls are fully established.

xix. Have a Safety Committee which shall assist and support the Safety Manager.

xx. Conduct annual comprehensive medical check-up of the employees (high blood pressure, liver function test, blood sugar, hepatitis, kidney test, heart, eye, ear etc but not limited to the above mentioned).

xxi. In ensuring a culture of safety-

A. Clearly define work standards for each operating facility and ensure that the procedures and policies under Part I Section 1 (a) to (e) of the Nigerian Electricity Health and Safety Standards Manual are adopted and enforced.

B. Have a corporate culture that promotes and makes safety of workers and the environment a priority in line with the provisions of Part I Section 1 (a) to (e) of the Manual.

C. Carefully assess site-specific work practices and work environments to identify high-risk areas and develop mitigation plans for enhanced occupational health and safety performance.

D. Use employees' documented assessments to prevent potential accidents before they occur and create a safer workplace, work-culture and environment in which employees carry out their work.

xxii. Ensure the provision of adequate tools, equipment, and machinery for the workers.

b. Every Employee shall:

i. Know and follow safety and health regulations relating to the job.

ii. Follow work procedures in a safe manner.

iii. Request to be trained before beginning work in a new area where competency is required.

iv. Work safely always and encourage co-workers to do same.

v. Correct or immediately report any unsafe condition or act to the supervisor and report any injury to a First Aid attendant or supervisor.

vi. Take the initiative to make suggestions for improved safety conditions in the workplace and make the workplace safe.

vii. Participate actively to ensure an effective OHS Management System is implemented.

c. Employers and Employees shall ensure that:

i. Workplace practices are safe and not hazardous to human health.

ii. Tools, equipment, and machinery are statutorily inspected and certified fit for use by supervisors and third-party inspectors as required and are always kept safe.

iii. When storing, transporting or working with dangerous tools and substances, the best safety practices are fully observed, and the health or lives of employees are not put at risk or in danger.

d. The Supervisor shall:

i. Instruct and train new workers on work safety matters, procedures, assign tasks to them, check their progress, and ensure that only adequately trained, qualified and authorised workers operate tools, equipment and use hazardous chemicals.

ii. Ensure that daily Toolbox talk is carried out before commencement of task and signed off by everyone that partakes in the Toolbox.

iii. Ensure that equipment and materials are properly handled, stored, and maintained, enforce safety regulations, correct unsafe acts, and identify workers with problems such as drugs or alcohol abuse that could affect their performance. And follow up with interviews and referrals where necessary, inspect hazardous work environment and report promptly.

e. Third Party Responsibilities shall:

i. comply with all established electrical safety rules and instructions issued by the company.

ii. not to willfully interfere with or misuse anything provided for electrical safety at the workplace.

iii. not to willfully place any person at risk of injury, ill health, or death.

1.4. INSTRUCTIONS

a. Site/Office Orientation

All new employees shall have a site orientation from their supervisor and are instructed on safety procedures including: the layout of the section, safety orientation, fire exit locations, emergency procedures, emergency equipment and location of First Aid facilities or services.

b. New Employee Orientation

i. Every Employer shall have a Safety Manager, who shall conduct staff training relating to classroom orientation/training, prepare all the training materials (handouts, forms, checklists, lesson plan, etc.), conduct employee evaluation, and maintain all documentations.

ii. The facility supervisor(s) shall conduct on-the-job training for new employees, and carry out observations, competency evaluation and performance analysis of the employee before issuance of competency to work.

iii. During the orientation period, the Employer shall ensure that new workers are introduced to all the basic safety information that apply to their work areas, such as:

a. General hazards in the work area.

b. Specific hazards involved in each task the employee performs.

c. Hazards associated with other areas of the facility.

d. Company safety policies and work rules.

e. Proper safety practices and procedures to prevent accidents; what to do in case of an accident or injury.

f. The location of emergency equipment such as firefighting equipment, eyewash stations, first-aid supplies, etc.; emergency evacuation procedures and routes.

g. Smoking regulations and designated smoking areas.

h. How to report emergencies, accidents, and near misses.

i. How to select, use and care for Personal Protective Equipment (PPEs).

j. Good housekeeping rules.

k. Facility security procedures and systems.

l. How to use tools and equipment safely.

m. Publication on Frequently Asked Questions (FAQs) in Health and Safety areas; how to report safety questions and problems.

n. Safe lifting techniques and materials handling procedures; and

o. Safe methods for handling, using, or storing hazardous materials and the location of material safety data sheets.

iv. Every Employer shall ensure that orientation programs are updated and refined by reviewing accident and near miss reports to reflect early warning signs of new or recurrent hazards in the workplace which must be corrected to avoid injury, loss or damage to persons or equipment.

c. Nature of Employee Orientation

Every Employer shall use the checklist contained in this Code to ensure that all new employees receive orientation on safety awareness and information on formal training programs.

d. Workers' Rights

All employers shall provide a safe workplace to their workers and ensure strict compliance with the provisions of the Nigerian Electricity Health and Safety Standards Manual.

Under this Section, the underlisted rights of every worker shall be provided by their Employers -

I. Adequate safety training in accordance with NERC established standards in Part I Section 1(e) of the Nigerian Electricity Health & Safety Standards Manual 2008 Version 1.

II. Subject to the above sections, every Employer shall have the right of appeal against NERC's Orders or decisions by:

   a. Filing a formal appeal of deadlines for correction of hazards.

   b. Filing an appeal of the deadlines that NERC sets for the Employer to correct any violation in the citation issued to the Employer.

   c. Filing a letter to NERC within 10 working days from the date the Employer posts the notice requesting an extension of the abatement deadline if the time granted is too short.

   d. Filing a discrimination complaint within 30 days where the employee feels he/she has been unduly punished or discriminated against for exercising his/her health and safety rights or for refusing to work under unsafe conditions posing imminent danger of a serious injury or death, provided also that there was insufficient time to report the matter to NERC for investigation.

   e. Requesting NERC to conduct a health hazard evaluation if the employee is concerned about toxic effects of a hazardous substance in the workplace.

f. Making an oral or written submission to NERC during the review of this Code or the making of any new health and safety standard laws.

1.5. PENALTIES

Any employer who operates and/or manages any electrical based premises in violation of:

a. any of the provisions of Part 1 Sections 1.2, 1.3, and 1.4 of this Code shall attract citations and subsequent violation shall attract penalties as scheduled in (b) of this Code,

b. any of the provisions of Part 1 Sections 1.2, 1.3, and 1.4 of this Code, shall be liable to a penalty not exceeding NGN2,000,000 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of not less than 3 months or both.

c. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN40,000(Forty Thousand Naira) per day in addition to the penalty in sub paragraph (b) above.

d. Any further violation of sub paragraph (c) above and upon conviction of continuous violation, after exhaustive corrective measures without success, may attract the suspension or removal of management or suspension or cancellation of the license of the affected licensee as deemed appropriate by the Commission.

e. All the provisions for penalties in sub paragraphs (a) to (c) shall be subject to any fiscal policy of the Federal Republic of Nigeria without losing value. Additionally, these penalties shall be subject to annual inflation adjustments compounded.

PART II
SAFETY PROGRAMME AND INDUSTRY BEST PRACTICES

ARTICLE 2: AIR QUALITY/NOISE TESTING AND MONITORING

2. INTRODUCTION:

Every Employer shall ensure regular monitoring and testing of air quality and noise level of work environment especially where employees may be exposed to excessive noise and hazardous air quality.

2.1. AIR QUALITY TESTING AND MONITORING

a. An Employer shall ensure testing and monitoring of air quality is strictly carried out in line with FME and NESREA Standards where employees may be exposed to the following -

i. nitrogen dioxide and sulphur dioxide.
ii. landfill gases.
iii. noxious odours.
iv. halon gas.
v. factory emissions.
vi. odour complaints.
vii. rainwater.
viii. metals.
ix. smoke levels.
x. dust.
xi. volatile organic compounds.
xii. indoor air quality (including Carbon Monoxide), and
xiii. any other harmful substance.

b. The results of the air quality testing shall be used to –

i. assign levels of worker respiratory protection; and
ii. prepare an emergency response plan.

c. The air quality monitoring shall be carried out in generator houses, transmitting stations, injection and switching substations etc., in accordance with NERC specifications using recommended methods under Part II Section 2(a) (1-6) of the Manual.

2.2. NOISE TESTING AND MONITORING:

a. Every Employer shall carry out a noise survey, generate a noise map and issue appropriate hearing protection equipment to all employees, ensure usage and provide adequate information and training.

b. Every electric power producer shall carry out an annual audiometric test, which shall include Otoscopy, pure tone audiometry (PTA), and auto acoustic emission test where applicable for all employees.

c. Employees shall not use hearing protection as a long-term alternative to a proper noise control mechanism by technical and organisational means.

d. The Employer shall effectively apply hearing protection using the following guidelines:

   i. make sure the hearing protection gives enough ear protection and aims to get the noise level at a maximum level of 85dB or below.

   ii. select hearing protections which are suitable for the working environment - consider how comfortable and hygienic they are.

   iii. provide a range of appropriate hearing protection equipment so that employees can choose the ones which suit them.

e. For Hearing protection to be used effectively, the employer shall comply with the provision of Part II Section 2(b)(1) of the Manual.

2.3. OCCUPATIONAL NOISE EXPOSURE STANDARD:

a. Allowable Levels of Exposure:

   i. Protection against the effects of noise exposure shall be provided by the employer whenever the sound levels exceed those shown in the Table below if measured on the A-scale of a standard sound level meter at slow response.

   ii. When noise levels are determined by octave band analysis, the equivalent A-weighted sound level shall be determined as follows:

Table 2a: Permissible Noise Exposures

Duration per day, hours	Sound Level, dBA slow response
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
0.5	110
0.25 or less	115

iii. When employees are subjected to a sound level exceeding those listed in the Table above, feasible administrative or engineering controls shall be utilised. If such controls fail to reduce sound levels, personal protective equipment (PPE) shall be provided and used to reduce sound levels.

iv. The Employer shall establish a hearing conservation program in accordance with part II Section 2(b) (3)(ii) of the Manual.

b. Training Programs:

i. Every Employer shall institute a training program for all employees who are exposed to noise at or above an 8-hour time-weighted average of 85 decibels and shall ensure employee participation in such programs.

ii. The training program shall be repeated annually for each employee included in the hearing conservation program. Information provided in the training program shall be updated to be consistent with changes in any protective equipment and work processes.

iii. Every Employer shall ensure that each employee is informed of the:

A. Effects of noise on hearing.

B. purpose of hearing protectors, the advantages, disadvantages, and attenuation of various types, and instructions on selection, fitting, and use.
C. purpose of audiometric testing and an explanation of the test procedures.

iv. Every Employer shall make adequate arrangements for a proper recordkeeping in respect of:

A. Employee's exposure measurements described in this section.

B. Audiometric test records described in this section. The record shall include:

a. Name and job classification of the employee.
b. Date of the audiogram.
c. The examiner's name.
d. Date of the last acoustic or exhaustive calibration of the audiometer.
e. Employee's most recent noise exposure assessment.

v. Maintaining accurate records of the measurements of the background sound pressure levels in audiometric test rooms.
vi. Retaining records for at least the following periods:

A. Noise exposure measurement records shall be retained for two years.

B. Audiometric test records shall be retained for the duration of the affected employee's employment.

vii. All records kept under this section shall be accessed upon request by employees, former employees; representatives designated by individual employees and NERC or appointed representatives of NERC.

viii. Any Employer who ceases to do business, shall upon request, transfer to the successor employer all records required to be maintained under this section, and the successor employer shall retain them for the rest of the period prescribed in this section.

2.4. RADIATION MONITORS AND METERS:

Every Employer shall provide radiation rate measuring instruments to measure the rate at which exposure is received (more commonly called the radiation intensity).

2.5. ELECTRICAL/ELECTRONIC TESTING METERS:

i. Every Employer shall provide electronic test equipment (called 'test gear') which shall be used to create stimulus signals and capture responses from electronic Devices Under Tests (DUTs).

ii. Every Employer shall provide all basic test equipment as necessary described in Part II Section 2(d) (2) (i) to 2(d) (3) of the Manual.

2.6. SAFE HANDLING OF CHEMICALS:

i. Every Employer shall observe all the provisions of the Health and Safety Standards established by NERC to ensure the safety, health and welfare of every person engaged in work or employment of any kind.

ii. Every Employer shall maintain a Material Safety Data Sheet (MSDS) document that contains information on the safe handling procedures and practices for every chemical product.

iii. Every Employer shall maintain a file of MSDS for all chemicals handled at a site, to train and educate workers on the proper way to handle and use the information in an MSDS, and to make the file available and accessible to all employees within the workplace, to NERC and other regulators as required. Every employer shall for the purpose of transporting chemicals, maintain a list of all regulated hazardous materials to ensure safe handling during transportation in line with

NESREA, International Maritime Organization (IMO), IATA/ICAO regulations and other International Transportation Regulations of which Nigeria is a signatory, as a reference.

iv. Every Employer shall apply procedural recommendations relative to air, land and water as described. During clean-up of spills or leaks, where necessary, the Employer shall use extra Personal Protective Equipment and shall not rely on normal operations.

v. Every Employer shall follow the guidelines for disposing of any chemical waste which is designated as hazardous. It shall be disposed of in a permitted hazardous waste treatment, storage, or disposal facility in accordance with local, state and federal regulations. However, where the material is non-hazardous, recommendations for disposal shall be made depending on the physical state and known characteristics of the material.

vi. Every Employer shall liaise with the Federal Ministry of Environment to eradicate all Polychlorinated Biphenyls (PCBs) contaminated equipment such as transformers, capacitors, reactors, and all other electrical equipment and ensure electrical equipment oil is tested to PCB acceptable level before procurement.

2.7. MAJOR REFERENCES

Every Employer shall provide training and information on some of the major references that have been consulted in preparing the Material Safety Data Sheet (MSDS) and shall be guided by the chemical exposure limits provided in the Nigerian Electricity Health & Safety Standards Manual.

2.8. JOB HAZARDS ANALYSIS ASSESSMENT:

a. A job hazard analysis shall accompany every project work plan. A job hazard analysis shall seek to identify hazards associated with every work, projects and worksites and identify the proper Protective Equipment needed, modified work procedures and managerial controls.

b. Every Employer, HSE Officers and staff shall use the job hazard analysis to monitor the safety performance of work supervisors, crews or contractors. The analysis shall serve as the standard against which actual safety performance is measured.

c. Any person responsible for preparing project/work plan and any specified HSE Officer shall complete a Job Hazard Analysis Form which shall be approved by a supervising officer.

d. Toolbox meetings shall be conducted daily prior to the beginning of any task and Supervisors on duty shall comply with the Job Hazard Analysis procedure in Part II Section 2 (f)(3)(ii) of the Manual.

e. Every Employer shall have adequate capacity/capability of determining and evaluating the proper hazards assessment program of any workplace, site or project and shall ensure that the hazard assessment program contains identification and evaluation of hazards in the workplace, site or project.

f. Every Employer shall use hazard assessment as a performance-oriented provision that enables them to determine the appropriate control measures for identified hazards for the work to be performed.

g. Every Employer shall conduct any hazard assessment in line with the provisions of Part II Section 2 (f)(3) of the Manual.

h. The General Provisions for Performing Safety inspections in every workplace, site and project shall comply with the provisions of Part II Section 2 (f)(3)(iii) of the Manual.

i. Employer's HSE Officer shall be responsible for every facility safety and health inspections and shall ensure that workplace, sites and projects inspections are carried out by persons who have been trained on the Manual, and other Occupational Health & Safety programs.

j. All workplaces and facilities shall be audited annually, and report submitted to NERC every first quarter of the following year. The report shall clearly identify all safety gaps within the operational area of the licensees and timeline for remediation.

k. All workplaces and facilities shall be inspected at least quarterly and as may be deemed necessary.

l. All Safety inspections shall be conducted in accordance with the provisions of Part II Section 2 (f) (3)(iii) of the Nigerian Electricity Health and Safety Standards Manual.

m. All hazards shall be classified as imminent danger, serious, and non-serious based on the criteria outlined in Part II Section 2 (f) (3) (v) of the Nigerian Electricity Health and Safety Standards Manual.

n. Equipment inspectors shall use appropriate test or sampling equipment when required to evaluate workplace conditions as contained in Part II Section 2 (f)(3)(vi) of the Manual.

o. The inspection process shall be a closed loop system to ensure correction of hazards as contained in Part II Section 2 (f)(3)(Vii) of the Manual; and every Inspector is required to deliver a closeout presentation and prepare an abatement plan in accordance with the provisions of Part II Section 2 (f)(3)(ix) of the Manual.

p. A general checklist for Hazard Assessment is provided in Part II Section 2 (f) (4) of the Manual.

q. Every Employer shall provide appropriate PPEs and training to the Employee required for the job to be carried out in accordance with the provisions of Part II Section 2 (g) (3) of the Manual.

r. Every Employer shall provide appropriate PPEs and induction for visitors.

s. Every Employer shall enforce the use of PPEs by employees and third parties within workplaces, sites, and projects. The Employer shall be responsible for regular inspection of the PPEs and replacement when defective and or expired.

t. Every Employee shall use the PPEs provided to ensure their safety in accordance with the provisions of the Manual.

2.9. FIRST AID AND RESUSCITATION:

a. Every Employer shall provide:

   i. First aid facilities in all workplaces, sites, and projects;

   ii. Competent and certified First Aider for every workplace, site, and project; and

   iii. First Aid training for the workforce, sites, and projects in accordance with the provisions of Part II Section 2 (h)(3) of the Manual.

b. Every Employer shall develop first aid programs and management system in accordance with the provisions of Part II Section 2 (h)(6) to 2(h)(9) of the Manual.

2.10. FIRE PROTECTION, EVACUATION, FIRST RESPONDER AND REQUIREMENTS FOR EMERGENCY PREPAREDNESS AND RESPONSE PLAN:

a. Every Employer shall in accordance with the provisions of Part II Section 2 (i) (1-13) of the Manual or NFPA Standard, provide:

   i. Preventive measures for the facilities, workplace, sites, and projects;

   ii. Adequate fire protective equipment;

   iii. Emergency evacuation plan for every facility, workplace, site, and project;

   iv. A competent and certified emergency response personnel;

v. Proper training for the workforce on basic firefighting and prevention methods/techniques; and

vi. Provision of effective firefighting trucks across licensee franchise areas.

b. Every licensee shall put in place an emergency preparedness & response plan and submit such plan to the Commission for approval.

2.11. PERMIT TO WORK SYSTEM

Every Employer shall ensure that:

a. standard operating procedures are established and implemented for all aspects of their operations in line with OEM guidelines and extant codes and regulations of the Commission relevant to their operations.

b. an effective permit to work system is established and implemented for all works carried out in their organisation.

c. the permit to work system established in subsection (2) above is sufficient to protect workers and equipment involved in the following types of work:

i. Electrical works
ii. Confined space work
iii. Work at height
iv. Hot work
v. Cold work
vi. Chemical work
vii. Work involving special equipment such as cranes, conveyors, elevators, and other lifting devices.

d. employees are sufficiently informed, instructed, trained and supervised on the permit to work system.

e. the permit to work system includes sufficient safety information, maintenance instructions, correct PPE and equipment for use.

f. each work permit contains information on the type of work required.

g. there is sufficient provision available to fulfil the requirements of the permit to work system.

h. employees responsible for the control of maintenance work are identified within the permit to work system and that each work permit is properly authorised by a responsible person.

i. the permit to work system is managed, regularly inspected and reviewed.

j. all work permits are kept on file.

k. sufficient safety precautions are taken prior to initiating a work permit. This shall include isolation, draining, flushing, environmental monitoring, risk assessments, job hazard analysis, toolbox talk and time allotted for the work.

l. all work permits are duly surrendered or cancelled before the guaranteed equipment is/are de-isolated and/or energised.

m. work permit is not issued to a contractor or third party but to an employee responsible for the supervision, monitoring or coordination of the contractor's work.

2.12. ELECTRIC SHOCK AND LOCKOUT/TAGOUT

a. Every Employer shall provide adequate training and protection for employees to prevent electric shock. Such training program shall be in accordance with the provisions of Part II Section 2 (j)(7) of the Manual.

b. Every Employer shall provide Lockout/Tagout devices and ensure compliance with the procedures in accordance with the provisions of Part II Section 2 (j) (10-12) of the Manual.

2.13. HAND TOOLS AND WORKSHOP MACHINES PRACTICES

a. Every Employer shall ensure that Employees are trained in the proper use and identification of hazards associated with:

   i. all hand tools; and
   ii. workshop machines.

b. Every Employer shall ensure full compliance with safe workshop practices and basic safety rules associated with the use of tools, machines, and chemicals in accordance with the provisions of Part II Section 2 (k) (1-21) of the Manual.

2.14. LINESMEN GENERAL SAFETY PRACTICES

a. Every Employer shall provide information and training on various causes of electrical accident such as shock resulting from:

   i. Poor or faulty insulation.
   ii. Improper or inadequate grounding.
   iii. Loose connections.
   iv. Defective or outdated parts.

v. Ground faults in equipment.
vi. Unguarded live parts.
vii. Failure to de-energise electrical equipment when it is being repaired or inspected.
viii. Intentional use of obviously defective and unsafe tools; or
ix. Use of tools or equipment too close to energised parts.

b. Every employer shall evaluate the procedures or work practices that shall be carried out to appropriately assess the electrical shock hazard associated with any type of maintenance or repair work.

The following regulatory requirements shall be strictly observed by both the employers and employees:

i. All equipment shall be in a de-energized state prior to any maintenance or repair work. (Limited authorised exceptions).

ii. Only a competent and authorised person shall verify and confirm the de-energised state of equipment prior to the commencement of any work.

The following Standard requirements shall be strictly observed by the employers and employees:

i. Every Employer shall ensure that safe work practices are used if circuits, operating at 50 volts or more, are not de-energised (placed in an electrically safe work condition).

ii. Every Employer shall ensure that work practices are targeted at protecting the employee from an arc flash, as well as inadvertent contact with live parts operating at 50 volts or more.

iii. Employees shall perform shock hazard analysis before approaching exposed live parts within the limited boundary in accordance with the provisions of table 2.

iv. Every Employer shall ensure that only qualified and competent personnel are permitted within boundary limits as specified in table 2 below:

Table 2b: Minimum Approach Distance

Operating Voltage (kilovolts)	Minimum Approach Distance (meters)
5 to 7.5	0.30
7.5 to 12	0.61
12 to 33	0.91
33 to 66	1.20

66 to 132	1.50
132	2.40
330	3.00

*Source: extracted from OSHA Standard 1910.269

2.15. FLASH HAZARD ANALYSIS

Every Employer shall provide information and training on flash hazard analysis and ensure compliance in accordance with the provisions of Part II Section 2 (I) (7) of the Manual.

2.16. BLAST HAZARD ANALYSIS

Every Employer shall provide information and training on blast hazard analysis, procedures and ensure strict compliance in accordance with the provisions of Part II Section 2 (I) (8) of the Manual.

2.17. SELECTION OF PERSONAL PROTECTIVE EQUIPMENT

a. Every Employer shall:

   i. Assess the workplace to determine if hazards are present or are likely to be present, requiring the use of appropriate PPEs.

   ii. Select, provide, and have each employee to use the type of PPE that is suitable to protect the employee from the hazards identified in the hazard assessment.

b. Every Employee shall be trained to be knowledgeable in the following issues and scenarios:

   i. When PPE is necessary.
   ii. Which PPE is necessary.
   iii. How to properly wear, adjust, and remove PPE.
   iv. The limitations of the PPE, and
   v. The proper care, maintenance, useful life, and disposal of PPE.

2.18. EXTERIOR SAFETY RULES

Where applicable, every employer shall provide training and information on the use of Ropes, Body Belts and Safety Straps, Rubber Protective Gloves, Gaffs, Climbers, Live-Line Tools, Vehicles etc in accordance with the provisions of the Manual.

2.18.1. Exterior Working Practices

Where applicable, every employer shall provide training and information on Excavation, Manholes, Potheads, Poles, Climbing in

accordance with the provisions of Part II Section 2 (I) (11) (i-v) of the Manual.

2.18.2. Electrical Safety Rules

a. Low Voltage: Every Employer shall ensure that all Employees working on low voltage systems comply with the provisions of Part II Section 2 (I) (12) (i) of the Manual.

b. Medium Voltage: Every Employer shall ensure that all employees working on medium voltage systems comply with the provisions of Part II Section 2 (I) (12) (i) (a) of the Manual.

c. High Voltage: Every Employer shall ensure that all employees working on high voltage systems comply with the provisions of Part II Section 2 (I) (12) (ii) of the Manual.

2.18.3. Circuits

a. De-energised Circuit:

Every Employer shall ensure that employees who work on de-energised (dead) circuits comply with the provisions of Part II Section 2 (I) (12) (iii) (a) of the Manual.

b. Live Circuit:

Every Employer shall ensure that only competent and duly authorised employees shall work on live circuits.

c. Protection:

Every Employer shall ensure that fuses or circuit breakers are installed as overload and short-circuit protection for circuit components and connected loads. They shall limit their selection regarding ampere rating to the maximum value allowable for the smallest conductor or equipment used in the circuit.

d. Overload:

Employees shall determine the cause of trouble and send a report to the appropriate authority after which **re-conductoring** of the overloaded circuits shall be carried out or dividing the connected load into several circuits.

e. Bypass:

Jumpers shall not be used to bypass the fuse and circuit-breaker protection shall not be removed from the circuit except when testing for short circuits. These primary safety devices are of vital importance in a circuit installation.

2.18.4. Transformers and Circuit Breakers

Safety precautions shall be observed by the employee when working on transformers, circuit breakers and other switching devices in accordance with the provisions of Part II Section 2(I)(13) of the Nigerian Electricity Health and Safety Standards Manual.

2.18.5. Adequacy and Effectiveness of the Training Program

Every employer shall ensure adequacy and effectiveness of the electrical safe work practices program and training of qualified electrical personnel in accordance with the provisions of Part II Section 2 (I) (15) of the Manual.

2.19. ELECTRICAL SAFE WORK PRACTICE PLAN

Every Employer shall ensure that adequate electrical safe work practice plan is in place in accordance with the provisions of Part II Section2(m)(1-4) of the Manual.

2.20. ELECTRICAL EQUIPMENT

Every Employer shall ensure that all individuals are protected from accidental or unexpected activation of electrical and/or mechanical equipment during the maintenance, repairing, cleaning, servicing, and adjusting of machinery or equipment.

a. Electrical Safety Facts:
Every Employer shall ensure compliance with the rules and procedures in Part II Section 2(n)(2) of the Manual to reduce electrical hazards in the workplace.

b. Use of Equipment:

The use of Portable equipment shall be in accordance with the provision of Part II Section 2(n)(4) of the Manual.

c. Vehicular and Mechanical Equipment Safe Clearances:

Minimum clearance of 3.00m shall be maintained for all vehicles or mechanical equipment capable of having parts or its structure elevated near energised overhead lines such as cranes, mobile

scaffolds, elevating platforms, dump trucks, lift trucks, flatbed trailer etc. Clearance is increased by 0.1m for every 10 kV over 50kV if the voltage of the overhead line is more than 50 kV as depicted in the table below.

Table 2c. Vertical vehicular and equipment clearance

Voltage Level (kV)	Clearance (m)
0.400	3.0
6.6	3.0
11	3.0
33	3.0
66	3.2
132	3.9
330	8.3

2.21. RIGHT-OF-WAY (ROW)

The Right-of-Way (**RoW**) is the distance of any structure from the middle conductor of overhead power line of any voltage level. The **RoW** shall be as indicated below.

Table 2d. Right-of-Way

Voltage levels	Right-of-Way (meters)
330kV	50 (25m on both sides)
132kV	30 (15m on both sides)
33kV	11 (5.5m on both sides)
11kV	11 (5.5m on both sides)

Note:

a. *The Right-of-Way measurement shall be divided equally from the center of the line on either side. For safety reasons, no structure/premises shall be built under or close to the overhead power line Right-of-Way. When such structures are built after the construction of a line, the Licensee shall not be liable for any mishap caused by the contact of line.*

b. *In the event an overhead line exists before the structure in violation of Right of Way, the Licensee shall not extend power supply to such erring structures. Additionally, the Licensee shall communicate the danger(s) of building structures on the RoW of power lines to the owner(s) of such structure(s) and the local Town Planning Authority.*

c. *In the event that the right of occupancy of a property is revoked on account of overriding public interest and is used for Right of Way, the Licensee shall ensure prompt payment of compensation to the title holder in line with the provisions of Section 28 of the Land Use Act.*

d. *Prohibition of Illegal activities around power facilities:*
The Licensee shall ensure that the public is restrained from carrying out activities that will endanger or risk their lives either through direct contact or by electromagnetic induction from any power facility. In line with this provision, the Licensee shall ensure that signage and physical barriers are provided (where applicable) to notify the public about inherent dangers.

2.22. LADDER SAFETY

a. **General Requirements**

Every Employer shall:

i. Provide a ladder at all work points of access if there is a break in elevation of 0.48m or more and no ramp, runway, embankment, or personnel hoist is available.

ii. Keep the access point clear of obstacles to permit free passage by workers if there is only one point of access between levels.

iii. Provide a second point of access if free passage becomes restricted.

iv. Ensure that at least one point of access remains clear when there are more than two points of access between levels.

v. Install all ladders fall protection systems required by these rules and ensure that their worksite meets all requirements of the ladder rules before employees use ladders.

b. Rules for All Ladder Types:

The Employee shall ensure compliance with the rules as contained in Part II Section 2(o)(2)(i-ii) of the Manual when using all types of ladders.

2.23. FORKLIFT SAFETY

Every Employer shall ensure that:

i. All forklift operators are qualified in accordance with the provisions of Part II Section 2(p)(2) of the Nigerian Electricity Health and Safety Standards Manual.

ii. Employees comply with all the rules and procedures as contained in Part II Section 2(p)(3-11) of the Manual for the safe operation of all forklifts.

2.24. CRANE OPERATION SAFETY

Operational Considerations:

Every Employer shall ensure that all crane operators and personnel are duly certified in line with the provisions of Part 3 Sections 25, 26 and 27 of the Factories Act of 2004 and in addition, shall comply with the provisions of Part II Section 2(q)(2) of the Manual.

2.25. SCAFFOLDS AND OTHER WORK PLATFORMS

Every Employer shall ensure the safe use of Scaffolds and Platforms at work in accordance with the provisions of Part II Section 2(r)(2) of the Manual.

2.26. SAFE WORK PRACTICES NEAR POWER LINES

2.26.1. Safe Work Practices

Every Employer shall comply with safe work practices near power lines as provided in Part II Section 2(s)(3) of the Manual to protect workers, operators of cranes and other boomed vehicles from contacting energised overhead power lines. Every Employer shall ensure that the following safe work practices are observed:

a. Only competent individuals shall trim trees around energised power lines.

b. Ladders and aerial equipment shall not come in contact with electrical equipment.

c. The employee shall maintain the 3meter minimum clearance from power lines. If the line exceeds 11,000 volts, clearance requirements increase; in accordance with table 28 of the Manual.

d. These working clearances are minimum safety clearances. Whenever possible, even greater clearances shall be maintained.

e. For work closer than the above clearances, the electric utility shall be promptly notified.

f. No work shall be performed near energised conductors until danger of contact with those conductors has been effectively assessed and guarded against. Work site shall be carefully inspected prior to climbing or working on a tree to determine whether electrical lines pass through the tree or within the reach of workers and the immediate public. All lines on utility poles shall be viewed as possibly being energised.

g. Branches hanging on energised power lines shall be removed only by competent tree trimmers in the employ of the electric utility and using approved insulated equipment.

Every Employer shall ensure the implementation of additional standards in accordance with the provisions of Part II, Section 2 (s) of the Manual.

2.26.2. Procedures to Follow if Contact Occurs between a Crane and Energised Line

To protect against electric shock injury in the event of contact between a crane and an energised line, the employee shall observe the following:

i. The crane operator shall remain inside the cab.

ii. All other personnel shall keep away from the crane, ropes, and load, as the ground around the machine might be energised.

iii. The crane operator shall remove the crane from contact by moving it in the reverse direction from that which caused the contact.

If the crane cannot be moved away from contact, the operator shall remain inside the cab until the lines have been duly de-energised.

2.27. PHYSICAL AND CYBER SECURITY REQUIREMENTS FOR ELECTRICAL POWER SYSTEMS

All Employers are required to put in place adequate and effective physical and cybersecurity control measures to ensure the security of their facilities in line with the provisions of ISO 18788 and ISO/IEC TS 27110 on Management Systems for Private Security and Cyber and Information Security Management Systems, respectively.

2.28. ASSURING FUNCTIONAL SAFETY

Every Employer shall provide functional safety and security to protect facilities and employees from external physical harm.

2.29. EXCAVATIONS AND TRENCHING

Every Employer shall ensure that employees follow the procedures explained on excavation and trenching as contained in Part II, Section 2 (u) of the Manual.

2.29.1. Safe Practices on Excavation and Trenching

Every Employer shall ensure that employees follow best practices on excavation and trenching provided in Part II Section 2(u) of the Manual.

2.30. CONFINED SPACES

Every Employer shall identify confined spaces and associated hazards, ensure compliance with entry programs and training provisions as outlined in Part II Section 2 (v) of the Manual.

2.31. COMPRESSED GAS CYLINDER SAFETY

Every Employer shall ensure that the employee identifies, handles, uses and transports compressed gas cylinders in accordance with the provisions of Part II Section 2 (w) of the Manual.

2.32. DRUM HANDLING SAFETY

Every Employer shall ensure that employees are trained in hazard communications and are aware of the safe handling of drums and other hazardous waste containers to prevent accidents in accordance with the provisions of Part II Section 2 (x) of the Manual.

2.33. SAFE WELDING PRACTICES

a. General Provisions

Welding operations shall be performed by only trained and authorised employees who shall ensure implementation of engineering, administrative, safe work practices and use of PPE to reduce or minimise the impact of identified hazards.

b. Safe Work Practice

Every Employer shall comply with safe work practices on welding activities as provided in Part II Section 2 (y) (3-5) of the Manual to protect workers and operators performing welding works.

c. Inspections

All welding equipment including attachments and accessories shall be inspected monthly by the supervisor or his designee. A written record, including the date, type of equipment, equipment number, and equipment serial number, along with the signature of the employee performing the inspection, shall be maintained for a period of one year.

2.34. CONTRACTORS' SAFETY/MANAGEMENT

Employers shall give priority to occupational health, safety and environment in the selection and management of contractors. Employers shall ensure that contractors and subcontractors working on any part of their system or network comply with the provisions of this Code and other extant codes, standards and regulations of the Commission.

2.35. PENALTIES

Any person who operates or manages any electrical based premises in violation of any of the provisions of Part II Sections 2.1 to 2.34 of this Code shall attract citations and subsequent violations shall attract penalties as scheduled below**:**

2.35.1. Electrical Safe Work Practice Plan

i. Any Person who operates and / or manages any electrical based premises and fails to provide valid electrical safe work practice plan as contained in the Manual Part II section 2, Sub-Section 2 (m) 1-4; 2n (2-5); section 2, (o) sub-section 1-7 (on ladder safety); Section 2 (o) sub- section 1-12 (on forklift safety) and Section 2 (q) sub section 2q(1-6) on crane operations safety, and evidence of performance and sustenance, shall upon proof be liable to a penalty of NGN2,400, 000 (Two Million, Four Hundred Thousand Naira) or upon proof in any court of competent jurisdiction an imprisonment term of not less than 3 months or both;

ii. Where such violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN100,000 (One Hundred Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

2.35.2. Provision of Electrical Safe Work Practices Plan Near Power Lines

i. Any person who operates or uses any electrical equipment or any equipment capable of conducting electrical energy near power lines, but fails to provide valid and adequate electrical safe work practices as contained in Part II Section 2, sub-section 2 (s) (2) i-vii of the Manual, shall upon proof be liable to a penalty of NGN3,000,000(Three Million Naira) or upon proof in any court of competent jurisdiction an imprisonment of six (6) months or both.

ii. Where such violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less

than NGN100,000 (One Hundred Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

2.35.3. Provision of Workshop & Hand Tools Safety Policy

i. Any person who operates or/and manages any electrical - based premises and fails to provide a workshop machine and hand tools policy which shall contain workshop safety data sheet and workshop and tools safety training plan in accordance with the provision of the Manual 2008 Version 1, 2008 Version 1, Part II section 2 (k), sub –section 2 (k) 1 - 22 shall upon proof be liable to a penalty of NGN2,000,000 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of not less than 3 months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN40,000 (Forty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

2.35.4. Provision of Radiation Rate Measuring Instruments

i. Any person who operates or /and manages any electrical based premises, and fails to provide radiation rate measuring instruments such as to include survey meters, audible alarms and area monitors as contained in the Manual Part II Section 2 sub-sections 1-10 shall upon proof be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of 6 (Six) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN20,000.00 (Twenty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

2.35.5. Provision of Electrical/Electronic Testing Meters

i. Any person who manages or operates an electrical based premises and fails to provide electrical/electronic testing equipment for its employees in accordance with the provisions of Part II Section 2 Sub section 2 (d) 1-3 of the Manual shall upon proof be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of six (6) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less

than NGN40,000.00 (Forty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

2.35.6. Maintenance of Approved Level of Noise Exposures and Hearing Conservation Programme

i. Any person who operates or manages any electrical based premises and fails to maintain the approved permissible noise exposures as contained in table 3 of the Nigerian Electricity Health & Safety Standards Manual 2008 Version 1 , 2008 Version 1, Part II, Section 2 sub-section 3 (i) and without a valid hearing conservation program as contained in same Section 2, sub-section 2b (3) (ii) shall upon proof be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of 6 (Six) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN40,000.00 (Forty Thousand Naira) per day in addition to the penalty in sub paragraph (ii) above.

2.35.7. Provision of a Job Hazard Analysis Assessment & Personal Protective Equipment Program

i. Any person who operates or manages an electrical based premises and fails to provide a personal protective equipment program which shall contain a Job Hazard Analysis Assessment in accordance with the Manual Part II Section 2 sub- section 2 (f) 1-4 shall upon proof be liable to a penalty of NGN3,000,000.00 (Three Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of not less than 3 months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN40,000.00 (Forty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

2.35.8. Provision of Linesmen Safety Practice Rules

i. Any person who operates or manages any electrical based premises that engages the services of linesmen and fails to provide a set of rules on linesmen safety practice and evidence of performance and sustenance in accordance with the provisions of the Manual Section 2 , sub-section 2 (i) 1-16 and sub section 2n 1-6 shall upon proof be liable to a penalty of NGN3,000,000.00 (Three Million Naira) or upon proof in any court

of competent jurisdiction an imprisonment term of six (6) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN100,000.00 (One Hundred Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

2.35.9. Provision of Functional Safety Programme for Electric Power Transmission System

i. Any person who operates or manages any Electric Power Transmission System and fails to provide a valid functional safety programme comprising of Facility Hazard Analysis and Job Safety Analysis Programs with documentary evidences of performance and sustenance in accordance with the Manual section 2 (t) sub-sections 1-4 shall upon proof be liable to a penalty of NGN3,000,000.00 (Three Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of 6 (Six) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN100,000.00 (One Hundred Thousand Naira) per day in addition to the penalty in sub paragraph (ii) above.

2.35.10. Provision of Excavation & Trenching Safety Practices & Program

i. Any person who carries out and/or manages Excavation, Trenching in any electrical based work related places and fails to provide valid Excavation & Trenching Safety Practice Program and evidences of performance and sustenance in accordance with the Manual Section 2 (u) sub-sections 1-4 and section 5 (i-vi) shall upon proof be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of 6 (Six) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN20,000.00 (Twenty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

2.35.11. Provision of Hot Work Program, Element & Elements of Safe Welding Practices

i. Any person who operates or/manages any electrical-based premises without provision of hot work program and elements of safe welding practices especially covering training and

work performed by authorised personnel requirements as contained in the Manual of Part II Section 2 (y) (1) to 2(y) (5) shall be guilty of an offence and shall be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of 6 (Six) months or both.

ii. Where a such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN40,000.00 (Forty Thousand Naira) per day in addition to the penalty in sub paragraph (ii) above.

2.35.12. Control of Hazardous Energy (Lockout /Tag Out)

i. Any person who operates and/or manages any electric based premises but fails to meet the requirements of the Lock Out/ Tag Out program and its implementation) as contained in the Manual Part II Section 2 (j) (10-12); shall upon proof be liable to a penalty of NGN3,000,000.00 (Three Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of 18 (Eighteen) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN100,000.00 (One Hundred Thousand Naira) per day in addition to the penalty in sub paragraph (ii) above.

2.35.13. Construction of Structures/Premises in Violation of Power Line Right-of-Way

a. Any person who constructs a structure/premises under power line Right-of-Way in violation of the part II Section 2.21 of the Health & Safety Code for the Nigerian Electricity Supply Industry shall have:

   i. the electricity supply to the structure/premises disconnected; and

   ii. the structure / premises demolished.

b. The Licensee shall not connect any new structure/premises that is in violation of power line Right-of-Way. Immediate disconnection of structure/premises under/too close to the power lines shall be carried out by the Licensee, failure of which shall attract a penalty of NGN1,000,000.00 (One Million Naira) per connection point.

2.35.14. Establishment and Implementation of Permit to Work System

i. Any person who operates and/or manages any electric based premises but fails to meet the requirements of the Permit to Work System as laid out in Part II Section 2.11 of this Code, shall upon proof be liable to a penalty of NGN3,000,000.00 (Three Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of 18 (Eighteen) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN100,000.00 (One Hundred Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

2.35.15. General Provisions

All the provisions for daily penalties in sub paragraphs 2.35.1 to 2.35.14 above shall be subject to any fiscal policy of the Federal Republic of Nigeria without losing value. Additionally, these penalties shall be subject to annual inflation adjustments compounded.

PART III
WORKERS' SAFETY RULES

ARTICLE 3: CRITICAL INCIDENT STRESS

3.1. CRITICAL INCIDENT STRESS

3.1.1. Responding to Emergency Events

Every Employer shall employ competent persons to effectively respond to crisis within the facilities in such a manner as to ensure the safety of personnel and property in accordance with the provisions of Part III Section 3(a-l) of the Nigerian Electricity Health and Safety Standards Manual.

Every Employer shall ensure training on toxic chemical handling and stress management for its employees in accordance with the provisions of Part III Section 3(b) of the Manual.

3.1.2. Electrical Protective Devices

All electrical protective devices shall comply with the design requirements, standards markings, AC/DC proof test requirements, and ASTM standards as provided in Part III Section 3(c) (1-5) of the Manual.

Every Employer shall ensure that hazard assessments are conducted, and Personal Protective Equipment are provided in compliance with standards test and maintenance programs provided in Part III Section 3(e) (1-5) of the Manual.

Every Employer shall ensure adequate sanitation of the workplace in accordance with the provisions of Part III Section 3(f) (1-14) of the Manual.

3.1.3. Safety Colour Code, Signs and Tags for Marking Physical Hazards

Every Employer shall comply with the requirements for Colour Codes, Signs and Tags for marking physical hazards as provided in Part III Section 3(g) - 3(h)(5) of the Manual.

3.1.4. Permits for Confined Spaces

Every Employer shall comply with the provisions of Part III Section 3 (i) (1-4) of the Manual.

3.1.5. Training and Communication

Every Employer shall provide adequate training to ensure that the purpose and function of the energy control program are clearly understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees in accordance with the provisions of Part III Section 3 (j) (8) of the Manual.

3.1.6. Medical Services

Every Employer shall ensure the availability of medical services and competent personnel for advice, consultation and treatment of employees, including ambulance services.

In the absence of a clinic or hospital in close proximity to the workplace, a person or persons shall be adequately equipped to render first aid within the work area. Adequate first aid supplies shall be readily available.

3.1.7. Slings Safety Programme and Inspection Records

Every Employer shall ensure the provision of an adequate sling safety programme and inspection records for its employees in accordance with the provisions of Part III Section 3(n) of the Manual.

3.1.8. Sanitation Requirements

Every Employer shall ensure the provision of adequate sanitation requirements for its employees in accordance with the provisions of Part III Section 3(f) of the Manual.

3.1.9. Adequate Protective Grounding Programme

Every Employer shall ensure the provision of an adequate protective grounding programme in accordance with the provisions of Part III Annex C of the Manual.

3.2. PENALTIES

Any person who operates or/and manages any electrical based premises in violation of any of the provisions of Part III Sections 3.1.1 to 3.1.9 shall attract citations and subsequent violation shall attract penalties as scheduled below.

3.2.1. Provision of First Aid & Resuscitation Program

i. Any person who operates or/and manages an electrical based premises without the provision of a First Aid resuscitation program

with all essential components of the First Aid Training Plan and First Aid Suppliers Plan in accordance with the Nigerian Electricity Health & Safety Standards Manual 2008 Version 1, 2008 Part III Section 3 (k) shall be guilty of an offence and shall be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of 6 (Six) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN20,000.00 (Twenty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

3.2.2. Provision of Adequate Slings Safety Program & Inspection Records

i. Any person who operates and/or manages an electrical based premises without provision for adequate sling safety program and inspection records to slings as used in conjunction with other handling equipment for movement of materials for hoisting as contained in the Nigerian Electricity Health and Safety Standards Manual Part III section 3 (n) shall be guilty of an offence and shall be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of not less than 3 months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN20,000.00 (Twenty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

3.2.3. Provision of Adequate Safety Colour Code Marking for Physical Hazards & Accident Prevention Signs & Tags

i. Any person who operates and /or manages any electrical based premises but fails to provide adequate safety colour code marking for physical hazards, and meet specifications for accident prevention signs and tags as contained in the Nigerian Electricity Health & Safety Standards Manual 2008 Version 1, 2008 Version 1, Part III Sections 3(g), 3h (i) to 3 (h) 5 shall upon proof be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of not less than 3 months or both.
ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN20,000.00 (Twenty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

3.2.4. Meeting Sanitation Requirements

i. Any person who operates and/or manages any electrical based premises but fails to meet sanitation requirements as contained in the Nigerian Electricity Health and Safety Standards Part III sub-section 3 (f) shall upon proof be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of not less than 3 months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN20,000.00 (Twenty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

3.2.5. Provision of Material Safety Data Sheet, List & History or Properties of Toxic Industrial Chemicals

i. Any person who operates or/and manages any electrical based premises and fails to provide the following under-listed as contained in the Nigerian Electricity Health & Safety Standards Manual 2008 Version 1, 2008 Version 1, Part III Section 3b:
   a. List of chemicals on the premises;
   b. Properties of the chemicals;
   c. Materials Safety Data Sheet (MSDS) of each Chemical;
   d. Evidence of Hazard communication to users;
   e. Evidence of adequate Personal Protective Equipment for use in the area; and
   f. Evidence of good storage area and containment.

   shall upon proof be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment of 6 (Six) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN20,000.00 (Twenty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

3.2.6. Provision of Adequate Emergency Response & Contingency Plans

i. Any person who operates or/and manages any electrical based premises but fails to put in place adequate emergency response and contingency plans as contained in the Nigerian Electricity Health and Safety Standards Manual Part III Section (3) (i) (4) (ix) shall upon proof be liable to a penalty of NGN2,000,000.00(Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment of 6 (Six) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN40,000.00 (Forty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

3.2.7. Provision of Adequate Electrical Protective Devices

i. Any person who operates or/and manages any electrical based premises but fails to provide adequate electrical protective devices in line with the requirements as contained in the Nigerian Electricity Health & Safety Standards Manual 2008 Version 1, 2008 Version 1, Part III Section 3 sub- section 3(c) (1) to 3 (c) (5) shall upon proof be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of not less than 3 months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN100,000.00 (One Hundred Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

3.2.8. Provision of Adequate Protective Grounding Programme

i. Any person who operates and/or manages any electrical based premises but fails to provide adequate protective grounding program which include the temporary and permanent groundings with evidence of implementation, as contained in the Nigerian Electricity Health & Safety Standards Manual, Part III Annex C shall upon proof be liable to a penalty of NGN3,000,000.00 (Three Million Naira) or upon proof in any court of competent jurisdiction an imprisonment of 12 (Twelve) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN100,000.00 (One Hundred Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

3.2.9. Provision of Training and Communication Requirements

i. Any person who manages and/or operates electrical based premises but fails to provide adequate training for its employees in accordance with the provisions of the Nigerian Electricity Health and Safety Standards Manual Part III, Section 3 (j)(8) shall upon proof be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment of 18 months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN40,000.00 (Forty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

3.2.10. General Provisions

All the provisions for daily penalties in sub paragraphs 3.2.1 to 3.2.9 above shall be subject to any fiscal policy of the Federal Republic of Nigeria without losing value. Additionally, these penalties shall be subject to annual inflation adjustments compounded.

PART IV
RECORDKEEPING, TRAINING, AND INSPECTIONS

ARTICLE 4: ACCIDENT INVESTIGATION AND REPORTING

4.1. SAFETY RECORDKEEPING PRACTICES

Every Employer shall keep records of all occupational injuries and illnesses in the "Injuries and Illnesses Incident Report Form" and "Log of Work-Related Injuries and Illnesses Form" as contained in Part IV Section 4(c) of the Manual.

A **"Summary of Work-Related Injuries and Illnesses Form"** shall be completed, filed and posted to the database by the employer every 31st of January following the year covered by the Form. Records shall be kept for a minimum of 10 (Ten) years.

4.1.1. Illnesses

Every Employer shall:

i. Document any work-related recordable illness that is "diagnosed or recognised" in accordance with the provisions of Part IV Section 4(b)(1) of the Manual.

ii. Employ the services of a competent physician, registered nurse or someone with training and experience to make a diagnosis, treat and keep proper records.

Any condition that is caused by anything other than an instantaneous event shall be recorded as an illness.

4.1.2. Injuries

Every Employer shall ensure that injury which involves any of the following but not limited to shall be recorded:

a. medical treatment case (other than first aid).
b. loss of consciousness.
c. restriction of work motion due to injury.
d. transfer to another job due to injury.
e. termination of employment due to injury.
f. electrical burns.
g. Electrocution, etc.

4.1.3. Deaths

Every Employer shall ensure that any death of an employee or former employee that occurs as a result of a work-related injury or illness as mentioned above is recorded, even when the death did not occur immediately. If an employee has a work -related recordable injury or illness and then is terminated or retires, and then dies as a result of the recordable injury or illness, the death shall also be recorded.

4.2. DIVULGEMENT OF RECORDS OF INJURY AND ILLNESS

Every Employer shall provide records of injuries and illnesses to any authorised person or body on demand for examination and any analysis deemed fit in accordance with the provisions of Part IV Section 4(b)(6) of the Manual.

4.2.1. Accident Recordkeeping Forms

Every Employer shall comply with the use of the prescribed accident record keeping forms provided in Part IV Section 4 (c) of the Manual.

4.2.2. Accident Investigation and Reporting

Every Employer shall comply with accident investigation provisions of Annex A of the Manual and also Section 5.2.1 of this Code.

4.2.3. Joint Investigation of Significant Incidents

Where a Significant Incident (as detailed in section 4.1.2 of the Code) has been declared and a report submitted as required in Section 5.2.1 of the Code, either party or all parties may request in writing that a joint investigation be carried out.

The composition of such an investigation panel will be appropriate to the incident to be investigated and agreed by all parties involved.

Where there has been a series of Significant Incidents (that is where a Significant Incident has caused or exacerbated another Significant Incident), the parties involved may agree that the joint investigation should include some or all of those Significant Incidents.

A joint investigation will only take place where all affected parties agree to it. The form and rules of the procedure for, and all matters (including, if thought appropriate, provisions for costs and for a party to withdraw from the joint investigations once it has begun) relating to the joint investigation will be agreed as the time of a joint investigation and in the absence of agreement the joint investigation will not take place.

Any joint investigation under this section of the Code is separate from any inquiry which may be carried out under the Electricity Act 2023 (as may be amended from time to time) or other Industry Rules and Regulations.

4.3. SAFETY TRAINING AND RECORDKEEPING

4.3.1. Type of Training

In addition to the safety training programs provided in Parts I, II, III of the Health and Safety Code for the Nigerian Electricity Supply Industry, every Employer shall develop and implement such other safety training programs in accordance with the provisions of Part IV Section 4 (d) of the Nigerian Electricity Health & Safety Standards Manual 2008 Version 1.

All safety professionals operating in the NESI shall have the minimum training and certification by the National Power Training Institute of Nigeria (NAPTIN) or its equivalent available locally or internationally.

4.3.2. Recordkeeping

Every Employer shall maintain training records of all employees from the date of first employment and up to five years after retirement or termination. The records shall include name of employee, type of training session, dates of training and number of contact hours.

Every Employer shall make the records available to NERC inspectors or any authorised person upon request.

4.4. PENALTIES

Any person who operates or/and manages any electrical based premises in violation of any of the provisions of Part 1V sections 4.1. to 4.3 shall attract citations and subsequent violation shall attract penalties as scheduled below.

4.4.1. Provision of Adequate Safety Record Log

i. Any person who operates or/and manages any electrical based premises and fails to provide adequate safety records of occupational injuries, illnesses as well as deaths in accordance with the Health and Safety Code for the Nigerian Electricity Supply Industry shall upon proof be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment of 6 (Six) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than

NGN20,000.00 (Twenty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

4.4.2. Falsification of Any Record of Health & Safety Matters

i. Any person who operates or/and manages any electrical based premises and found involved in falsification of any record in respect to health and safety matters as contained in the Health & Safety Code for the Nigerian Electricity Supply Industry Part IV, Section 4.1.2, sub section a – g or/and any related section therein found in the Code shall upon proof be liable to a penalty of NGN3,000, 000.00 (Three Million Naira) or upon proof in any court of competent jurisdiction an imprisonment of 18 (Eighteen) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN100,000.00 (One Hundred Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

4.4.3. Provision of Training and Communication Requirements

i. Any person who manages and/or operates electrical based premises but fails to provide adequate training for its employees in accordance with all relevant sections of the Health and Safety Code for the Nigerian Electricity Supply Industry shall upon proof be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment of 18 (Eighteen) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN20,000.00 (Twenty Thousand Naira) per day in addition to the penalty in sub paragraph (ii) above.

4.4.4. General Provisions

i. All the provisions for daily penalties in sub paragraphs 4.4.1 to 4.4.3 above shall be subject to any fiscal policy of the Federal Republic of Nigeria without losing value. Additionally, these penalties shall be subject to annual inflation adjustments compounded.

PART V

RISK MANAGEMENT, REPORTING OBLIGATIONS AND COMPENSATION

ARTICLE 5: RISK MANAGEMENT

5.1. OCCUPATIONAL HEALTH AND SAFETY OFFICE

a. Every Employer shall establish and maintain a functional Occupational Health & Safety Management structure, complement of Staff and tools required for the Office to perform its statutory function which shall be overseen by competent personnel that reports directly to the Head of the organisation.

b. Every Employer shall have a functional risk management process in place in accordance with the provisions of Part V Section 5(a)(1) of the Manual.

5.1.1. Health and Safety Management Committee

Every Employer shall establish a Health and Safety Management Committee to provide valuable services to the organisation for risk and other safety management planning. The Committee shall meet periodically to exchange risk and other safety management ideas and information.

The Committee shall comprise the following members or its equivalent:

i. Head of the Company	-	Chairman
ii. Head Technical/Maintenance	-	Member
iii. Head Operations/Dispatch	-	Member
iv. Head Procurement	-	Member
v. Head Accounts	-	Member
vi. Head Human Resources	-	Member
vii. A representative of Labour Unions	-	Member
viii. Head of Medical Services (where applicable)	-	Member
ix. Head of Health & Safety	-	Member/Secretary

The Committee shall have oversight responsibility for implementing the Company's Health and Safety Policy and the Health and Safety Code for the Nigerian Electricity Supply Industry.

In ensuring compliance with the provisions of this Code, the Committee shall be guided by the provisions of Part V Section 5 (a)(3) of the Manual.

Every Employer shall ensure compliance with the crisis management and vulnerability assessment procedures in accordance with the provisions of Part V Section 5 (c) of the Manual.

5.2. REPORTING OBLIGATIONS

5.2.1. Reporting of Incident/Accident

Every case where either or a combination of the following happens:

a. damage/loss of Equipment, Apparatus within the Company as a result of accident;

b. damage or loss of property of a Consumer or end user as a result of system malfunction or failure.

c. a person, or animal receives an electric shock, whether mild or serious or suffers an injury or burn, directly or indirectly due to electrical causes;

shall be treated as a Significant Incident.

The employee in charge of the concerned equipment, apparatus or area shall report the incident/accident to the employer within 24 hours. The Safety Manager or a Safety Representative of the Company or his designated nominee shall reach the spot within 48 hours and assess the situation and probable cause of the accident, losses, and damage to Equipment, Apparatus of the Company and/ or the end User(s).

In the event of an accident resulting in or likely to result in loss of life or injury to human beings or animals, the Company through Safety Manager shall send a notification to the Commission (NERC) within 24hours.

This shall be followed by a preliminary investigation report to be submitted to the Commission within 72 hours and detailed investigation report submitted within 3 (Three) weeks. The Company shall take all other statutorily required actions, such as reporting to the Nigerian Police, etc.

The Commission shall immediately order an in-depth inquiry of the event as deemed fit.

5.2.2. Safety Reporting

Employers are required to self-report to the Commission incidents, accidents, safety gaps and any unsafe occurrences that occur in the course of their operations or activities.

5.2.3. Public Enlightenment

Every licensee shall ensure a comprehensive enlightenment programme that adequately informs the general public on the hazards associated with their businesses. The enlightenment program shall be carried out in each quarter of a year.

No later than fifteen days into a new quarter, every licensee shall submit to the Commission, a detailed report on their public enlightenment programme for the previous quarter.

5.3. INSURANCE AND COMPENSATION FOR VICTIMS OF ELECTRICAL ACCIDENT

Every Employer shall take a comprehensive insurance policy to adequately cover its facilities, employees and third parties as appropriate without prejudice to other national and/or state laws or regulation insurance.

5.3.1. Minimum Compensation

The following compensations shall be minimum provisions in the insurance cover for accident victims:

a Contractors' Compensation: Contractors, vendors and other third-party staff retained by licensees shall be given similar insurance cover and compensation as direct/permanent employees of the Licensee.

b Third Party Compensation

i. The compensation payable for loss of human life as a result of an electrical accident shall be a minimum of NGN15,000,000.00 (Fifteen Million Naira).

ii. The compensation payable for more than 60% disability resulting from electrical accident shall be NGN15,000,000.00 (Fifteen Million Naira) per person. The amount of this compensation shall be based on medical certification issued by a government hospital.

iii. The compensation payable for 40% to 60% disability resulting from electrical accident shall be NGN7,500,000.00 (Seven Million, Five Hundred Thousand Naira) per person. The amount of this compensation shall be based on medical certification issued by a government hospital irrespective of whether the victim is treated in the Licensee's hospital.

iv. A sum of NGN750,000.00 (Seven Hundred and Fifty Thousand Naira) per person requiring hospitalisation for more than a week. This is irrespective of whether the victim is treated in the

Licensee's hospital.

v. A sum of NGN250,000.00 (Two Hundred and Fifty Thousand Naira) per person requiring hospitalisation for less than a week. This is irrespective of whether the victim is treated in the Licensee's hospital.

vi. The cost of the medical treatment of the accident victim should be borne by the Licensee.

vii. The compensation payable for loss of animal life as a result of an electrical accident shall be at the following rates in the table below:

Table 5a. Compensation for loss of animal

S/N	Type of Incident	Amount
i	Death of Milch Animal (Cow/Camel etc)	NGN600,000.00
ii	Death of Draught Animal (Cow/Camel/horse etc)	NGN500,000.00
iii	Death of Draught Animal (Sheep/Goat etc)	NGN150,000.00
iv	Death of Draught Animal (Calf/Donkey etc)	NGN85,000.00

5.3.2. Timeline for Payment of Compensation

Every licensee shall ensure that payment of compensation by their insurance company to the victim(s) or family of the deceased is effected within six months from the date of the accident. Non-compliance by the licensee shall attract an additional 5% at the end of every month of the rate provided in section 5.3.1 (a) and (b) above.

5.4. PENALTIES

Any Licensee in violation of any of the provisions of Part V Sections 5.1. to 5.3 of the Health and Safety Code for the Nigerian Electricity Supply Industry and other operating codes/technical regulations, shall attract citations and subsequent violation shall attract penalties as scheduled below.

5.4.1. Occupational Health & Safety Office

Any person who operates or/and manages any electrical based premises and fails to provide a Health and Safety Office and Health & Safety Management Committee in accordance with the Health and Safety Code for the Nigerian Electricity Supply Industry shall upon proof be liable to a penalty of NGN10,000,000.00 (Ten Million

Naira) or upon proof in any court of competent jurisdiction an imprisonment term of 6 (Six) months or both.

5.4.2. Provision of Adequate Risk, Crisis & Vulnerability Assessment Programs

i. Any person who operates and/or manages any electrical based premises but fails to provide adequate evidence of risk, crisis and vulnerability assessment programs and management in accordance with the Nigerian Electricity Health and Safety Standards Manual Part V Sections 5 (a) to 5 (c) shall upon proof be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment term of not less than 3 months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN40,000.00 (Forty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

5.4.3. Provision of Training Contents of the Code

i. Any person who manages and/or operates electrical-based premises but fails to provide adequate training for its employees in accordance with all the sections of the Health and Safety Code for the Nigerian Electricity Supply Industry shall upon proof be liable to a penalty of NGN2,000,000.00 (Two Million Naira) or upon proof in any court of competent jurisdiction an imprisonment of 18 (Eighteen) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN40,000.00 (Forty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

5.4.4. Reporting Obligation

i. Any person who manages and/or operates electrical-based premises but fails to comply with all reporting compliance obligation in accordance with Part V Section 5.2.2 of the Health and Safety Code for the Nigerian Electricity Supply Industry shall upon proof be liable to a penalty of NGN10,000,000.00 (Ten Million Naira) or upon proof in any court of competent jurisdiction an imprisonment of 6 (Six) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN100,000.00 (One Hundred Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

5.4.5. Public Enlightenment Programme

i. Any person who manages and/or operates electrical-based premises but fails to comply with the public enlightenment obligation in accordance with Part V Section 5.2.3 of the Health and Safety Code for the Nigerian Electricity Supply Industry shall upon proof be liable to a penalty of NGN10,000,000.00 (Ten Million Naira) or upon proof in any court of competent jurisdiction an imprisonment of 6 (Six) months or both.

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN100,000.00 (One Hundred Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

5.4.6. Other Regulatory Instruments

i. In addition to compensation and payment of penalties listed in 5.4.1 to 5.4.5, noncompliance to other operating codes/technical regulations leading to death or injuries or loss of properties shall upon proof be liable to a penalty of NGN20,000,000.00 (Twenty Million Naira).

ii. Where such a violation continues after the rectification deadline issued by the Commission, it shall attract a penalty of not less than NGN40,000.00 (Forty Thousand Naira) per day in addition to the penalty in sub paragraph (i) above.

5.4.7. General Provisions

All the provisions for compensations and penalties shall be subject to any fiscal policy of the Federal Republic of Nigeria without losing value. Additionally, this compensation shall be subject to annual inflation adjustments compounded.

PART VI
REVIEW PROCESS AND CODE DISPUTES

6.1. THE HEALTH AND SAFETY CODE FOR THE NIGERIAN ELECTRICITY SUPPLY INDUSTRY REVIEW PANEL

6.1.1. The Commission shall establish and maintain a Health and Safety Code Review Panel ("the Panel"), drawn from the Licensees and other relevant stakeholders. The Panel shall be responsible for improving and developing the Code through regular review, consultation, research, and other methodologies found appropriate from time to time. The funding and maintenance of the Panel shall be the responsibility of the Commission. The Secretariat of the Panel shall be located in a place agreed to by a majority of the Panel members.

6.1.2. The Panel shall be a standing body to carry out the functions referred to in clause 8.1.1 and members shall be appointed for a term of two (2) years, renewable for another term of two years only and no more.

6.1.3. The Health and Safety Code Review Panel shall -

a. Maintain and ensure publication of the current version of the **Health and Safety Code for the Nigerian Electricity Supply Industry.**

b. Keep the Health and Safety Code for the Nigerian Electricity Supply Industry and its implementation under review.

c. Review all suggestions for amendments to the Health and Safety Code for the Nigerian Electricity Supply Industry which NERC or any User or Operating Companies may wish to submit for consideration by the Panel from time to time.

d. Publish recommendations and conduct stakeholders' engagement on the amendments to the Health and Safety Code for the Nigerian Electricity Supply Industry that any of the Operating Companies or the Panel feels are necessary or desirable and give reasons for the recommendations.

e. Submit to the Commission recommendations to each proposal for amendment to the **Health & Safety Code for the Nigerian Electricity Supply Industry** and the reasons for the recommendations.

f. Issue guidance in relation to the Health and Safety Code for the Nigerian Electricity Supply Industry and its implementation, performance and interpretation when asked to do so by any User.

g. Consider what changes are necessary to the Health and Safety Code for the Nigerian Electricity Supply Industry arising out of any unforeseen circumstance referred to it by operators of the Generation, Transmission, Distribution Companies or NERC.

h. Consider and identify changes to the Health and Safety Code for the Nigerian Electricity Supply Industry to remove unnecessary section(s) or clause(s) that are irrelevant to the effective operation of the Nigeria Electricity Supply Networks.

i. Establish and maintain joint coordination arrangements with the Grid Code and Distribution Code Review Panels to coordinate changes for consistency.

6.1.4. The Panel shall consist of:

a. A Chairman and up to 8 members.

b. 2 persons representing Generating Companies, one of which must represent hydro power stations.

c. 2 persons representing TCN one from the Transmission Service Provider (TSP) and other from the Independent System Operator (ISO).

d. 2 persons representing Distribution Companies.

e. 1 person representing Standard Organization of Nigeria (SON).

f. 2 persons representing Nigerian Electricity Management Services Agency (NEMSA).

The Chairman of the Panel shall be elected by the members of the Panel and shall be from a utility company. All members of the Panel shall be registered members of the Institute of Safety Professionals of Nigeria ("ISPON"). Each of the Panel members shall be appointed by their respective industry-sector pursuant to the rules issued by the Panel in 6.1.5.

6.1.5. The Panel shall establish and always comply with its rules and procedures relating to the conduct of its business, which shall be approved by NERC. Meetings of the Panel shall be held at regular intervals and at least once every quarter except for emergencies at such time and place as the Panel shall decide.

6.2. HEALTH AND SAFETY CODE AMENDMENTS PROCESS

6.2.1. All amendments to the Health and Safety Code for the Nigerian Electricity Supply Industry must be first reviewed by the Health and Safety Code Review Panel prior to submission to the Commission for approval. All proposed revisions from Stakeholders, the Commission, DisCos, GenCos, TCN or the System Operator shall be sent to the Chairman of the Health and Safety Code Review Panel for consideration by the Panel. The Chairman will advise the Panel of all proposed revisions to the Health and Safety Code with notice of no less than [20 Business Days] in advance of the next scheduled meeting of the Health and Safety Code Review Panel.

6.2.2. The Panel shall consult in writing all stakeholders and Licensees that are likely to be affected in relation to all proposed amendments to the Health and Safety Code and shall review and discuss all proposed amendments and comments to the Health and Safety Code prior to coming up with recommendations to amending the Health and Safety Code.

6.2.3. The Panel through any of the Licensees shall establish (and, where appropriate, revise from time to time) joint working arrangements with industry stakeholders or licensees to facilitate the identification, coordination, making and implementation of changes to their operations consequent on an amendment to the Health and Safety Code in a full and timely manner. These working arrangements shall be such as to enable the development and evaluation of proposed amendments to the Health and Safety Code for the Nigerian Electricity Supply Industry, how Licensees will proceed in a full and timely manner to make changes to their operations consequent to an amendment to the Health and Safety Code for the Nigerian Electricity Supply Industry to be made.

6.2.4. Following the review of a proposed revision by the Health and Safety Code Review Panel, the Commission shall review the Panel's recommendation. The Commission shall consider the proposed revision, other views, and any further representations and shall determine whether the proposed revision should be made and, if so, whether in the form proposed or in an amended form.

6.2.5. If the Commission decides that the revision shall be made, the Chairman shall notify each Licensee, in a manner approved by the Commission, of the revision at least 10 Business Days prior to the revision taking effect. The revision shall take effect with this Health and Safety Code deemed to be amended accordingly from [and including] the date specified in such notification. One representative of each of the DisCos and GenCos in the Panel shall have the responsibility of drafting the amended Conditions.

6.2.6. After approval of any amendment to the Health and Safety Code for the Nigerian Electricity Supply Industry by the Commission, each Licensee shall publish the revised version for implementation.

6.3. HEALTH AND SAFETY CODE FOR THE NIGERIAN ELECTRICITY SUPPLY INDUSTRY DISPUTES RESOLUTION

6.3.1. If any dispute arises relating to, out of or in connection with the implementation of any part of this Code, the parties involved shall go to the dispute resolution panel of the Commission for redress to be concluded within six months.