AFRICAN NETWORK OF CENTERS OF EXCELLENCE IN ELECTRICITY
ANCEE
RACEE
RESEAU AFRICAIN DES CENTRES D'EXCELLENCE EN ELECTRICITE

2022-2023 • TRAINING CATALOG

BANQUE AFRICAINE DE DEVELOPPEMENT
AFRICAN DEVELOPMENT BANK
AFRICAN DEVELOPMENT FUND
FONDS AFRICAIN DE DEVELOPPEMENT

APUA
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DE DÉVELOPPEMENT

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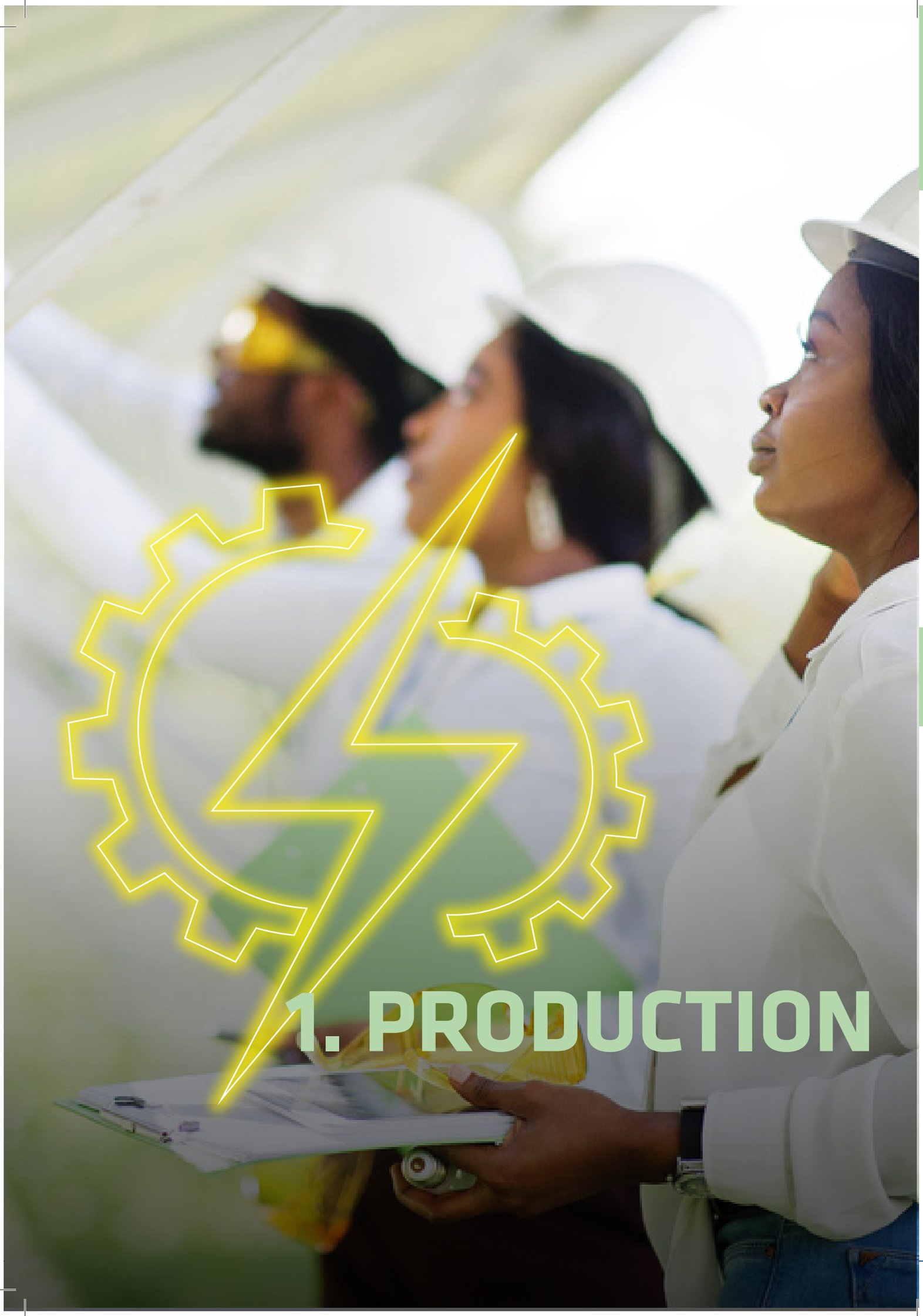


1. PRODUCTION

1. PRODUCTION
Studies And Planning

CALCULATION OF THE EFFICIENCY OF THERMAL POWER PLANTS (STEAM, DIESEL, TAG)

Calculating the efficiency of steam power plants

1. Know the factors affecting the efficiency of thermal installations. To acquire the knowledge necessary for the operation and maintenance of wind farms.
2. Calculate the efficiency of thermal installations.
3. Calculate the specific consumption of the unit.

Time : 2 days

TARGET AUDIENCES
Study and Planning Manager
Operations and Maintenance Officer
Agent Thermal production

PREREQUISITES
Knowledge of the facilities

ATTENDEES
10-20

ALIGNMENT OF ROTATING MACHINES

know the alignment techniques for rotating machines

1. Check shafts and couplings
2. Aligning rotating machines

Time : 2 days

TARGET AUDIENCES
1) Maintenance Officer
2) Agent Thermal steam generation

PREREQUISITES
Mechanical knowledge

ATTENDEES
10-20

1. PRODUCTION
Exploitation

EXPLOITATION OF COMBINED CYCLES

Efficient operation of combined cycle power plants

1. Start combined cycles
2. Stopping combined cycles
3. Operating combined cycles in normal operation

Times: 5 Days

TARGET AUDIENCES
1) Operators (rounder), Head of the block
2) Shift Manager, Operational Manager
Operational Maintenance Manager

PREREQUISITES
Know the basic principles of plant operation

ATTENDEES
10-20

EXPLOITATION OF GAS TURBINES

Efficient operation of gas turbines

1. Describe the launch system
2. Explain the sequences
3. Explain the operating principle

Times: 10 Days

TARGET AUDIENCES
Maintenance coordinator for production facilities

PREREQUISITES
Describe a thermal generation facility

ATTENDEES
8

1. PRODUCTION
Exploitation

OPERATION OF STEAM TURBINES

Efficient operation of a steam turbine

1. To know the operating principle of steam turbines
2. Correctly analyse the problems encountered on TAV
3. Take corrective action

Times: 10 Days

TARGET AUDIENCES
1) Operators (rounder), Head of the unit.
2) Shift Manager, Operational Manager
Operational Maintenance Manager

PREREQUISITES
1. know the basic principles of a steam turbine
Experience in the operation of steam turbines

VOLTAGE REGULATION SYSTEM FOR HYDRAULIC POWER PLANTS

Correct operation of voltage regulators

1. Describe the voltage regulator
2. Describe the principle operating diagram of the voltage regulation system
3. Identify the layout of the elements

Times: 5 Days

TARGET AUDIENCES
1) Plant Operations Coordinator
2) Generation Operations Engineer

PREREQUISITES
1- To have followed the programming module for programmable industrial controllers
2- Completion of the Power Plant Operator module

ATTENDEES
8

MAINTENANCE OF DIESEL ENGINES

Carry out effective maintenance of DIESEL engines

1. Define the operation of the engines
2. Explain the operating principle of DIESEL engines
3. identify the components of DIESEL engines

Times: 5 Days

TARGET AUDIENCES
1) Production Facilities Maintenance Technician
2) Production Facilities Maintenance Coordinator
3) Maintenance engineer for production facilities

PREREQUISITES
Have knowledge of engines

MAINTENANCE OF STEAM TURBINES

Efficient maintenance of steam turbines

1. Know the basic principles of TAV maintenance
2. Master the requirements of routine and preventive maintenance of the TAV
3.Modify a simple program and implement the basic instruction set

Times: 5 Days

TARGET AUDIENCES
1) Maintenance operators
2) Operational maintenance manager Plant Manager

PREREQUISITES
Have experience in maintenance

VIBRATION ANALYSIS OF ROTATING MACHINES

Detecting vibration phenomena on machines

1. Explain maintenance through vibration analysis
2. Identify the problems caused by vibration defects
3. Explain the benefits of condition monitoring through vibration analysis

Times: 10 Days

TARGET AUDIENCES
1) Coordonateur de maintenance
2) Ingénieur maintenance ouvrages et production

PREREQUISITES
Avoir des notions en mécanique

2. TRANSMISSION

2. TRANSMISSION
Studies And Planning

STRUCTURE OF HV/HV SOURCE SUBSTATIONS

Upgrade knowledge of the source station

1. Explain the organisation, equipment and functionality of the source station

Times: 3 Days

TARGET AUDIENCES
Staff assigned to work in a source station

PREREQUISITES
Have attended the module Electrical Risks

ATTENDEES
From 8

HV ELECTRICAL SAFETY

Apply the necessary safety measures when working on structures G24

1. Master the rules and procedures relating to the operation of electrical works
2. Draw up the working documents correctly
3. Identify and correctly use safety equipment in operations

Times: 10 Days

TARGET AUDIENCES
1) Engineers and technicians working on HV electrical networks
2) Operating technicians for electrical works.

PREREQUISITES
1- Electrical engineering basics
2- Good knowledge of HV network equipment

ATTENDEES
12-16

PROTECTION OF HV OUTLETS

Facilitate intervention on HV protections.

1. Identify incidents and faults on HV networks
2. Configure and set the digital protections of the HV departures
3. Operate the HV outgoing protections

Times: 5 Days

TARGET AUDIENCES
1) Managers
2) Supervisory staf

PREREQUISITES
Electrotechnics

ATTENDEES
12-16

PROTECTION OF HV NETWORKS

Effectively maintain steam turbines

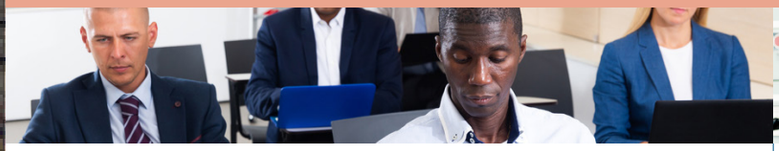
Allow participants to master the protections of the electricity transmission system.

Times: 15 Days

TARGET AUDIENCES
1. Identify incidents and defects of HTB networks
2. Identify the different protective relays on HV networks
3. Configure, parameterise and operate protective relays correctly

PREREQUISITES
1) Managers
2) Supervisory staf

ATTENDEES
10-12




2. TRANSMISSION
Studies And Planning

REACTIVE POWER COMPENSATION

Compensating for the reactive energy of electrical installations

Calculating the power factor
Determining capacitor banks
Determine the means used for reactive energy compensation

Times: 2 Days

TARGET AUDIENCES
Transport network technicians and managers

PREREQUISITES
Electricity or/and network mechanics

ATTENDEES
10-20

CONTROL AND MANAGEMENT OF THE EHV AND HV ELECTRICITY NETWORK

Driving and operating power lines and substations

Coordinate the manoeuvres required to achieve unavailability Operating power lines and substations

Times: 3 Days

TARGET AUDIENCES
Transport network technicians and managers

PREREQUISITES
Electricity or / and network mechanics

ATTENDEES
10-20

2. TRANSMISSION
Live working

ANALYSIS OF TRANSPORT NETWORK INCIDENTS

Identify malfunctions and/or anomalies during incidents, model the network for a better appreciation of the electrical quantities of the fault and use the computer tool for a better study of the variations of the electrical quantities during faults.

1. Interpret partially the information collected.
2. operate the disturbance and status logging systems
3. Analyse incidents: Line incidents, transformer incidents, busbars and others et autres.

Times: 5 Days

TARGET AUDIENCES
1) Engineers, senior technicians in electrical control and operation of electricity transmission facilities with good experience of protection systems

PREREQUISITES
1- State engineer or TS
2- Professional experience: Two (02) years or more

ATTENDEES
12 - 16

DISTANCE HV VOLTAGE WORK

Ensuring the maintenance of HV lines without interrupting the electricity supply

1. Identify the regulatory texts applicable to HVB TST /
2. Explain the regulations specific to the remote HVB TST framework
3. Develop HVB work preparations for remote work

Times: 5 Days

TARGET AUDIENCES
1) HV live line maintenance operator
2) HV live line maintenance manager

PREREQUISITES
1- Identify the risks of falling from a height and of working near live equipment
2- Climbing a pylon
3- Replacing the accessories for hanging a pylon

ATTENDEES
8

2. TRANSMISSION
Live working

LIMIT OUTAGE TIMES DURING WORK FOR THE LV CUSTOMERS

Limiter les temps de coupure lors de travaux pour la clientèle BT

1. Analyse the working conditions to be achieved
2. Choose the tools and procedures appropriate to the work to be done
3. Working under voltage on underground connections from underground networks

Times: 3 Days

TARGET AUDIENCES
1) Technical maintenance, operation and repair staff carrying out live underground connections

PREREQUISITES
1- Explain the methods and techniques for making underground connections
2- Have attended the «Basic TST» module

ATTENDEES
8

LIVE WORKING - OVERHEAD AND OVERHEAD-UNDERGROUND CONNECTIONS

Limiting outage times during works for LV customers

1. Choose the tools and procedures appropriate to the work to be carried out
2. Live working on overhead and overheadunderground connections from twisted or bare conductor networks
3. Apply the TECs excluding particular TEC No. 3 during the construction of overhead and overhead-underground connections

Times: 3 Days

TARGET AUDIENCES
1) Technical operating, maintenance and repair staff required to make overhead or overhead-underground connections with live connections to bare or insulated networks

PREREQUISITES
1- Know the methods and techniques for making overhead and overhead-underground connections
2- Have attended the Basic TST module

ATTENDEES
8

LIVE WORK ON HV/LV BOXES AND SUBSTATIONS

Limiting outage times during works for LV customers

1. Analyse the conditions of the work to be done
2. choose the tools and procedures appropriate to the work to be carried out
3.Live working on underground connections from underground networks

Times: 3 Days

TARGET AUDIENCES
1) Technical maintenance staff carrying out work on LV boxes in live MV/LV transformer stations

PREREQUISITES
1-Explain the methods and techniques for installing boxes in MV/LV transformer stations
2- Have attended the Basic TST module

ATTENDEES
8

REMOTE HV VOLTAGE WORK

Limiting outage times during works for LV customers

1. Analyse the conditions for carrying out remote live working
2. Prepare and check tools appropriate to the site
3. Efficiently carry out the physical movement of drivers

Times: 6 Weeks

TARGET AUDIENCES
1) TST/HTA installer

PREREQUISITES
1- Be declared competent after the specialised medical examination
2- Have followed the module knowledge of the HV network equipment
3- Know how to compose and decompose forces in a triangulation in order to deduce the forces in compression and traction

ATTENDEES
6

2. TRANSMISSION
Live working

LIVE WORKING ON PE WORKS

Limiting outage times during works for LV customers

1. Choose the tools and procedures appropriate to the work to be done
2. Working under voltage on overhead public lighting networks with twisted or bare conductors
3. Apply TECs when carrying out work on WPPs

Times: 2,5 Days

TARGET AUDIENCES
1) Maintenance electricians carrying out work on live EP works

PREREQUISITES
1-Explain the methods and techniques for carrying out public lighting work on the bare and isolated LV network

ATTENDEES
8

MAINTENANCE OF HV CIRCUIT BREAKERS WITH OLEO-PNEUMATIC CONTROL

Carry out level 1 to 3 maintenance on HV circuit breakers with oleo-pneumatic control

1. Describe the mechanically operated HVB circuit breaker
2. Describe the construction of a Merlin GERIN FA2 type circuit breaker
3. Carry out systematic level 3 maintenance on the Merlin GERIN FA2 spring circuit breaker

Times: 5 Days

TARGET AUDIENCES
1) HVB Maintenance Operator
2) Staff member

PREREQUISITES
1- To have operated a source station or a generating station
2- Have a basic understanding of the circuit breaker

ATTENDEES
8

2. TRANSMISSION
Maintenance

MAINTENANCE OF HTB CIRCUIT BREAKERS WITH PNEUMATIC CONTROL LEVEL 1 TO 3

Carry out level 1 to 3 maintenance on HV circuit breakers with pneumatic control

1. Describe the mechanically operated HTB circuit breaker
2. Describe the construction of a Magrini GALILEO 123 MHM 30C circuit breaker
3. Carry out level 3 systematic maintenance of the Magrini GALILEO 123 MHM 30C spring-loaded circuit breaker

Times: 5 Days

TARGET AUDIENCES
1) HVB Maintenance Operator
2) Staff member

PREREQUISITES
1- To have operated a source station or a generating station
2- Have a basic understanding of the circuit breaker

ATTENDEES
8

MAINTENANCE OF EHV/HV SUBSTATION EQUIPMENT

Acquire maintenance techniques for EHV/HV distribution substations

Maintaining switching devices
Maintain processing equipment
Maintain protective equipment

Times: 2 Days

TARGET AUDIENCES
Transport network technicians and managers

PREREQUISITES
Electricity or/and network mechanics

ATTENDEES
10-20

MAINTENANCE OF EHV & HV OVERHEAD POWER LINES

Acquire maintenance techniques for EHV & HV overhead power lines

To know the transport works and equipment of VHT and HV overhead power lines
Identify the equipment and accessories used in EHV and HV overhead power lines
Know the types of maintenance work carried out on EHV and HV overhead power lines

Times: 2 Days

TARGET AUDIENCES
Transport network technicians and managers

PREREQUISITES
Electricity or/and network mechanics

ATTENDEES
10-20

MAINTENANCE AND CONNECTION OF THE OPTICAL FIBER

Implementation and Optical Fibre Connection Fibre optic connection.

1. Know the basics of telecommunication par fibre optique.
2. Identify tooling requirements, describe procedures, make connections and measure.
3. Responding to breakdowns and incidents (Analysis and troubleshooting)

Times: 15 Days

ATTENDEES
10 - 12

3. DISTRIBUTION

3. DISTRIBUTION
Studies And Planning

POWER SYSTEM INCIDENT ANALYSIS

Reduce the risk of accidents associated with the use of equipment.

1. Explain the main steps of incident analysis
2. Use incident analysis methods and tools effectively

Times: 5 Days

TARGET AUDIENCES
Interconnected Network Engineer,
Generation Plant Operating Technician,
Generation Plant Operating Engineer,
Maintenance Engineer for Production Facilities,
HV/MV/LV Network Operations Engineer,
HV and MV Maintenance Manager and Engineer
Lines Maintenance Manager and Engineer

PREREQUISITES
Have the structure of the electrical unit

ATTENDEES
8-8

DESIGN STUDY OF LV UNDERGROUND NETWORKS

Contribute to the harmonisation, safety and implementation of LV underground networks

1. Study and design of low voltage underground networks
2. Checking their implementation

Times: 2 Days

TARGET AUDIENCES
Technical agents responsible for the study, design and construction of LV underground networks

PREREQUISITES
1- Define the structure of the networks and the technology of the underground networks
2- Apply the basic rules of electricity (ohms law, power, voltage drop)
3- Define the basic concepts of electrical engineering applied to the network

ATTENDEES
8-8

TECHNICAL SPECIFICITY OF A 225/20KV SOURCE STATION

Contribute to the harmonization and reliability of source items

1. Define the study for the construction of a source station in accordance with the technical guidelines to ensure the conformity of the works
2. Monitor the construction of a source substation in accordance with technical guidelines to ensure the conformity of the works
3. Use technical and technological knowledge of the components of the source station

Times: 2 Days

TARGET AUDIENCES
Source managers or technical officers or those in charge of studies, planning and monitoring of construction sites and modifications of source stations

PREREQUISITES
1- Have a good experience in the trade or have followed the FPS1 and FPS4 courses
2-A minimum of 18 months experience as a PS manager is desirable

ATTENDEES
8-8

STRUCTURE OF HV/HV SOURCE STATIONS

Upgrade knowledge on the source station

1. Explain the organization, the equipment and its functionality in the source substation

Times : 3 days

TARGET AUDIENCES
Personnel responsible for intervening in a source substation

PREREQUISITES
Have followed the module: Electrical Risks

ATTENDEES
8-8

3. DISTRIBUTION
Studies And Planning

DESIGN STUDY OF THE HV 15 AND 33 KV OVERHEAD NETWORKS

Contribute to the harmonisation and safety of the construction of overhead HV networks

1. Design and study the HV overhead networks (H61 substations, lines

Times: 5 Days

TARGET AUDIENCES
1) Designers involved in the design and construction of HV networks
2) Technical agents responsible for the operation and maintenance of MV/LV distribution stations

PREREQUISITES
Explain the different structures of HV and LV distribution networks

ATTENDEES
8-8

TECHNICAL MANAGEMENT OF DISTRIBUTION WORKS

Prevent potential accidents and incidents by carrying out planned work based on statistical data

1. Know the regulations for the performance of a job
2. Define maintenance and its different methods
3. Controls the parameters of the maintenance policy

Times: 4 Days

TARGET AUDIENCES
1) HV/LV network maintenance agents
2) Agents responsible for the operation and maintenance of MV/LV networks

PREREQUISITES
Explain the different structures of HV and LV distribution networks

ATTENDEES
8-8

DESIGN STUDY OF MV/LV TRANSFORMER STATIONS FOR PUBLIC DISTRIBUTION

Contribute to the harmonisation and safety of the construction of MV/LV substations for public distribution

1. Study the MV/LV transformer stations of public distribution
2. Designing MV/LV transformer stations for public distribution

Times: 5 Days

TARGET AUDIENCES
1) Design office staff involved in the design and construction of MV/LV transformer stations
2) Agents responsible for the operation and maintenance of MV/LV distribution stations

PREREQUISITES
Explain the different structures of HV and LV distribution networks

ATTENDEES
8-8

STUDY OF OVERHEAD, OVERHEADUNDERGROUND AND UNDERGROUND RISER CONNECTIONS

Contribute to the harmonisation and safety of the construction of LV overhead networks

1. Designing overhead, overhead-underground, underground and riser connections
2. Study these overhead, overhead-underground, underground and riser connections
3. Explain the methods of electrically connecting cables

Times: 2 Days

TARGET AUDIENCES
Technical agents in charge of the study for the realisation of connections to the public distribution network

PREREQUISITES
1- Know the structure of the BTA public distribution networks
2- Apply the basic rules of electricity (ohms law, power, voltage drop)
3- Defining an electrical clearance

ATTENDEES
8-8

KNOWLEDGE OF MAPPING SOFTWARE (ARCGIS)

GIS update and data exploitation

1. Knowing the ARCGIS software environment
2. Know the components of the ESRI geographic information system
3. Knowing how to consult data (zooming, moving, simple queries...)

Times: 10 Days

TARGET AUDIENCES
1) HV, LV and PE mapping desinators.
2) HV, LV and PE operator

PREREQUISITES
Knowledge of basic GIS concepts (even minimal) is a plus for this course

ATTENDEES
12-8

MV AND LV METERING OF ELECTRICAL ENERGY

Mastering MV and LV metering of electrical energy

Describe the constitution and operation of LV, MV and HV metering.
Choose the measurement reducers adapted to metering

Times: 2 Days

TARGET AUDIENCES
Distribution network technicians and managers

PREREQUISITES
Electricity or/and network mechanics

ATTENDEES
10-20

UNBALANCED LV NETWORKS

Attenuate and significantly reduce the cost of maintenance of LV E14 by ensuring compliance with the rules of the art in terms of LV connections.
Ensure a better quality of service for customers

1. Highlight the technical and financial consequences of an unbalanced network.
2. Highlight the negative consequences of the imbalance on the quality of service to customers.

Times: 5 Days

TARGET AUDIENCES
1) Managers,
2) Supervisory staff
3) Distribution electricians

PREREQUISITES
Electrotechnics

ATTENDEES
10-12

USE OF GPS DEVICES

Familiarisation with the GPS receiver for the geolocation of HV, LV and PE network structures

1-Know the GPS system
2-Conducting field surveys with a GPS receiver
3-Project the points surveyed in the field onto a map

Times: 4 Days

TARGET AUDIENCES
1) Cartographers
2) MV, LV and PE network operators

PREREQUISITES
1- Knowledge of the HV, LV and PE network works
2- Concepts of cartography
3- Concepts in GIS

ATTENDEES
8-20

3. DISTRIBUTION
Studies And Planning

REACTIVE ENERGY COMPENSATION

Compensate for the reactive energy of electrical installations

Determine the power balance of electrical installations.
Acquire reactive energy compensation techniques.

Times: 2 Days

TARGET AUDIENCES
Distribution network technicians and managers

PREREQUISITES
Electricity or/and network mechanics

ATTENDEES
10-12

OPERATION OF INTERCONNECTED OR SPECIFIC HTB WORKS

Master the conduct of certain specific lines and interconnection lines

1. Explain the operating mode of an HTB / HTA substation or a specific power transmission line

Times: 1 Day

TARGET AUDIENCES
Post Agent
Interconnected Network Operator

PREREQUISITES
Define electrical network structures

ATTENDEES
8-8

3. DISTRIBUTION
Maintenance

BTA NETWORK TROUBLESHOOTING: FAULT FINDING AND DIAGNOSIS

Restore interrupted electricity as soon as possible

1. Locate a LV fault by carrying out an effective diagnosis
2. Methodically analyze the elements collected.
3. Take the necessary measures to limit the disruptive effects, by integrating the prevention of electrical risk

Times : 2,5 Days

TARGET AUDIENCES
1) Repair agent
2) Network maintenance electrician

PREREQUISITES
Define the structure of the LV network

ATTENDEES
8-8

WORKS AND MAINTENANCE OF SOURCE AND DISPATCHER SUBSTATIONS

Contribute to the harmonization and reliability of MV source substations and dispatchers

1. Ensure the maintenance and troubleshooting of MV cells and circuit breakers in MV source substations and distributors

Times : 3 Days

TARGET AUDIENCES
Personnel in charge of the maintenance and troubleshooting of source stations and dispatchers

PREREQUISITES
1- Have followed the modules: UTE C18-510 accreditation; Lockout Rules and Electrical Risks
2- Define the structure of the distribution networks.
3- Define source and dispatcher stations

ATTENDEES
8-8

MAINTENANCE OF OVERHEAD NETWORKS

Contribute to the harmonisation and reliability of overhead HV networks with bare conductors

1. Carrying out repairs and maintenance of the HV overhead networks

Times : 3 Days

TARGET AUDIENCES
1) Personnel responsible for the maintenance of HV lines with bare conductors

PREREQUISITES
1- Explain the different structures of HV distribution networks
2- Explain the rules of consignment and empowerment according to C18-510
3- Be able to work at height

ATTENDEES
8-8

MAINTENANCE OF MV/LV SUBSTATION EQUIPMENT

Ensure proper maintenance of MV/LV equipment

Acquire maintenance techniques for MV/LV distribution substations

Times : 1 Days

TARGET AUDIENCES
Distribution network technicians and managers

PREREQUISITES
Electricity or/and network mechanics

ATTENDEES
10-20

MAINTENANCE AND CONNECTION OF THE OPTICAL FIBRE

Implementation and connection of optical fibres / Raccordement des Fibres optiques.

1. To know the principles of fibre optic telecommunication.
2. Identify necessary tooling, describe procedures, make connections and measure.
3. Responding to breakdowns and incidents (Analysis and troubleshooting)

Times : 15 Days

TARGET AUDIENCES
1) Managers,
2) Supervisory staf

PREREQUISITES

ATTENDEES
10-12

WORK UNDER LV VOLTAGE

To provide power utilities with a resource capable of intervening on live / LV networks, under voltage.

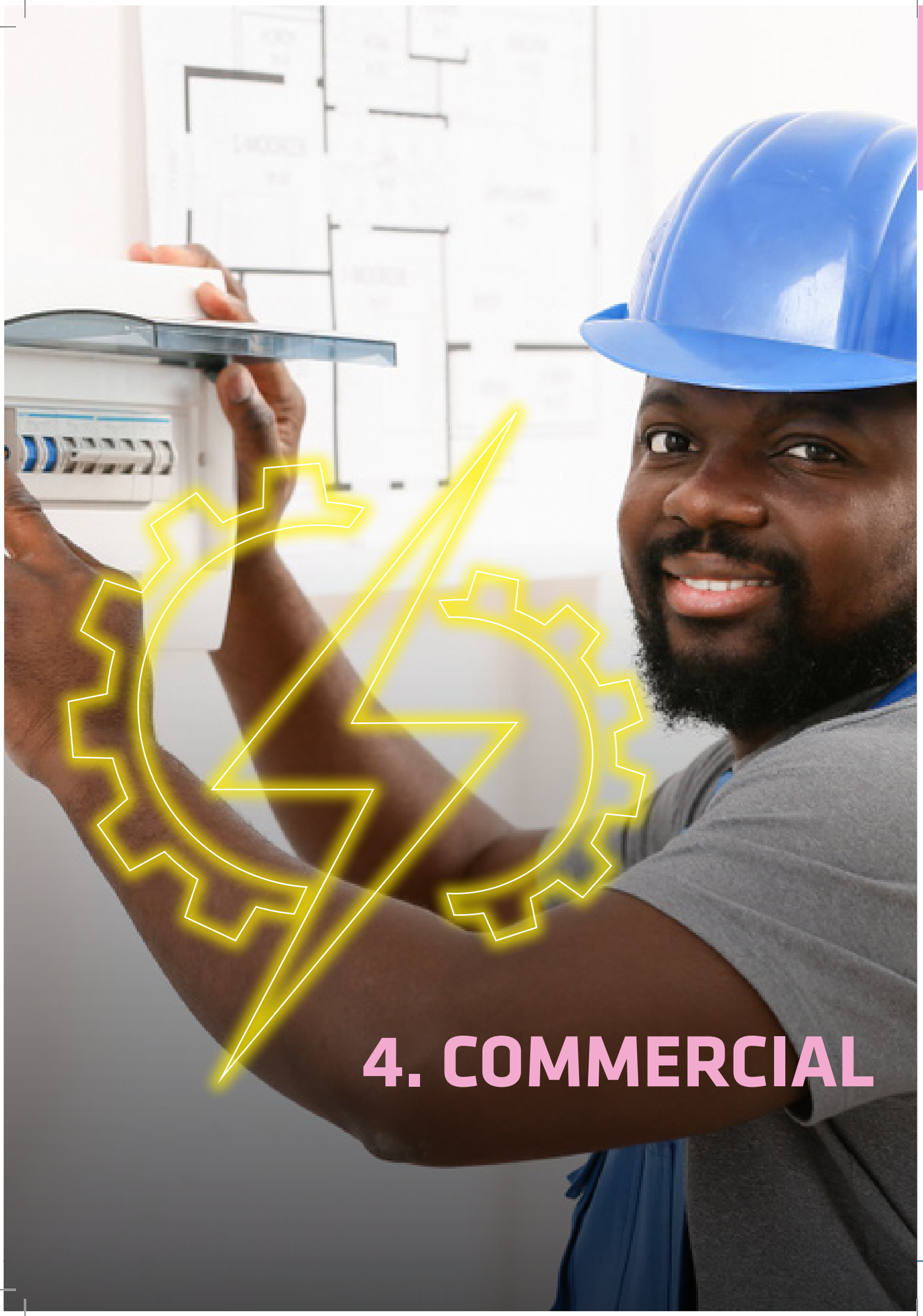
1. Live working on low-voltage networks in application of the provisions of the general instruction on Live working and the conditions of execution of the work.

Times : 10 Days

TARGET AUDIENCES
1) Able to work on low-voltage networks off-line.
2) Medical fitness for live working

PREREQUISITES
None

ATTENDEES
8-12



4. COMMERCIAL

4. COMMERCIAL
Marketing and communication

LV AND MV TARIFFS

LV or MV tariffs

- Organisation of the power
- Regulatory Background sector
- LV or MV tariffs

Times : 2 Days

TARGET AUDIENCES
Managers or Technicians working in the commercial and electrical distribution fields

PREREQUISITES
Basic knowledge of mathematical calculations

ATTENDEES
10-20

SMART RELEVE SOFTWARE

To provide practical knowledge on how to use SMART RELEVE software to ensure proper reading of customers

1. Understanding the SMART RELEVE application
2. Understanding a succession campaign
3. Understanding the evolution of succession statistics

Times : 5 Days

TARGET AUDIENCES
Area Officer

PREREQUISITES
1- Have knowledge of other SAPHIR modules
2- Have a thorough knowledge of the invoice

ATTENDEES
8-8

INVOICING AND RECOVERY OF CLAIMS

Set up an electronic receivables invoicing and recovery process while mastering legal and commercial procedures.

1. Mastering the rules applicable to invoices
2. Mastering collection techniques
3. Optimising and making recovery profitable

Times : 5 Days

TARGET AUDIENCES
Invoicing and Debt Collection Officers

DIGITAL AND ELECTRONIC COUNTING

Constitution and operation of LV, MV and HV metering.

Constitution and operation of LV, MV and HV metering.
Measuring reducers suitable for metering,

Times : 2 Days

TARGET AUDIENCES
Executives or Technicians working in the commercial and electrical distribution fields

PREREQUISITES
Basic knowledge of general electricity

ATTENDEES
10-20

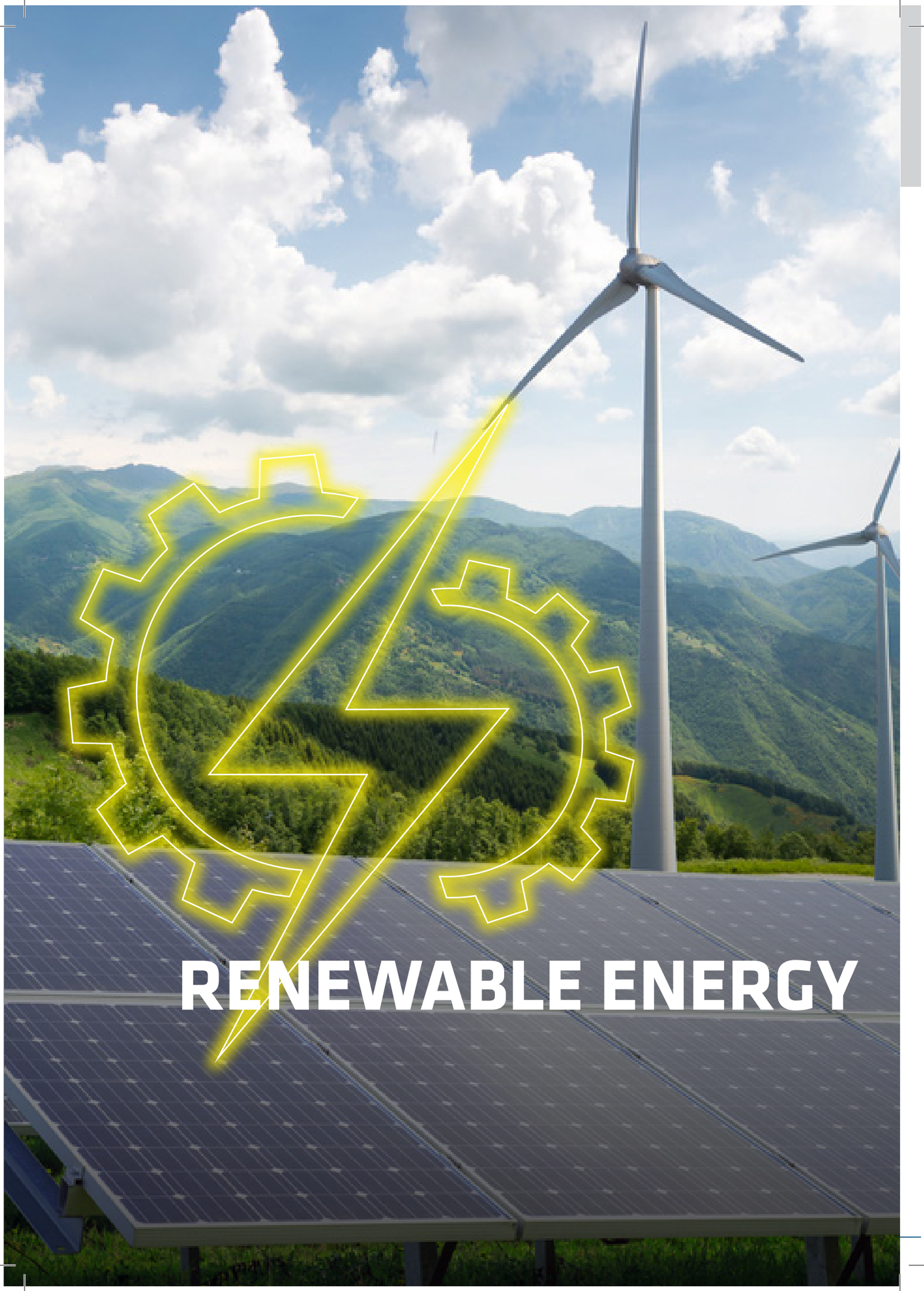
ENERGY SAVING

To introduce participants to possible sources of energy savings and solutions for lowering energy bills

1. Provide sound advice in line with customers' expectations on energy saving
2. Promote the use of responsible consumption patterns in order to reduce the energy bill

Times : 5 Days

TARGET AUDIENCES
1) Head of Customer Structure
2) Receptionist and telephonist
3) Technical sales representative


RENEWABLE ENERGY

5 - RENEWABLE ENERGY
Studies And Planning

INTRODUCTION TO RENEWABLE ENERGY

1. Introduce the trainee to the different renewable energies applicable to buildings and industry
2. Raise awareness of the possibilities and limitations
3. State the main rules of good practice in the design and implementation of RE solutions

Times : 3 Days

PREREQUISITES
1-Students with a technical BTS or professional experience in industry and construction, Industrial Engineer or equivalent
2- Knowledge test to orient potential trainees (face-to-face or e-learning)

ATTENDEES
8-20

DESIGN ELEMENTS ON RENEWABLE ENERGIES

1. Know how to dimension and design (specifications and schematic diagram) solar thermal and photovoltaic installations

Times : 5 Days

PREREQUISITES
1- Students with a BTS or professional experience in industry
and construction, Industrial Engineer or equivalent
2-Follow-up of module D1 & D3 strongly recommended
3-Knowledge test to orient potential trainees

ATTENDEES
8-20

SOLAR ENERGY CONVERSION AND PHOTOVOLTAIC SYSTEM INTEGRATION

know the principle of integrating solar energy into the electricity grid

- Know the different types of radiation,
- Know the physics of photovoltaic conversion, - know the principle of photovoltaic system integration within an autonomous system or connected to the network
- Know the main conversion structures used in power electronics
- Apply the main conversion structures in the field of renewable energies

Times : 3 Days

TARGET AUDIENCES
Renewable unit operating agent

PREREQUISITES
knowledge of solar installations

ATTENDEES
10-20

SOLAR ENERGY CONVERSION AND PHOTOVOLTAIC SYSTEM INTEGRATION

Know the principle of electronic power converters used in solar energy

- Know the main conversion structures used in power electronics
- Apply the main conversion structures in the field of renewable energies.

Times : 3 Days

TARGET AUDIENCES
Renewable Unit Operator

PREREQUISITES
Basic knowledge of power electronics

ATTENDEES
10-20

5 - RENEWABLE ENERGY
Studies And Planning

IMPACTS OF PHOTOVOLTAIC INSTALLATIONS PHOTOVOLTAIC INSTALLATIONS ON THE GRID

Prepare a human resource capable of establishing an impact assessment of renewable energy installations on the electricity grid.

1. Know how to size the electrical network structures to receive the power of the Renewable Energy plant.
2. Draw up a plan for the engagement of diesel/gas turbine units in an isolated grid, taking into account the Renewable Energy based power injected.
3. Carry out the connection study: Static study and & Dynamic study.

Times : 10 Days

TARGET AUDIENCES
Engineers and Technicians

PREREQUISITES
Know the basics of photovoltaics or have completed a training in photovoltaics.

ATTENDEES
10-16

SOLAR PHOTOVOLTAIC ENERGY (REMOTE)

Prepare a human resource capable of naming, identifying, and distinguishing between solar photovoltaic systems.

1. Distinguish between the different configurations of solar photovoltaic systems.
2. Understand the working principle of the components of different photovoltaic systems.
3. Know the different standards for photovoltaic installations.

Times: 30 Days (That is 06 Days billing)

TARGET AUDIENCES
All populations

PREREQUISITES
No prerequisites required

RISKS AND SAFETY OF PHOTOVOLTAIC INSTALLATIONS

Prepare a human resource capable of identifying the risks and safety rules related to photovoltaic installations

1. Identify the general risks associated with electrical current.
2. Identify the specific risks of photovoltaic installations.
3. Know the safety measures to be taken in photovoltaic installations.

Times : 5 Days

TARGET AUDIENCES
Engineers and Technicians

PREREQUISITES
Have knowledge of solar photovoltaic energy.

ATTENDEES
10-16

THERMODYNAMIC SOLAR POWER PLANTS

Identify and distinguish the constitution and principle of the different technologies of thermodynamic power plants.

1. Know the different technologies technologies; type and constitution.
2. Know the thermal storage techniques and storage techniques and the heat transfer fluids used.
3.Know the methods for evaluating the cost of cost of KWh produced.

Times : 10 Days

TARGET AUDIENCES
Engineers and Technicians

PREREQUISITES
Knowledge of the basics of thermics or have followed a thermal training.

ATTENDEES
10-16

5 - RENEWABLE ENERGY
Studies And Planning

BIOMASS

To know the advantages, the multiple uses and the application channels of biomass.

1. Knowing the resources and the different biomass sectors;
2. Assess the resources and potential of biomass both in Algeria and in the world.
3. Know the benefits of using biomass.

Times : 5 Days

TARGET AUDIENCES
All populations

PREREQUISITES
No prerequisites required.

ATTENDEES
10-16

GEOTHERMAL

To know the advantages, the multiple uses and the fields of application of geothermal energy.

1. Explain how the different types of geothermal systems work.
2. Evaluate the geothermal potential and resources both in Algeria and in the world.
3. Determine the parameters to be considered for the choice of the channel implemented.

Times : 5 Days

TARGET AUDIENCES
All populations

PREREQUISITES
No prerequisites required

ATTENDEES
10-16

SIZING OF PHOTOVOLTAIC SYSTEMS

To provide theoretical and practical knowledge on the sizing of Photovoltaic systems

1. Dimensioning of photovoltaic installations
2. Estimate the cost price of electricity
3. Know how to validate the compatibility between the components

Times : 5 Days

TARGET AUDIENCES
1) Frameworks and technical skills

PREREQUISITES
None

ATTENDEES
12-16

INJECTION OF SOLAR ENERGY INTO THE LV GRID

To provide technical knowledge on grid-connected photovoltaic generators connected to the grid.

1. Understand the field of photovoltaics, technologies, formalities and regulations
2. Be familiar with the different components and methods used in the system of electricity injection into the grid

Times : 5 Days

TARGET AUDIENCES
1) Managers and technical supervisors

PREREQUISITES
None

ATTENDEES
12-16

5 - RENEWABLE ENERGY
Studies And Planning

INSTALLATION AND MAINTENANCE OF STAND-ALONE PHOTOVOLTAIC SYSTEMS

To provide theoretical and practical knowledge on StandAlone Photovoltaic photovoltaic systems (SPVA).

1. Identify the different components of a VAS
2. Choose the right equipment and install a SPVA
3. intervene on VAS for maintenance

Times: 5 Days

TARGET AUDIENCES
1) Managers and technical supervisors

PREREQUISITES
None

ATTENDEES
12-16

METHODOLOGY FOR THE DEVELOPMENT OF A PHOTOVOLTAIC AND HYBRID (DIESEL / PHOTOVOLTAIC) POWER PLANT PROJECT AND HYBRID (DIESEL / PHOTOVOLTAIC) POWER PLANTS

To prepare a human resource capable of understanding the development stages of a photovoltaic and hybrid (diesel/ photovoltaic) power plant project.

1. Review the state of the art of photovoltaics worldwide and the outlook.
2. Understanding photovoltaics: technologies, tendering, pre-sizing, monitoring, administrative formalities.
3. Create your project: general information, tasks, resources...

Times : 15 Days

TARGET AUDIENCES
Engineers

PREREQUISITES
Know the basics of photovoltaics or have completed a training in photovoltaics.

ATTENDEES
10-12

STANDARDS AND TECHNICAL SPECIFICATIONS FOR PHOTOVOLTAIC INSTALLATIONS

Prepare a human resource capable of naming, identifying, and distinguishing between the equipment constituting a solar photovoltaic installation as well as knowing the standards associated with them.

1. Know how to distinguish between the different equipment
making up a solar photovoltaic installation.
2. Know how to define the criteria for choosing each piece of equipment.
3. Know the different standards for photovoltaic equipment.

Times : 5 Days

TARGET AUDIENCES
Engineers and Technicians

PREREQUISITES
Know the basics of photovoltaics or have completed a training in photovoltaics.

ATTENDEES
10-16

HYBRID PHOTOVOLTAIC - WIND POWER SYSTEM

Provide theoretical and practical knowledge of the hybrid system
PV/wind and understand how this system works

1. Restore the basic notions of photovoltaic solar energy and wind energy.
2. Define and present the PV/WIND hybrid system
3. Describe the composition of the hybrid system (Photovoltaic generators - Wind generator)

Times : 5 Days

TARGET AUDIENCES
1) Executives and technical skills

PREREQUISITES
None

ATTENDEES
12-16

5 - RENEWABLE ENERGY
Studies And Planning

STUDY AND DEVELOPMENT OF RE-INTEGRATION OF RE FOR THE PRODUCTION OF ELECTRICAL ENERGY

To know the advantages, the multiple uses and the fields To prepare a human resource capable of grasping the essential concepts relating to the different sources of renewable energy and the related technologies in the production of electrical energy.

1. List, identify and explain the operating principle of the main equipment in steam, gas and diesel power of steam, gas and diesel power plants.
2. List, identify and explain the operating principle of the main constituent equipment (photovoltaic, thermal, wind, geothermal...)
3. Acquire the basics of project management with MS Project.

Times : 20 Days

TARGET AUDIENCES
Engineers and Technicians

PREREQUISITES
Have some knowledge of renewable energy or have taken a training course on renewable energy. training in renewable energy.

ATTENDEES
10-16

QUALITY OF RENEWABLE ELECTRICITY AND ENERGY EFFICIENCY

Defining the quality of renewable energy and its effects on energy efficiency

Characterise the main disturbances emanating from the integration of renewable energies into electricity networks and affecting the quality of electricity.
To master the solutions implemented To improve the quality of electrical energy in this type of power supply in accordance with the standards in force. E70

Times : 2 Days

TARGET AUDIENCES
Renewable Unit Operator

PREREQUISITES
Grid electricity

ATTENDEES
10-20

WIND ENERGY DEPLOYMENT AND CONVERSION

Know the principle of wind turbines

- Know the operating principle of wind turbines,
- Know the different types of wind turbines.
- Know the main wind energy conversion chains

Times : 3 Days

TARGET AUDIENCES
Renewable Unit Operator

PREREQUISITES
knowledge of renewable installations

ATTENDEES
10-20

SIZING AND INSTALLATION OF SOLAR PHOTOVOLTAIC PUMPS

Acquire the necessary skills to dimensioning a solar pumping system pumping system.

1. Know the different components of a solar PV pumping system.
2. Know the different pumps, motors and their control.
3. Correctly size a solar PV pumping system.

Times : 10 Days

TARGET AUDIENCES
Engineers and Technicians

PREREQUISITES
Know the basics of photovoltaics or have completed a training in photovoltaics.

ATTENDEES
10-12

5 - RENEWABLE ENERGY
Studies And Planning

VOLTAGE REGULATION SYSTEM FOR HYDRAULIC POWER PLANTS

Correct operation of voltage regulators

1. Describe the voltage regulator
2. Describe the principle operating diagram of the voltage regulation system
3. Identify the layout of the elements

Times : 5 Days

TARGET AUDIENCES
1) Plant Operations Coordinator
2) Generation Operations Engineer

PREREQUISITES
1- To have followed the programming module for programmable industrial controllers
2- Completion of the Power Plant Operator module

ATTENDEES
8-8

OPERATION AND MAINTENANCE OF PHOTOVOLTAIC POWER PLANTS

To acquire the knowledge necessary for the operation and maintenance of a photovoltaic plant.

1. To know the constitution and technology of the different components of a photovoltaic power plant.
2. Know the concepts and procedures for intervention on structures.
3. Know how to draw up a maintenance plan for a photovoltaic plant.

Times : 15 Days

TARGET AUDIENCES
Engineers and Technicians

PREREQUISITES
Know the basics of photovoltaics or have completed a training in photovoltaics.

ATTENDEES
10-16

OPERATION AND MAINTENANCE OF WIND FARMS

To acquire the knowledge necessary for the operation and maintenance of wind farms

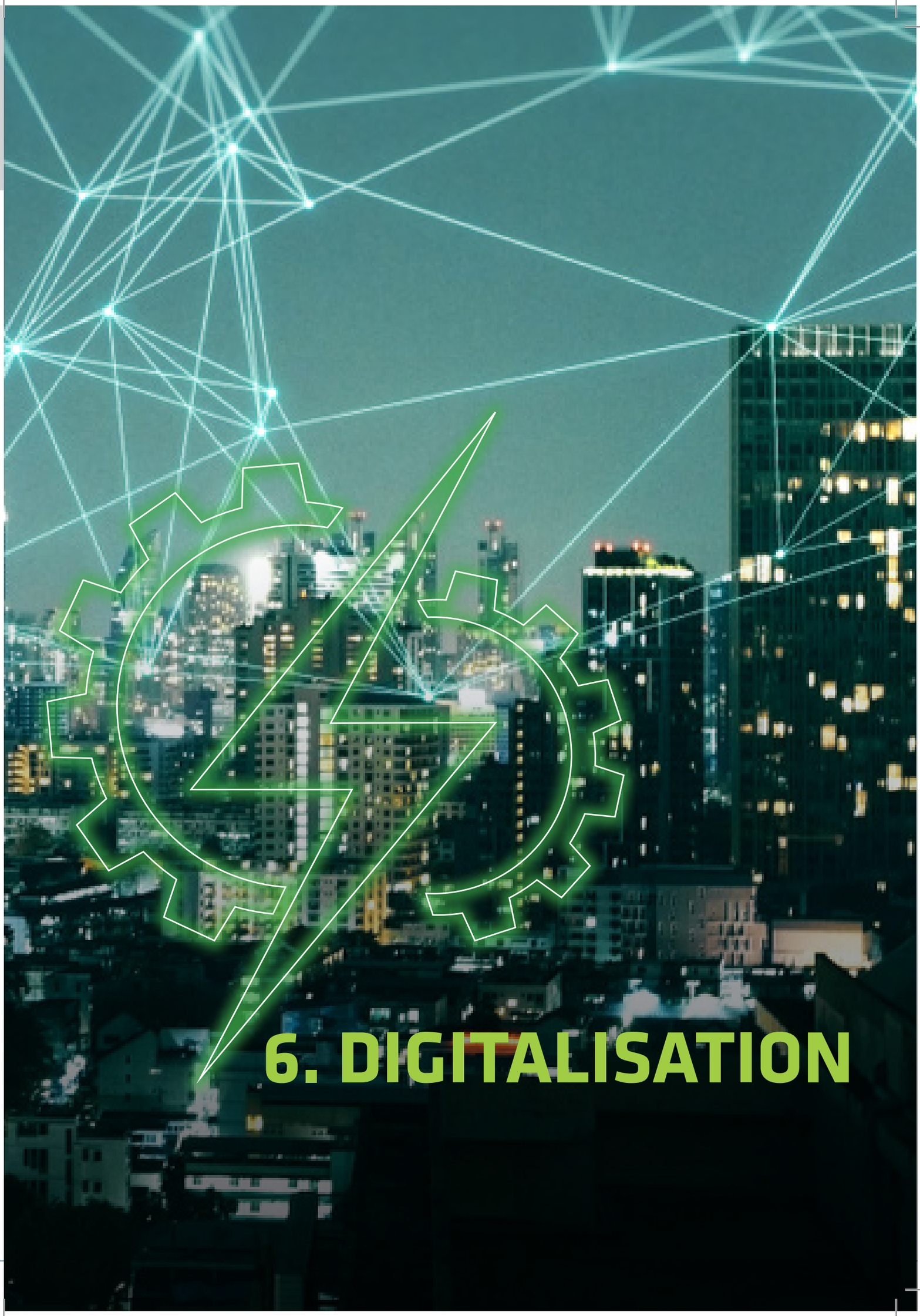
1. To know the constitution and technology of the different components of a wind farm.
2. Know the concepts and procedures for intervention on structures.
3. Know how to develop a maintenance plan for a wind farm.

Times : 15 Days

TARGET AUDIENCES
Engineers and Technicians

PREREQUISITES
Knowledge of the basics of wind energy or have completed a training in wind energy.

ATTENDEES
10-16



6. DIGITALISATION

6 - DIGITALIZATION
Studies And Planning

DIGITAL METERING SYSTEM IN DISTRIBUTION NETWORKS

- Master the principle and operation of the digital counting system,
- Parameterize and configure BT and MV digital meters,
- Intervene and remedy a malfunction in the LV and HTA digital metering system,
- Choose the appropriate equipment and measurement reducers in the LV and MV digital metering system.

Times : 02 Days

METERING SYSTEM IN TRANSPORT NETWORKS

- Carry out counting readings,
- Realize, control and maintain the counting system

Times : 03 Days

INTEGRATION OF RENEWABLE ENERGIES AND THE PLANNING OF ELECTRICAL DISTRIBUTION NETWORKS

- Carry out counting readings,
- Realize, control and maintain the counting system

Times : 03 Days

INTEGRATION OF RENEWABLE ENERGIES AND THE PLANNING OF ELECTRICAL DISTRIBUTION NETWORKS

- Carry out counting readings,
- Realize, control and maintain the counting system

Times : 03 Days

CONTROL AND COMMAND SYSTEM FOR DISTRIBUTION AND TRANSPORT NETWORKS

Understand the operation of DC instruments to monitor and control equipment during normal or incident operation

Times : 03 Days

CONCEPTS OF RENEWABLE ENERGY SOURCES AND STORAGE SYSTEMS

- Master the different production technologies of renewable energies: Wind Energy and Solar Energy.
- Master the different energy storage technologies
- Know the impact of the introduction of renewable energies on the operation of an electrical system and the role of energy storage

Times : 03 Days

IMPACT OF RE ON THE DISTRIBUTION NETWORK PROTECTION PLAN

Control the impact of renewables on the protection plan: short-circuit protection, overvoltage, undervoltage and reactive power protection, etc.

Times : 03 Days

INTRODUCTION TO SMART-GRIDS AND DIGITALIZATION OF ELECTRICAL NETWORKS

Recognize Smart-grids technologies

Times : 04 Days

6 - DIGITALIZATION
Studies And Planning

MASTERING THE IEC 61850 COMMUNICATION PROTOCOL

Mastering the IEC 61850 communication protocol

Times : 05 Days

SMART-GRID: STORAGE MANAGEMENT SYSTEM (BESS, BMS, PCS)

- Master the storage system (BESS, BMS, PCS)

Times : 10 Days

SMART-GRID: ENERGY MANAGEMENT SYSTEM (EMS)

- Mastering the energy management system (EMS)

Times : 07 Days

SMART-GRID : ADVANCED METERING INFRASTRUCTURE (AMI) ET METER DATA MANAGEMENT (MDM)

- Maitriser du système AMI +MDM

Times : 07 Days

IMPACT OF THE INTEGRATION OF RENEWABLE ENERGIES INTO TRANSPORT NETWORKS

- Know the impact of renewable energies on the management of electrical systems,
- Recognize the impact of renewable energies on demand supply management, electrical system reserve, system inertia and network voltage Know the impact of renewable energies on the network and the FRT,
- Master the constraints linked to the massive integration of renewable energies,
- Recognize the impact of renewable energies on the quality of energy,
- Recognize the technical decrees of design and operation for the connection to the transport network.

Times : 03 Days

6 - DIGITALIZATION
General

INTRODUCTION TO INTELLIGENT NETWORKS AND INTEREST OF SMART GRIDS

Times : 05 Days

DIGITALIZATION OF SMART GRIDS (SMART GRID DIGITALIZATION)

Times : 05 Days

ELECTRICAL POWER QUALITY

Times : 05 Days

OPTIMIZATION OF ELECTRICAL SYSTEMS

Times : 10 Days

USE OF ELECTRICAL NETWORKS ANALYZER

Times : 05 Days

6 - DIGITALIZATION
Remote Control

INDUSTRIAL MEASUREMENT SENSORS

Times : 05 Days

INSTRUMENTATION AND CALIBRATION IN POWER PLANTS

Times : 05 Days

INDUSTRIAL PROGRAMMABLE AUTOMATES LEVEL 1,2 & 3

Times : 15 Days

MAINTENANCE & CONTROL OF PROGRAMMABLE AUTOMATES

Times : 10 Days

INDUSTRIAL AUTOMATION

Times : 5 Days

DIGITAL CONTROL OF HTB STATIONS

Times : 10 Days

6 - DIGITALIZATION
Remote Control

TECHNOLOGY AND OPERATION IAT & IATCT

Master the technology, installation and operation of the remote control overhead switch.

1. Operate an IAT & IATCT

Times : 5 Days

TARGET AUDIENCES
1) Executives,
2) Supervisors
3) team leaders and distribution electricians

PREREQUISITES
Electrical engineering

ATTENDEES
10-12

DIGITAL CONTROL OF HTB STATIONS

Allow the trainee to acquire the basics of digital control systems for HTB stations

1. Identify the various Hardware components of a HTB station control-command network and describe their functions.

Times : 5 Days

TARGET AUDIENCES
1) Engineers and technicians in charge of maintenance and operation of HTB stations

PREREQUISITES
1- Good knowledge of HTB networks

ATTENDEES
12-16

REMOTE CONTROL OF DISTRIBUTION NETWORKS

Know the telecontrol techniques applied to distribution networks

Assimilate the basic concepts of remote control
Distinguish between the different parts of the telecontrol system
Identify the different operating modes of remote-controlled devices.

Times : 5 Days

TARGET AUDIENCES
1) Engineers and technicians responsible for the operation and maintenance of electrical networks

PREREQUISITES
1- Basic notions on electrical networks

ATTENDEES
12-16

PROTECTION AND DIGITAL CONTROL (FPS3-1)

Contribute to the harmonization and reliability of substations

1. Define the study for the realization of a digital set or cohabitation lots in compliance with the technical directives to guarantee the conformity of the works
2. Ensure site monitoring of a digital station or cohabitation lots in compliance with technical guidelines to ensure the compliance of works

Times : 3 Days

TARGET AUDIENCES
Experienced substation project managers

PREREQUISITES
Possess knowledge equivalent to that acquired at the end of the FPSA, FPS2-1 and FPS-2 training

ATTENDEES
8-8

6 - DIGITALIZATION
Remote Control

SPEEDTRONIC MARK VI LEVEL 2 TURBINE CONTROL SYSTEM

Times : 10 Days

MARK VI OPERATING COMMAND AND CONTROL SYSTEM

Times : 5 Days

REGULATION IN TV CENTERS

Times : 15 Days

REGULATION IN TG POWER PLANTS

Times : 10 Days

GRID SYNCHRONIZATION AND ALTERNATOR REGULATION

Times : 15 Days

ALTERNATOR VOLTAGE REGULATION

Times : 5 Days

LV ELECTRONIC METER

Times : 05 Days

HT DIGITAL METER

Times : 05 Days

MV OUTPUT PROTECTION

Times : 10 Days

PROTECTION OF HTB NETWORKS

Times : 10 Days

CALCULATION OF HTB NETWORK PROTECTION SETTINGS

Times : 10 Days

CALCULATION OF HTB NETWORK PROTECTION SETTINGS

Times : 5 Days

CALCULATION OF MV NETWORK PROTECTION SETTINGS

Times : 10 Days

6 - DIGITALIZATION
Remote Control

60KV NETWORK ELECTRICAL PROTECTION

Times : 05 Days

NUMERICAL COMMAND CONTROL IN POWER PLANTS

Times : 10 Days

DIGITAL PROTECTIONS IN POWER PLANTS

Times : 20 Days

PROTECTION OF THE ELECTRICITY TRANSMISSION GENERATION SYSTEM (SPTE)

Times : 25 Days

PROTECTION OF THE ELECTRICITY TRANSMISSION AND DISTRIBUTION PRODUCTION SYSTEM

Times : 20 Days

ELECTRIC MOTOR PROTECTION

Times : 05 Days

DIGITAL PROTECTION OF MV NETWORKS

Times : 05 Days

6 - DIGITALIZATION
Driving & Telecontrol

MICROSCADA SYSTEM FOR CONTROLLING MV NETWORKS

Times : 05 Days

NATIONAL DISPATCH MANAGEMENT

Times : 10 Days

RTU, PCG AND CCN

Times : 10 Days

SPIDER DISPATCH SYSTEM

Times : 5 Days

6 - DIGITALIZATION
Driving & Telecontrol

MEASUREMENT TRANSDUCER

Times : 03 Days

MANAGEMENT OF THE BCC CENTRAL DRIVING OFFICE

Times : 10 Days

CONDUCT AND MANAGEMENT OF SPTE ELECTRICAL SYSTEMS

Times : 15 Days

MV DISTRIBUTION NETWORK SCADA SYSTEM

Times : 5 Days

OPERATION, CONDUCT AND MANAGEMENT OF GROUPED COMMAND STATIONS (PCG)

Times : 15 Days

HMI MARK VI

Times : 05 Days

BCC & MICROSCADA TELECONTROL SYSTEMS

Times : 10 Days

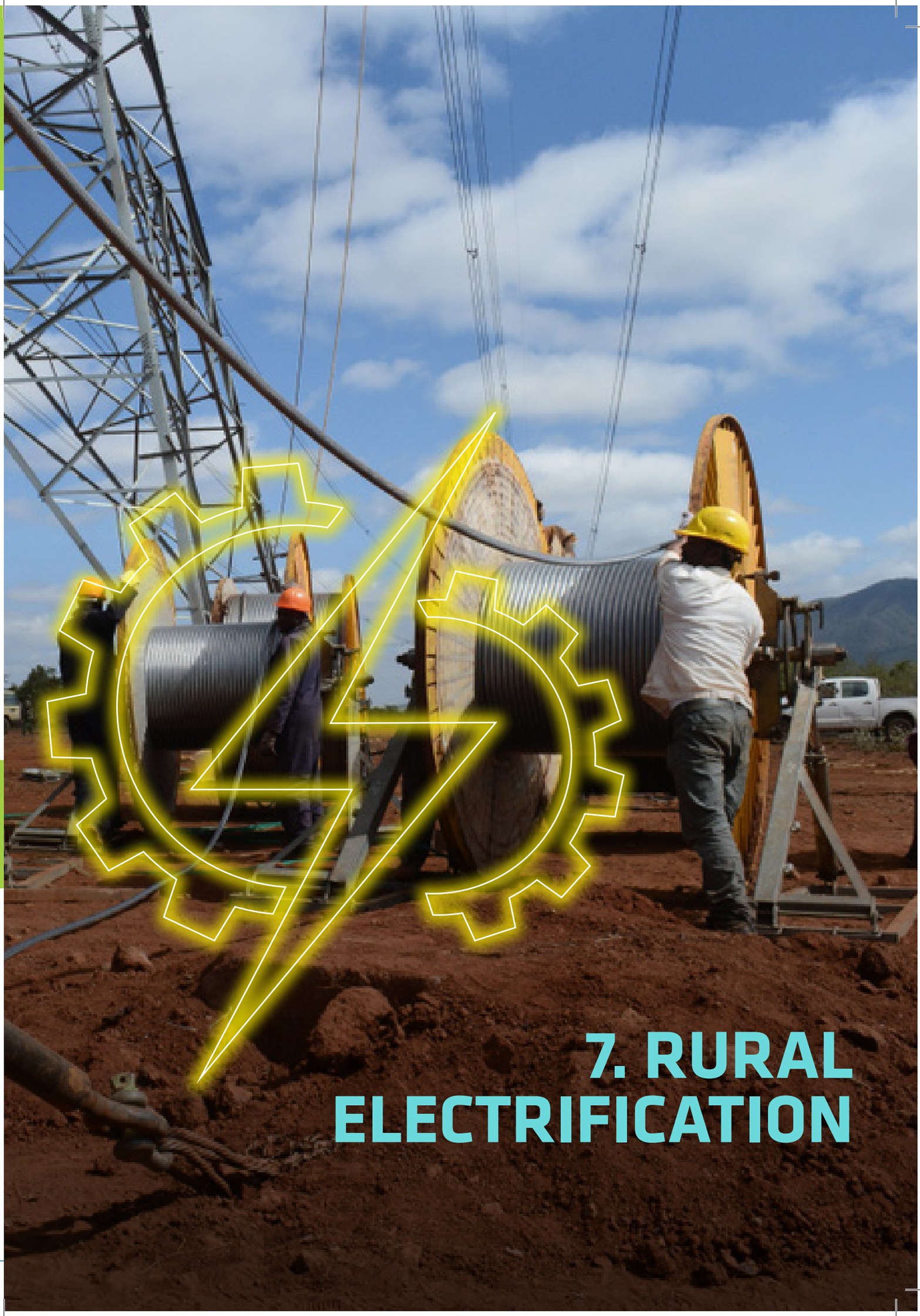
6 - DIGITALIZATION
Other

INTEGRATION OF RENEWABLE ENERGIES ON THE ELECTRICAL NETWORKS

Times : 10 Days

ENERGY EFFICIENCY FOCUSED ON REDUCING LOSSES IN THE PRODUCTION, TRANSPORT AND DISTRIBUTION CHAIN

Times : 05 Days



7. RURAL ELECTRIFICATION

7. RURAL ELECTRIFICATION
Studies And Planning

FACTORS AND PARAMETERS FOR THE SUCCESS OF AN RE PROJECT USING RENEWABLE ENERGIES

Times : 2 Days

TARGET AUDIENCES
Technical staff and middle management

ECONOMIC ANALYSIS OF RE PROJECTS

Times : 3 Days

TARGET AUDIENCES
Project managers, executives in charge of studies and monitoring and evaluation, economist/financial

RURAL ENERGY TRANSMISSION AND DISTRIBUTION EQUIPMENT

Times : 2 Days

TARGET AUDIENCES
Personnel in charge of the management, upkeep and maintenance of the facilities

OPERATION AND MAINTENANCE OF SOLAR MINI-GRIDS AND SMALL HYDROELECTRICITY (PANELS, BATTERIES AND METERS, TRANSPORT SUPPORT (POLES), INSULATORS AND ELECTRICAL WIRES, TURBINE, ETC.)

Times : 3 Days

TARGET AUDIENCES
Personnel in charge of the management, upkeep and maintenance of the facilities

SSHP BUSINESS MODEL

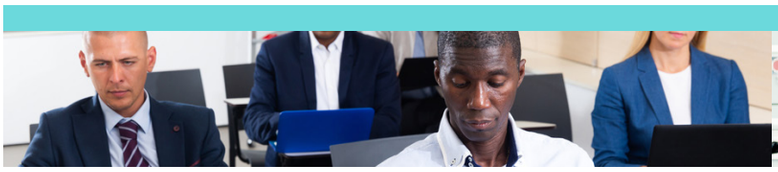
Times : 2 Days

TARGET AUDIENCES
Personnel in charge of the management, upkeep and maintenance of the facilities

ASSEMBLY AND IMPLEMENTATION OF DECENTRALIZED RE PROJECTS, WITH THE TERRITORIAL COMMUNITIES

Times : 3 Days

TARGET AUDIENCES
Technical staff
Preferably associate CTD and FEICOM




8. REGULATION

8 - REGULATION

THE FUNDAMENTALS OF THE ELECTRICITY SECTOR

Understand the basics of the industry

Times : 3 Days

POINTS OF APPLICATION
Good practices in the management of the electricity sector: technical, commercial, tariff, financial aspects

ATTENDEES
All specialties combined

MARKET FUNDAMENTALS ELECTRICITY AND ITS ORGANIZATION

Acquire the basics to understand the needs for evolution towards a market system of electricity, its organization and its impact on national companies

Times : 5 Days

POINTS OF APPLICATION
The fundamental economic concepts of the market, Competitive and monopolistic markets The necessary de-integration of vertically integrated companies and new players (independent producers, transmission system operator, system operator, traders, eligible customers, etc.)
The role of players according to the degree of maturity of the markets
Contractual relations and the short-term market

ATTENDEES
All specialties combined

DEEPENING OF THE OPERATION OF THE MARKET FOR ELECTRICITY

Deepen your knowledge of how electricity markets work

Times : 3 Days

POINTS OF APPLICATION
Economic principles of the electricity market Main characteristics of electricity demand and supply
Wholesale markets, ancillary services and retail markets
Risk management on deregulated markets

ATTENDEES
All specialties combined

THE BASICS OF MARKET REGULATION WITH A VERTICALLY INTEGRATED OPERATOR

Acquire a good understanding of the basics and fundamental principles of regulation in a market framework with a vertically integrated operator

Times : 4 Days

POINTS OF APPLICATION
Basic concepts for understanding how the sector works
General principles of regulation
Roles and functions of a national regulator
Role of regional regulation

ATTENDEES
All specialties combined

8 - REGULATION

THE BASICS OF FREE MARKET REGULATION

Acquire a good understanding of the basics and fundamental principles of regulation in a free market framework

Times : 4 Days

POINTS OF APPLICATION
General principles of regulation in an open market
Roles and functions of a national regulator
Role of regional regulation

ATTENDEES
All specialties combined

FUNDAMENTALS OF REGULATION: RELATIONSHIP BETWEEN NATIONAL REGULATOR AND REGIONAL REGULATOR

Acquire a good understanding of the interactions between national regulator and regional regulator

Times : 4 Days

POINTS OF APPLICATION
Role of the regional regulator (cross-border exchanges)
Cooperation needs with national regulators

ATTENDEES
All specialties combined

FUNDAMENTALS OF REGULATION: DEEPENING

Understand the role of the regulator in improving the quality of electricity exchanges

Times : 3 Days

POINTS OF APPLICATION
Quality of service indicators and methods of control
Tariff control (non-discrimination and transparency, absence of cross-subsidies, etc.)
Control of compliance with cross-border exchange contracts

ATTENDEES
All specialties combined

REDUCE TRANSMISSION AND DISTRIBUTION LOSSES

Acquire basic knowledge on technical and non-technical losses

Times : 3 Days

POINTS OF APPLICATION
Technical losses: theoretical principles, practical examples, reductions
Non-technical losses: practical examples, reduction

ATTENDEES
Engineers

8 - REGULATION

SERVICE QUALITY STANDARDS

Acquire the necessary knowledge in terms of the required quality of service and understand the role of the regulator in this area

Times : 3 Days

POINTS OF APPLICATION
Definitions
Define minimum service quality standards, role of the regulator
Quality standards in bilateral trade, role of the regulator
Practical examples

ATTENDEES
Engineers

THIRD PARTY ACCESS TO THE NETWORK - NETWORK MANAGEMENT AND NETWORK CODE

Acquire the necessary knowledge in terms of organizing the management of the transport network to prepare third-party access to the network

Times : 4 Days

POINTS OF APPLICATION
The functions of the public transmission network manager
and the manager's concession contract
Electricity supply contracts
The outline of a Network Code
The role of the national regulator

ATTENDEES
All specialties combined

THIRD-PARTY ACCESS TO THE NETWORK - ACTIVITIES TO BE CARRIED OUT TO ADAPT THE ELECTRICITY SECTOR TO THE ACCESS OF THIRD PARTY TO THE NETWORK

Know the activities necessary for the development of access to the network

Times : 3 Days

POINTS OF APPLICATION
Preparing for limited network access:
feasibility (characteristic of eligible consumers, interest and willingness of players, supply-demand balance, price estimate, impact for the incumbent operator, etc.),
The contractual environment for third-party access
Role of the regulator in this limited free market (extension of its missions)
Adaptation needs of the legal framework (case study)

ATTENDEES
All specialties combined

EXCHANGE CONTRACTS - GENERAL

Acquire the necessary skills to be able to analyze exchange contracts and improve them

Times : 3 Days

POINTS OF APPLICATION
Contractual practices in the ECOWAS zone
Guidelines for drawing up contracts for exchange and access/use of interconnections Case studies

ATTENDEES
All specialties combined

8 - REGULATION

PPPS IN THE ENERGY SECTOR

Understand the role of the private sector for market development, and know the main modalities of publicprivate partnership

Times : 3 Days

POINTS OF APPLICATION
Independent producers in the production of electricity
(types of contracts and associated risks
for the private and for the public)
Forms of PPP
Case studies

ATTENDEES
All specialties combined

NETWORK OPERATOR CONCESSION CONTRACTS

Acquire the knowledge to be able to analyze concession contracts and improve them

Times : 3 Days

POINTS OF APPLICATION
The missions of the network manager The contractual relations of the network manager with other players in the sector
The risks for the network manager
The outline of a concession contract
The key points that the regulator must check

ATTENDEES
All specialties combined

ORGANIZATION OF A DISPUTE RESOLUTION STRUCTURE

Master the legal framework that must be put in place for the organization of the structure responsible for settling disputes

Times : 1 Days

POINTS OF APPLICATION
Organization and functioning of the decision-making body
Designation, function of the body
instruction / instructor
Relations with other regulator departments
Principle of fair trial / adversarial process

ATTENDEES
Lawyers

DISPUTE SETTLEMENT PROCEDURE

Acquire the knowledge to set up a dispute resolution procedure

Times : 2 Days

POINTS OF APPLICATION
Referral to the dispute settlement body Admissibility of the referral (time limits, substantive conditions, form, etc.)
Exchanges between the parties Investigation measures
Summons
Public session (proceedings, confidentiality, publicity, etc.)
Deliberation/decision (adoption, confidentiality, notification, etc.)
Challenge of the decision (Body, deadlines, conditions, etc.)

ATTENDEES
Lawyers

8 - REGULATION

PRICING METHODOLOGY

Acquire the fundamental knowledge, objectives and basic techniques to understand how tariffs are designed

Times : 4 Days

POINTS OF APPLICATION
Introduction to financial analysis
Basic economic concepts of a pricing system
Tariff Development Process
Presentation of the different tariff methodologies, their advantages and disadvantages, the contexts to which they are adapted

ATTENDEES
Engineers and Economists-Financials

PRICING METHODOLOGY: INTRODUCTION TO LOAD FLOW

Understand the physical principles on which the chosen methodology is based and the conditions for putting it into practice

Times : 4 Days

POINTS OF APPLICATION
Introduction to operational planning and real-time exploitation
Modeling of network elements
Introduction to load flow
Case studies
Implementation of the Load Flow methodology at the regional level: obligations of transmission network operators, role of ERERA and WAPP
Examples of existing load flow software tools

ATTENDEES
Engineers and Economists-Financials

THE REGULATION OF COMPETITION

Acquire the basic knowledge of dealing with fair competition in the electricity market, according to the degree of development of the electricity market

Times : 2 Days

POINTS OF APPLICATION
Definitions, role, powers and limits of a national regulator, specificities of the electricity market, principles of fair treatment Definitions, role, powers and limits of a national regulator, specificities of the electricity market, principles of fair treatment

ATTENDEES
Toutes spécialités confondues

PRICING METHODOLOGY: IN-DEPTH

Deepen skills in pricing methodology. Be able to apply the methodology and assess prices

Times : 3 Days

POINTS OF APPLICATION
Reminder of the fundamentals of tariff regulation
Introduction to Financial Modeling
Introduction to network modeling
Presentation of the pricing methodology used (LoadFlow)
The relationship between tariff and quality of service (reflecting total costs in the tariff)

ATTENDEES
Engineers and Economists-Financials

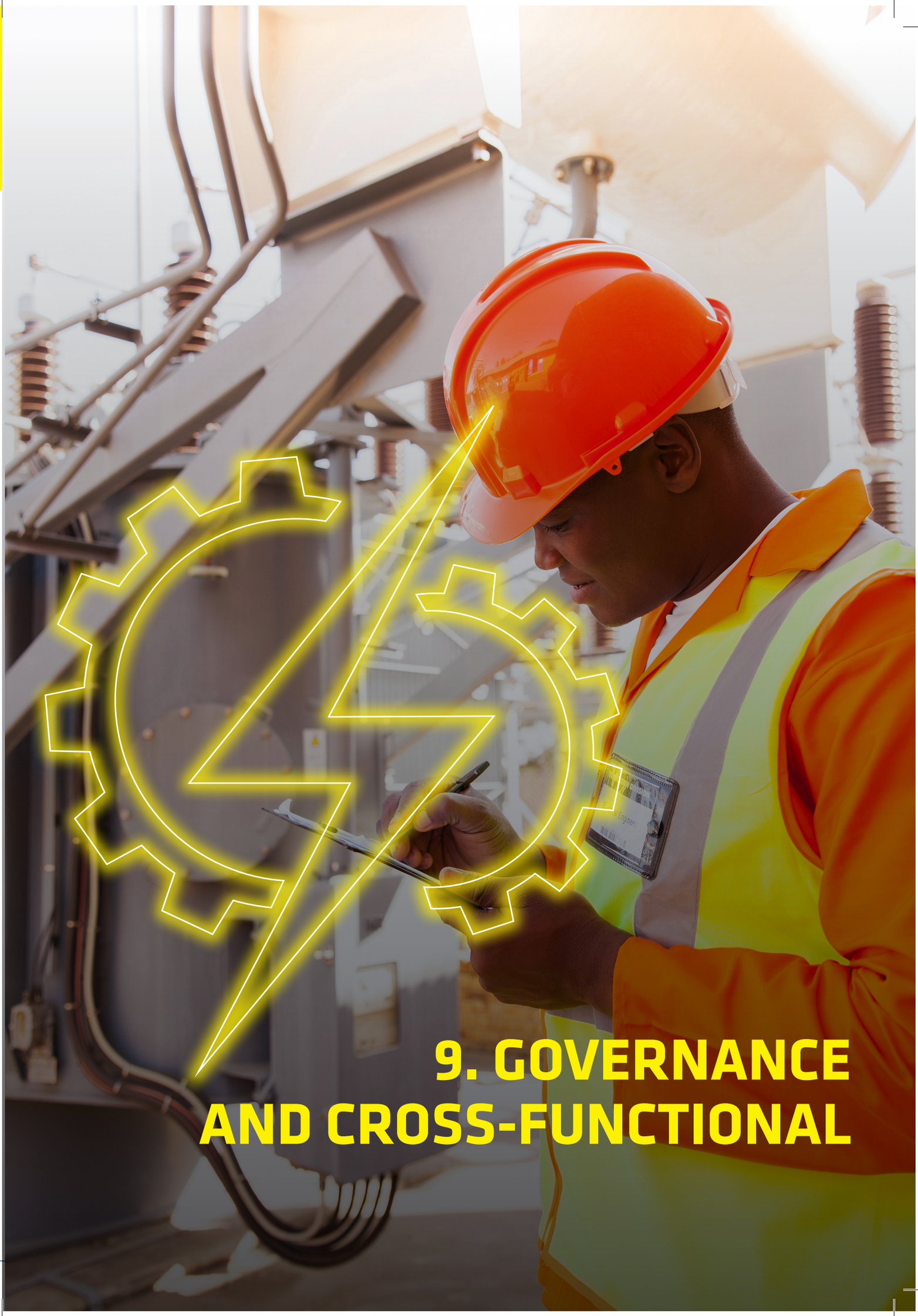
ROLE AND OPERATION OF A MARKET OBSERVATORY

Acquire the necessary skills to enable the establishment and updating of a market observatory

Times : 2 Days

POINTS OF APPLICATION
Role of a market observatory
Content of a market observatory
(raw data, relevant indicators) Collection, processing and analysis of electricity market data
The information collection procedure for the ERERA observatory

ATTENDEES
All specialties combined



9. GOVERNANCE AND CROSS-FUNCTIONAL

9. Governance and cross-functional
General management

ENVIRONMENTAL IMPACT STUDIES

Equip utilities with resources to conduct environmental impact assessments for sustainable development

1. the mastering of techniques for the analysis of parameters
with an environmental impact
2. Identify projects requiring an environmental impact assessment
3. know the main political, economic and social trends in Africa

Times : 5 Days

TARGET AUDIENCES
1. Environmental managers and executives
2. HSE

LEADERSHIP DEVELOPMENT

Leadership development

Gives direction and sets the framework for achieving the expected objectives,
How to avoid inefficiency and misuse of resources.

Times : 2 Days

TARGET AUDIENCES
Executive or Administrative Persons

EMPLOYMENT AND SKILLS PLANNING

Integrate planning into human capital management

1. To master the basic foundations and aims of G.P.E.C
2. Appropriate tools and methods for practical implementation
3. Evaluate the conditions for the successful implementation
of a GPEC in a company

Times : 5 Days

TARGET AUDIENCES
Managers in charge of Human Resources management.

SKILLS INVENTORY SYSTEM

Be able to run an effective skills inventory

1. Identify the issues and specificities of the skills inventory interview
2. Optimising the preparation of the skills inventory interview
3. Run the interview using the Competence Inventory Guide correctly

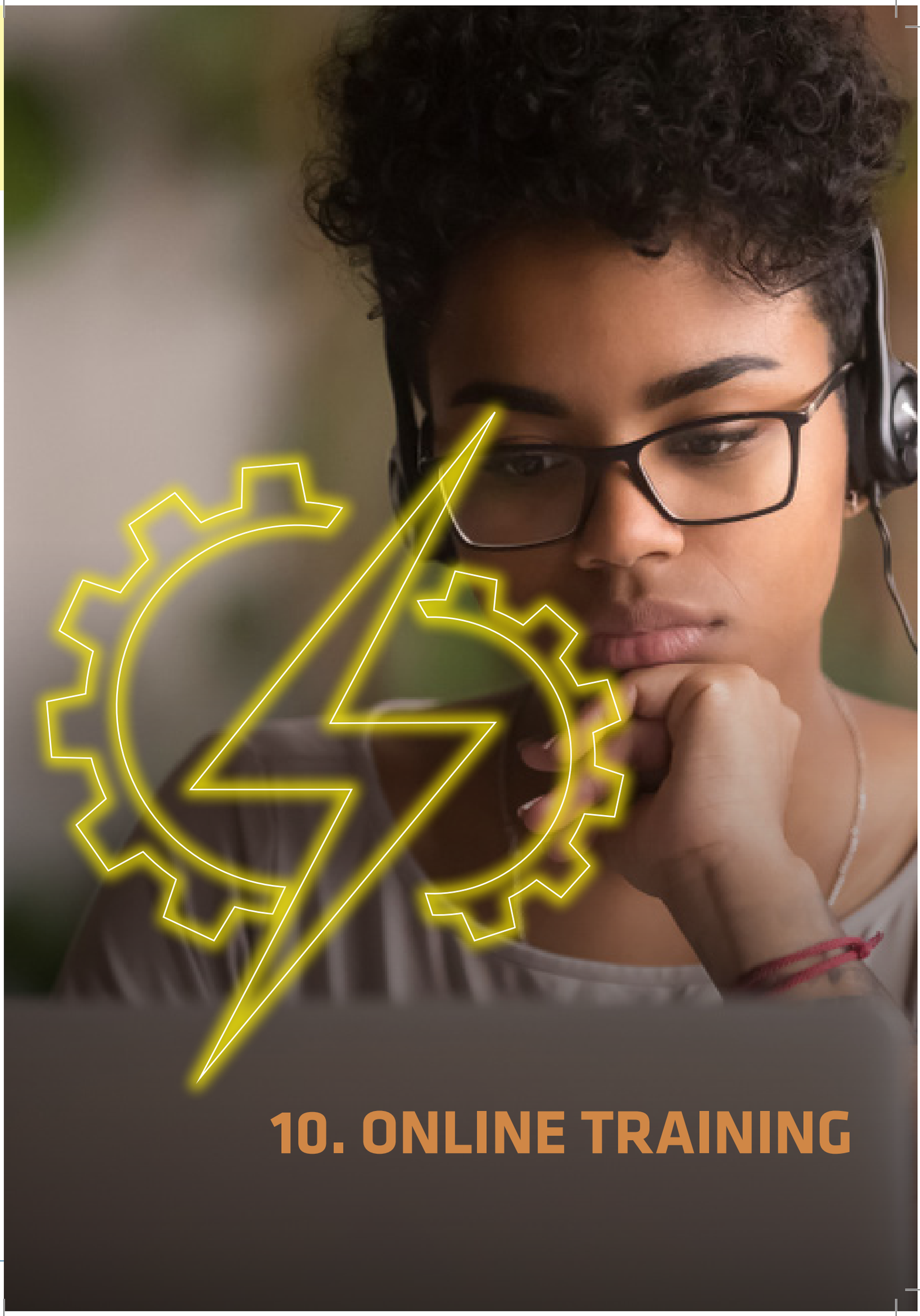
Times : 3 Days

TARGET AUDIENCES
Any employee in a management position in the company

MANAGING CHANGE IN A REFORM ENVIRONMENT

Times : 2 Days

TARGET AUDIENCES
All staff



10. ONLINE TRAINING

10 - ONLINE TRAINING
Electrical Safety

ELECTRICAL SAFETY FOR MANAGEMENT

Times: 30 hours remotely + 12 face-to-face

SAFETY RULES RELATING TO OFF-LINE ELECTRICAL WORK

Times: 50 hours remotely + 12 face-to-face

GENERAL INSTRUCTIONS AND PROCEDURES FOR OPERATING THE HTB ELECTRICITY NETWORK

Times: 30 hours remotely + 12 face-to-face

PREVENTION OF ELECTRICAL RISKS

Times: 50 hours remotely

10 - ONLINE TRAINING
Mechanic

TECHNOLOGICAL PROTECTION IN A TG PLANT

Times: 30 hours remotely

10 - ONLINE TRAINING
General Education

WATER TREATMENT

Times: 20 hours remotely

CPHS ROLE AND MISSION

Times: 20 hours remotely

NOISE AND VIBRATION RISK PREVENTION

Times: 20 hours remotely

PREVENTION OF THERMAL AND MECHANICAL RISKS

Times: 15 hours remotely

10 - ONLINE TRAINING
General Education

PREVENTION OF CHEMICAL RISKS

Times: 20 hours remotely

ENVIRONMENTAL REGULATIONS

Times: 20 hours remotely

10 - ONLINE TRAINING
Renewable energy

INTRODUCTION TO RENEWABLE ENERGY

Times: 20 hours remotely

THE BIOMASS

Times: 20 hours remotely

PHOTOVOLTAIC SOLAR ENERGY

Times: 30 hours remotely

GEOTHERMY

Times: 20 hours remotely

IMPACT OF RENEWABLE ENERGIES ON THE ENVIRONMENT

Times: 10 hours remotely

10 - ONLINE TRAINING
Gas Field

PROTECTION OF GAS STRUCTURES AGAINST CORROSION

Times: 20 hours remotely

GAS SECURITY

Times: 30 hours remotely + 12 face-to-face

10 - ONLINE TRAINING
Remote control

INTRODUCTION TO ELECTRICAL PROTECTION SYSTEMS

Times: 20 hours remotely

ELECTRICAL PROTECTION IN POWER PLANTS

Times: 65 hours remotely + 30 face-to-face

POWER TRANSFORMER PROTECTION

Times: 25 hours remotely

HTB LINE SPAN PROTECTION

Times: 25 hours remotely

ELECTRICAL PROTECTION OF ALTERNATORS

Times: 25 hours remotely

ANALYSIS OF NETWORK OPERATING INCIDENTS

Times: 25 hours remotely

ELECTRICAL PROTECTION OF MV MOTORS

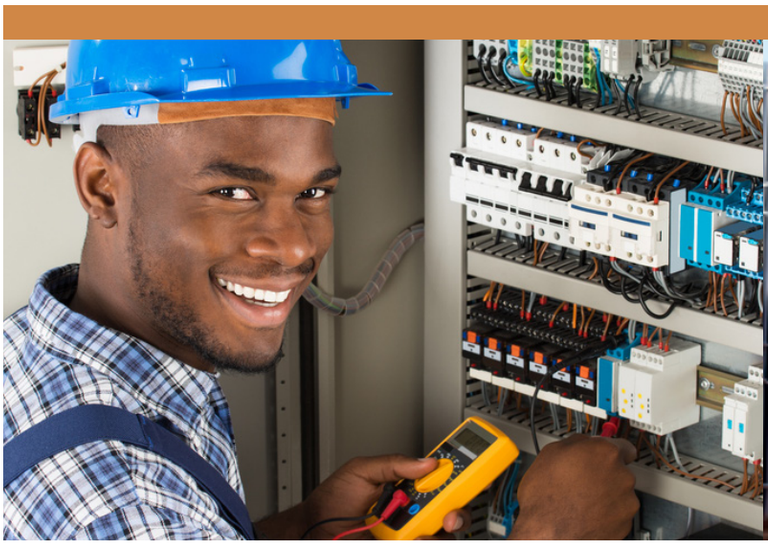
Times: 25 hours remotely

ELECTRICAL PROTECTION OF HTB STATIONS

Times : 35 heures à distance + 18h en présentiel

LV NETWORK PROTECTION

Times: 25 hours remotely



10 - ONLINE TRAINING
Production

MAINTENANCE OF DIESEL POWER PLANTS

- Identify the organs of the generating set,
- Identify the different circuits of the generating set (power supply, cooling,
lubrication, supercharging),
- Detect failures according to operating parameters
- Carry out the different types of maintenance.

Times : 4 Days

ANALYSIS OF DIESEL POWER PLANT OPERATING INCIDENTS

- Identify probable causes;
- Interpret the operating parameters;
- Establish an incident report.

Times : 3 Days

ENERGY BALANCE AND PERFORMANCE INDICATORS OF DIESEL POWER PLANTS

- Analyze the performance of Diesel installations,
- Prepare and ensure the follow-up of development and control work

Times : 3 Days

ANALYSIS OF GAS TURBINE (TAG) OPERATING PARAMETERS

- Read and note the operating parameters,
- Interpret operating parameters,
- Analyze operating parameters,
- Identify anomalies.

Times : 3 Days

ANALYSIS OF GAS TURBINE OPERATING INCIDENTS (TAG)

- Identify the probable causes;
- Interpret the operating parameters;
- Establish an incident report.

Times : 4 Days

YIELDS OF GAS TURBINE PRODUCTION UNITS (TAG)

- Know the factors affecting the performance of thermal installations;
- Calculate the efficiency of thermal installations;
- Calculate the specific consumption of a TAG.

Times : 3 Days

ANALYSIS & STUDY OF PRODUCTION FACILITY PARAMETERS HYDRAULIC

- Master the parameters of HYDRAULIC production facilities
- Analyze the parameters and interpret the results

Times : 4 Days

ANALYSIS OF HYDRAULIC OPERATING INCIDENTS

- Know the incidents of hydraulic exploitation
- Analyze hydraulic operating incidents
- Determine the causes of incidents
- Establish an incident report

Times : 4 Days

YIELDS OF HYDRAULIC PRODUCTION UNITS

- Know the factors affecting the efficiency of hydraulic installations;
- Calculating the yield of hydraulic units.

Times : 3 Days

HYDRAULIC MICRO-POWER

- Acquire and develop techniques for carrying out a technical-commercial study
relating to a micro-hydroelectric plant.
- Acquire and deepen theoretical and practical knowledge relating to the principles of operation and operating techniques of a micro-hydroelectric plant

Times : 3 Days

10 - ONLINE TRAINING
Production

ANALYSIS OF OPERATING PARAMETERS OF STEAM THERMAL POWER PLANTS

- Control the parameters of thermal steam production facilities
- Analyze the parameters and interpret the results

Times : 4 Days

INCIDENT ANALYSIS OF STEAM THERMAL POWER PLANTS

- Know the incidents of thermal steam operation
- Analyze steam thermal operation incidents
- Determine the causes of incidents
- Establish an incident report

Times : 4 Days

YIELDS OF THERMAL STEAM PRODUCTION UNITS

- Know the factors affecting the performance of thermal installations;
- Calculate the efficiency of thermal installations;
- Calculate the specific consumption of the bay.

Times : 4 Days

AUTOMATION AND REGULATION

- Know the principles of continuous automation (servocontrol and regulation),
- Become familiar with the practices of industrial regulation on case studies,
- Acquire the technology and adjustment of regulators.

Times : 3 Days

PROTECTION OF PRODUCTION FACILITIES

- Know the operating principle of the different protections;
- Identify faults affecting groups;
- Identify the different protection relays;

Times : 4 Days

10 - ONLINE TRAINING
Renewable energies - energy efficiency

RENEWABLE ENERGIES AND ENERGY STORAGE

- Mastering the different renewable energy production technologies; Energy Wind and Solar Energy.
- Master the different energy storage technologies
- Know the impact of the introduction of renewable energies on the operation of a electrical system and the role of energy storage

Times : 4 Days

BASIC COMPONENTS OF A PHOTOVOLTAIC SYSTEM

- Characterize the different components of a photovoltaic installation.
- Broaden its culture in the areas of construction and operation of a field of photovoltaic sensors

Times : 3 Days

10 - ONLINE TRAINING
Renewable energies - energy efficiency

INTEGRATION STRUCTURE & DESIGN OF APPLICATIONS OF A PHOTOVOLTAIC SYSTEM

- Control the parameters of thermal steam production facilities
- Analyze the parameters and interpret the results

Times : 3 Days

STUDY AND MANAGEMENT OF RURAL ELECTRIFICATION PROJECTS

- Study and plan rural electrification projects
- Know the principle of photovoltaic cells
- Manage a rural electrification project by Individual photovoltaic kit

Times : 3 Days

ENERGETIC EFFICIENCY

Mastery of energy efficiency

Times : 3 Days

ENERGY AUDIT

-Know the impact of renewable energies on the management of systems electrical;
-Know the impact of renewable energies on supply and demand management, the electrical system reserve, system inertia and network voltage;
-Know the impact of renewable energies on the network and the FRT;
- Master the constraints linked to the massive integration of renewable energies;
- Know the impact of renewable energies on the quality of energy.

Times : 3 Days

ECONOMIC AND FINANCIAL ANALYSIS RURAL ELECTRIFICATION PROJECTS DECENTRALIZED

- Study the pre-feasibility of electrification projects decentralized;
- Perform an economic and financial analysis of decentralized rural electrification projects.

Times : 5 Days

IMPACT OF RENEWABLE ENERGIES ON ELECTRICAL NETWORKS

-Know the impact of renewable energies on the management of systems electrical;
-Know the impact of renewable energies on supply and demand management, the electrical system reserve, system inertia and network voltage;
-Know the impact of renewable energies on the network and the FRT;
- Master the constraints linked to the massive integration of renewable energies;
- Know the impact of renewable energies on the quality of energy.

Times : 4 Days

QUALITY OF ELECTRICAL ENERGY

- Describe the main phenomena that degrade the Quality of Electric Power (QEE), their origins, the consequences on the equipment and the main solutions.

Times : 3 Days

10 - ONLINE TRAINING
Transmission

CALCULATION AND ELECTRICAL DIMENSIONING OF HTB OVERHEAD LINES

- Know the electrical calculation techniques of HTB overhead lines
- Know the electrical dimensioning of HTB overhead lines

Times : 5 Days

CALCULATION AND MECHANICAL DIMENSIONING OF HTB OVERHEAD LINES

- Know the mechanical calculation techniques of HTB overhead lines
- Know the mechanical dimensioning of HTB overhead lines

Times : 5 Days

PROTECTION OF THE HTB ELECTRICAL NETWORK

- Identify faults affecting groups, transformers and lines.
- Perform preliminary incident analysis.
- Participate in the review of plans relating to the development of the network (lines and transport stations

Times : 3 Days

HTB ELECTRICAL ENERGY METERING

- Carry out counting readings,
- Realize, control and maintain the counting system.

Times : 3 Days

MAINTENANCE OF HV STATION EQUIPMENT

- Acquire maintenance techniques for HTB stations.

Times : 4 Days

CONDUCT AND MANAGEMENT OF THE HTB ELECTRICAL NETWORK

- Coordinate the necessary maneuvers for the realization of unavailability
- Conduct and operate power lines and substations

Times : 3 Days

MAINTENANCE OF HTB OVERHEAD ELECTRICAL LINES

- Recognize the structure and types of transport network,
- Know the transport and equipment works of HTB overhead power lines,
- Identify the equipment and accessories used in HTB overhead power lines,
- Know the types of maintenance work carried out on overhead power lines HTB.

Times : 3 Days

ANALYSIS OF HTB ELECTRICAL NETWORK INCIDENTS

Know the techniques of incident analysis
- Know how to behave in the face of an incident

Times : 3 Days

CONDUCT AND MANAGEMENT OF THE HTB ELECTRICAL NETWORK

- Coordinate the necessary maneuvers for the realization of unavailability
- Conduct and operate power lines and substations

Times : 4 Days

DEPLOYMENT OF AERIAL FIBER USING DIFFERENT TECHNIQUES

- Types of fiber optic cables in transmission.
- Fiber optic cable standards.
- Installation of different types of fiber optic cables.
- Fiber optic cable maintenance procedures.

Times : 5 Days

TARGET AUDIENCES

Engineers working in the field of overhead lines.

10 - ONLINE TRAINING
Distribution

MAINTENANCE OF MV/LV SUBSTATION EQUIPMENT

Acquire maintenance techniques for MV/LV distribution stations.

Times : 3 Days

MAINTENANCE OF MV & LV OVERHEAD ELECTRICAL LINES

- Know the structure and types of distribution network,
- Identify the equipment and accessories used in MV & LV overhead power lines,
- Know the types of maintenance work carried out on MV overhead power lines.

Times : 3 Days

PROTECTION OF MV & LV NETWORKS

- Acquire the knowledge necessary for the operation of control-command equipment
MV and LV networks.
- Know the role and operation of MV and LV network protection.
- Know the principle of protection settings.

Times : 3 Days

INCIDENT ANALYSIS OF MV & LV ELECTRICAL NETWORKS

- Interpret the diagrams and analyze the incidents of the MV & LV network
- Know and apply the incident analysis techniques of the MV & LV network
- Apply the conduct to follow in the event of an incident.

Times : 4 Days

CALCULATION AND ELECTRICAL DIMENSIONING OF MV & LV LINES

- Know the techniques of electrical calculation of MV & LV lines
- Know the electrical dimensioning of MV & LV lines

Times : 3 Days

LV & MV METERING OF ELECTRICAL ENERGY

- Describe the constitution and operation of LV, MV metering;
- Choose the measurement reducers suitable for metering.

Times : 5 Days

LV AND MV UNDERGROUND CABLE TECHNOLOGY

- Recognize the advantages and disadvantages of the underground distribution network,
- Identify the types of cables and accessories for LV and MV underground power lines,
- Know the main technical rules relating to work on LV and MV underground power lines.
- Study the different methods of laying LV and MV underground power lines.
- Know the types of faults and causes in the LV and HTA underground electrical network,

Times : 3 Days

10 - ONLINE TRAINING
Management

GENERAL ACCOUNTING PRACTICE

- Acquire the basic practical elements of general accounting
- Master the operational tools and techniques of general accounting
- Master the accounting and tax treatment of the company's various transactions
- Know the techniques of bank reconciliation
- Establish the various annual summary statements for the closing of the accounts.

Times : 5 Days

PROJECT MANAGEMENT

- Provide organization and project management
- Know the risks of the project
- Identify risk factors

Times : 3 Days

MONITOR AND MANAGE YOUR BUDGET

- Understand the basic concept of budget preparation
- Master the different phases and Budget Process
- Identify the gap analysis methodology

Times : 3 Days

PRINCIPLES OF COST ACCOUNTING

- Understand the basic techniques of cost accounting
- Identify the different cost analysis methods
- Role of cost accounting within ONEE-BE
- Master the principles and specifics of a Cost calculation system

Times : 3 Days

FORECASTING TECHNIQUES

- Know the forecasting methods,
- Analyze and measure the different components of temporal phenomena,
- Develop seasonal indices,
- Perform regression and correlation analysis,
- Use steering and monitoring indicators.

Times : 3 Days

PEDAGOGICAL METHODS & TECHNIQUES

- Design the pedagogical engineering.
- Discover the role of the educational adviser.
- Distinguish the different levels of objectives of a training action to design the training with the aim of achieving the educational objectives.
- Design a training action.
- Identify and design training materials.
- Prepare to lead a training session.
- Start and end a training session.
- Create a climate conducive to learning.
- Use animation techniques.
- Evaluate and promote the transfer of learning.
- Indicative program

Times : 5 Days

10 - ONLINE TRAINING
Management

ENGINEERING TRAINING

- Apply the fundamentals of training engineering and pedagogical engineering.
- Acquire a methodology to design an effective and coherent training project.
- Analyze the training request and draw up the specifications/training contract.
- Understand and contribute to the process of developing the skills of these employees.
- Master the mechanisms to move from an expert logic to a process of sharing practices and knowledge through training engineering.
- Define its positioning in relation to the RMC competency business benchmark and the culture of the business in terms of values and missions to succeed in its function with maximum efficiency.
- Assess skills needs in relation to unit objectives.
- Master the techniques of pedagogical engineering for adult training, including methodological, pedagogical and organizational resources.
- Effectively manage training projects in logistical, economic, strategic and educational terms and evaluate the effects in terms of return on investment of training projects.

Times : 5 Days

TRAINING OF TRAINERS (TOT)

- The model (ADDIE).
- Types of trainers and trainees.
- Develop a curriculum.
- Different training methodologies.
- Kirk Patrick 4 levels for training evaluation.

Times : 5 Days

TARGET AUDIENCES

Engineers working in the field of overhead lines.

10 - ONLINE TRAINING
Governance

MONITORING AND EVALUATION STRATEGY AND ACTION PLAN

- Define strategic terminologies.
- Objective of the M&E strategy
- Understand the M&E development process
- Provide information on key performance indicators.
- Define Balance Score Cards for the four perspectives.

Times : 5 Days

TARGET AUDIENCES

Employees involved in management, planning, finance, and business decision-making roles.

CORPORATE GOVERNANCE: PRINCIPLES, POLICIES AND BEST PRACTICES

- List the principles of corporate governance
- Analyze the governance structure of the company
- Evaluate the performance of the board of directors
- Advice on corporate governance in the organization
- Apply the best practices of corporate governance.

Times : 5 Days

TARGET AUDIENCES

Board members, CFOs, senior executives, administrators, CFOs, financial controllers, accounting and finance staff, legal counsel, corporate counsel, corporate secretaries, attorneys, external and internal auditors, human resource managers and department heads.

MONITORING AND EVALUATION OF PUBLIC SERVICES

- Provide an introduction to what is meant by strategy
- Develop an understanding of the monitoring and evaluation process
- Gain an understanding of key performance indicators
- Develop awareness of Balance Score Cards.

Times : 5 Days

TARGET AUDIENCES

Employees improving their monitoring and evaluation systems

STRATEGIC FINANCING AND CORPORATE GOVERNANCE

- Actively participate in the analysis and strategic formulation
- Develop vital measures of financial performance and strength
- Design financing and capital structure strategies
- Build financial models to manage cash flow, risk and investment decisions
- Advice on capital investment decision-making
- Provide insight into the company's long-term growth strategies.

Times : 5 Days

TARGET AUDIENCES

Top Management, senior level, junior level (engineering – economic – financial – administrative).

FINANCING OF ENERGY PROJECTS

- Financing offers.
- Entry into force of a financing agreement.
- Disbursement methods

Times : 4 Days

TARGET AUDIENCES

Employees who work in finance

10 - ONLINE TRAINING
Risk management

PROJECT RISK MANAGEMENT, RESEARCH METHODS AND DATA ANALYSIS

- Plan risk management and manage the risk register
- Identify project risks using different techniques
- Perform a qualitative risk analysis to determine the overall risk score of the project
- Perform quantitative risk analysis using techniques
- Plan strategies for negative and positive risks
- Review and control project risks through reassessments and audits

Times : 5 Days

TARGET AUDIENCES

Project Risk Managers, Risk Owners, Project Managers and Project Board Members, Project Sponsors, Functional Managers, Senior Managers, and those interested in Project Risk Management.

RISK MANAGEMENT AND INTERNAL CONTROL SYSTEMS

- General principles of risk management and internal control
- Risk management scope
- Limits of risk management

Times : 5 Days

TARGET AUDIENCES

CFOs, chief accountants, accountants, internal auditors and all owners.

LE LABEL DE FORMATION EN ÉLECTRICITÉ

THE STANDARD FOR TRAINING IN ELECTRICITY

www.ancee-racee.org