Product & Materials Catalogue

Infrastructure Equipment & Supply Solutions



Requirement-led sourcing for electrical, renewable-energy, and EV-charging infrastructure.

EXPERT ROUTE
ADVISORY

EXPERT ROUTE ADVISORY



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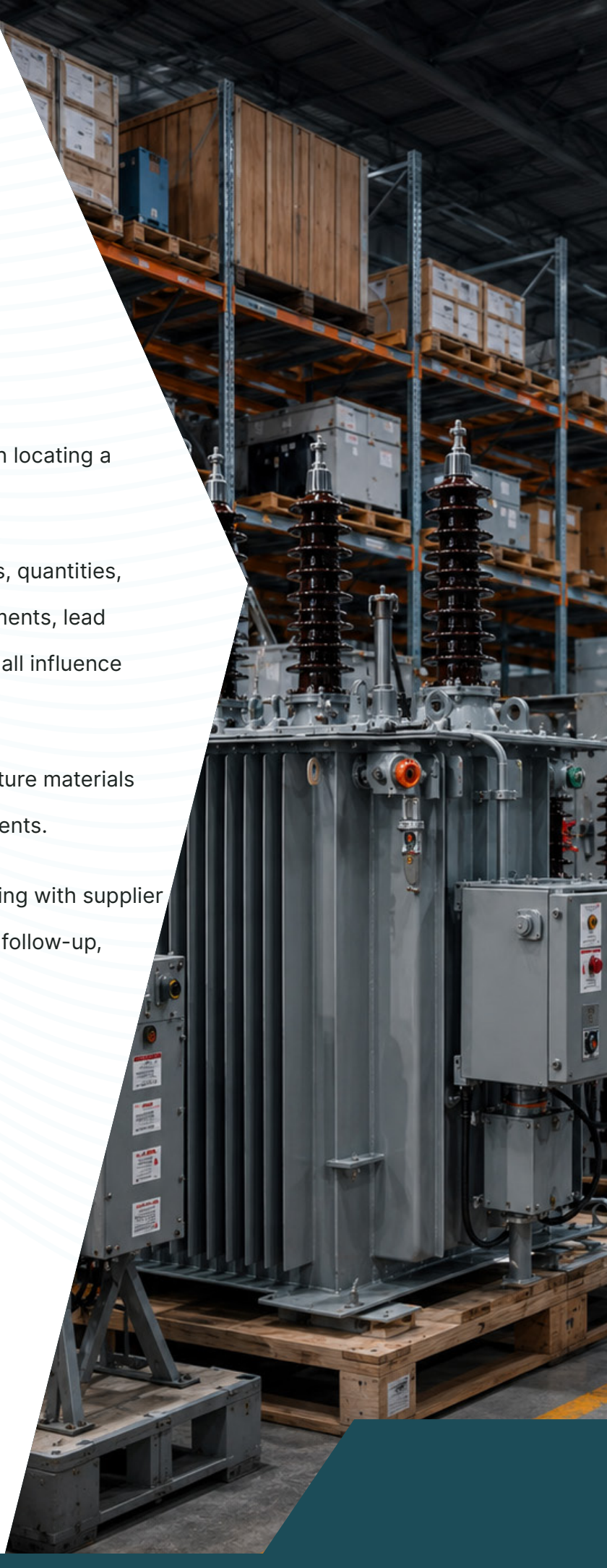
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TRADING & SUPPLY



Infrastructure Supply Guided by Technical Understanding

Successful material supply requires more than locating a product.

Technical specifications, applicable standards, quantities, operating conditions, documentation requirements, lead times, logistics, and installation requirements all influence whether a supply solution is suitable.

ERA sources and supplies selected infrastructure materials and equipment according to project requirements.

Our approach connects technical understanding with supplier coordination, product documentation, quality follow-up, logistics, and delivery support.

> **From project requirement to coordinated delivery.**

HOW ERA SUPPORTS SUPPLY



ERA manages supply requirements through a clear and coordinated process.

01

Review

Confirm product descriptions, specifications, drawings, quantities, applicable standards, operating conditions, destination, and delivery priorities.

02

Match

Identify suitable products and review their alignment with the technical requirement, including alternatives, assumptions, and deviations where applicable.

03

Source

Coordinate with suitable manufacturers and supply partners according to the required product, quantity, project conditions, and delivery schedule.

04

Document

Organize the technical and commercial information required for product review, approval, inspection, shipment, and handover.

05

Coordinate

Follow documentation, approvals, production status, agreed inspections, logistics, and outstanding actions.

06

Deliver

Coordinate shipment and delivery information and follow discrepancies or outstanding supply items according to the agreed scope.

PRODUCT PORTFOLIO

Infrastructure Equipment Across Four Core Categories

ERA's product and materials portfolio is structured around four principal areas supporting electrical infrastructure, renewable energy, and EV-charging applications.

01 Substation Equipment & Accessories

Equipment and materials supporting transformation, switching, protection, control, connection, auxiliary systems, and substation infrastructure.



02 Power Distribution Equipment & Accessories

Equipment and materials supporting medium- and low-voltage networks, rural electrification, overhead and cable systems, metering, earthing, and public lighting.



03 Solar PV & Energy Storage Systems

Generation, conversion, storage, protection, mounting, cabling, and monitoring equipment for solar and energy-storage applications.



04 EV Charging Equipment & Infrastructure

Charging equipment and supporting electrical, protection, enclosure, mounting, and communication systems.





Products are selected according to project requirements and specifications. Exact technical data, standards, ratings, accessories, and available configurations depend on the selected product and approved supply source. Detailed information is provided with the relevant quotation and technical submittal.

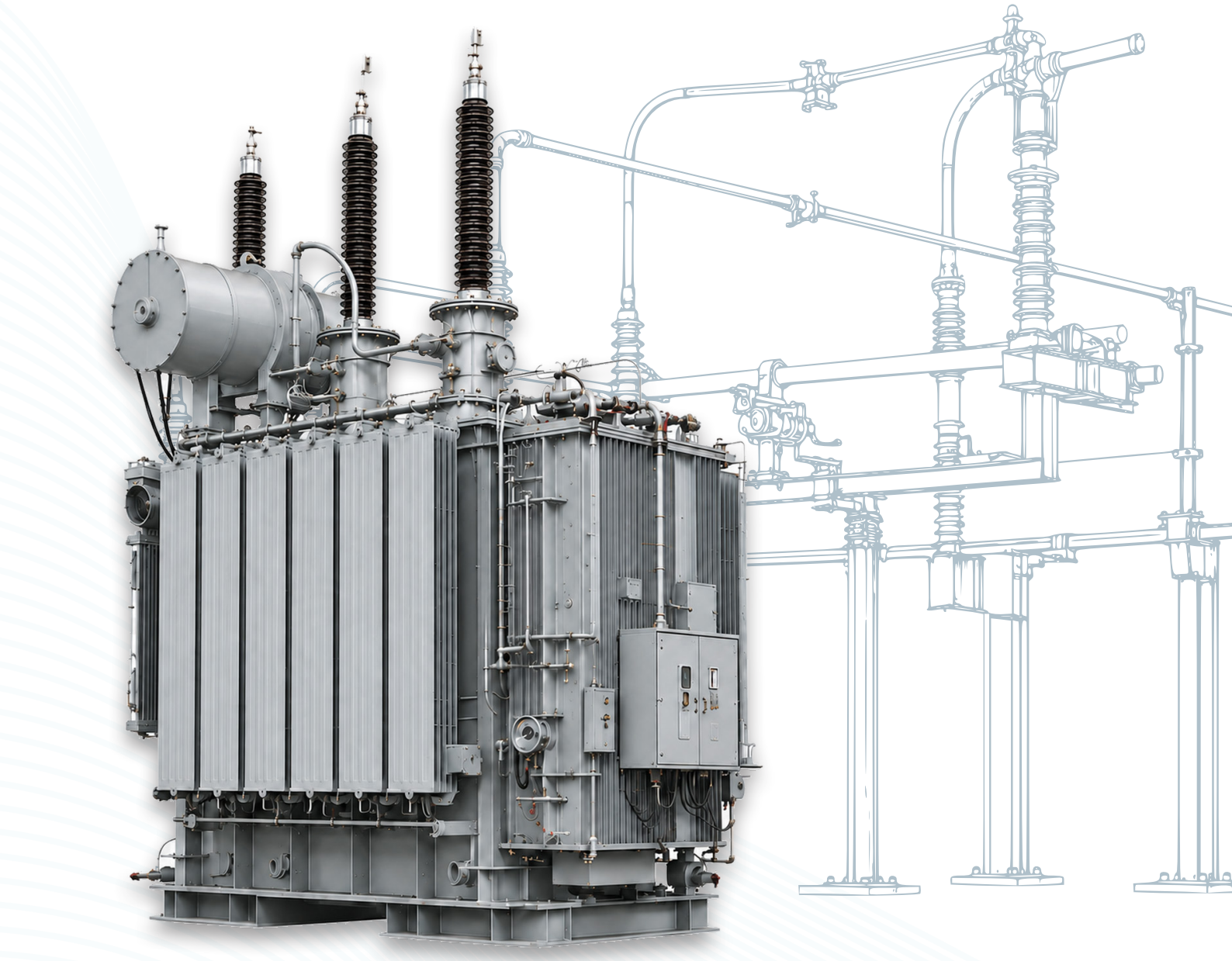
01

SUBSTATION EQUIPMENT & ACCESSORIES

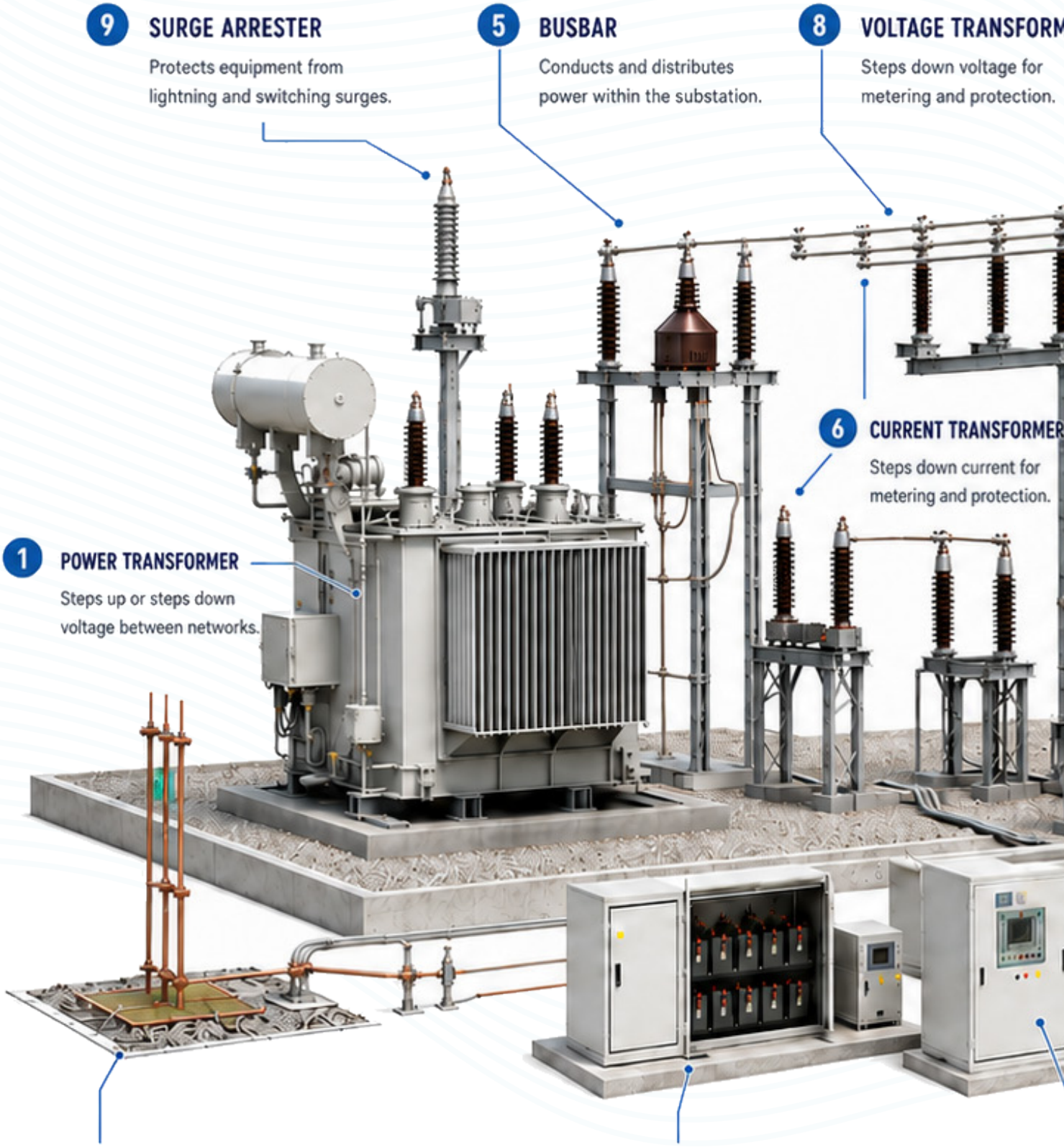
Equipment for Transformation, Switching, Protection & Control

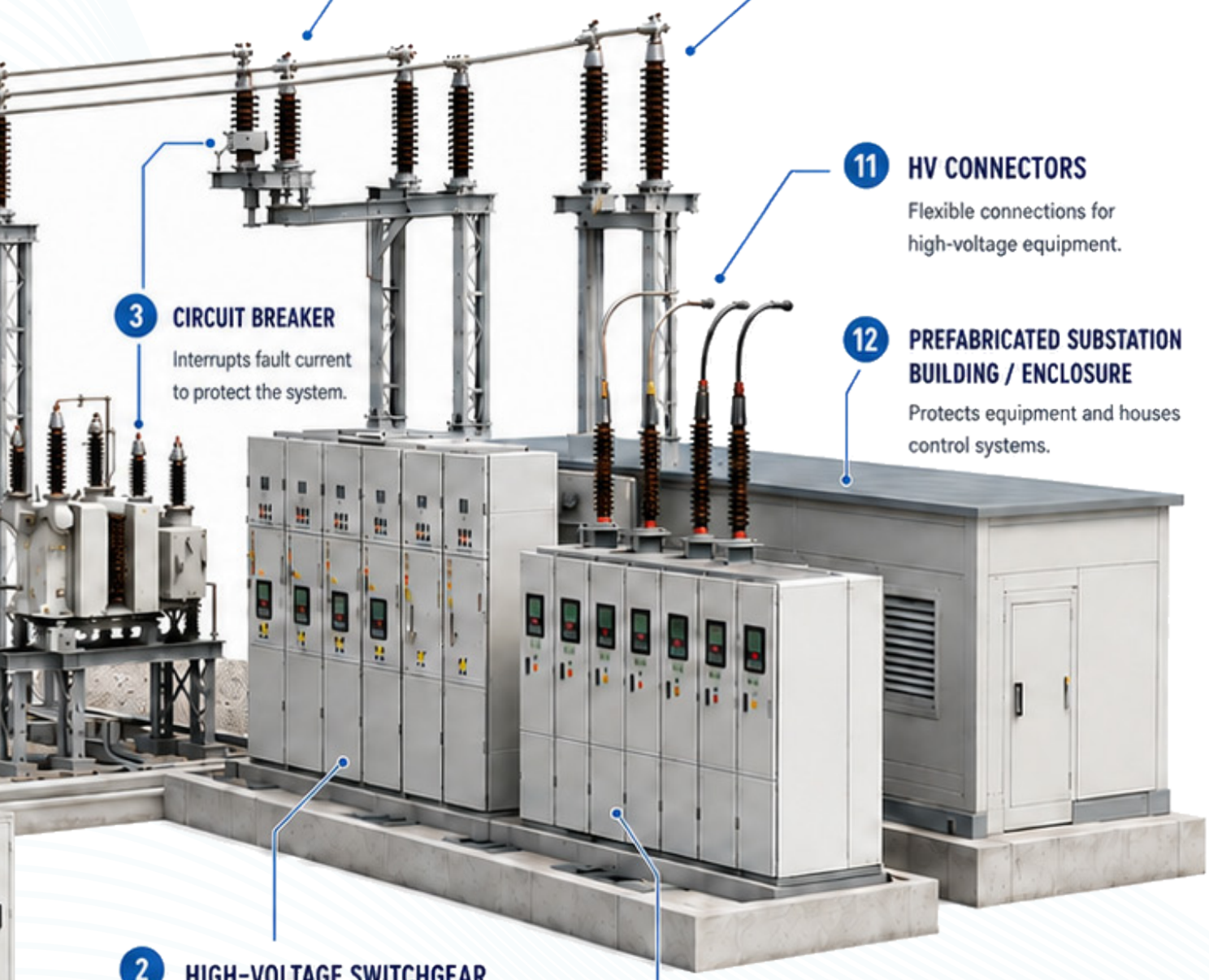
ERA sources selected equipment and materials used across substation transformation, switching, protection, control, connection, auxiliary, and site-infrastructure requirements.








9 SURGE ARRESTER
Protects equipment from lightning and switching surges.
5 BUSBAR
Conducts and distributes power within the substation.
8 VOLTAGE TRANSFORM
Steps down voltage for metering and protection.
6 CURRENT TRANSFORMER
Steps down current for metering and protection.
1 POWER TRANSFORMER
Steps up or steps down voltage between networks.
13 EARTHING & LIGHTNING MATERIALS
Ensures personnel safety and protects equipment from lightning and faults.
14 AUXILIARY POWER SYSTEM
Provides DC/AC power for control, protection and station services.



IER

4 DISCONNECT SWITCH / ISOLATOR

Provides visible isolation for safe maintenance.

10 INSULATOR

Mechanical support and electrical insulation.

11 HV CONNECTORS

Flexible connections for high-voltage equipment.

3 CIRCUIT BREAKER

Interrupts fault current to protect the system.

12 PREFABRICATED SUBSTATION BUILDING / ENCLOSURE

Protects equipment and houses control systems.

2 HIGH-VOLTAGE SWITCHGEAR

Controls, protects, and isolates high-voltage circuits.

7 MEDIUM-VOLTAGE SWITCHGEAR

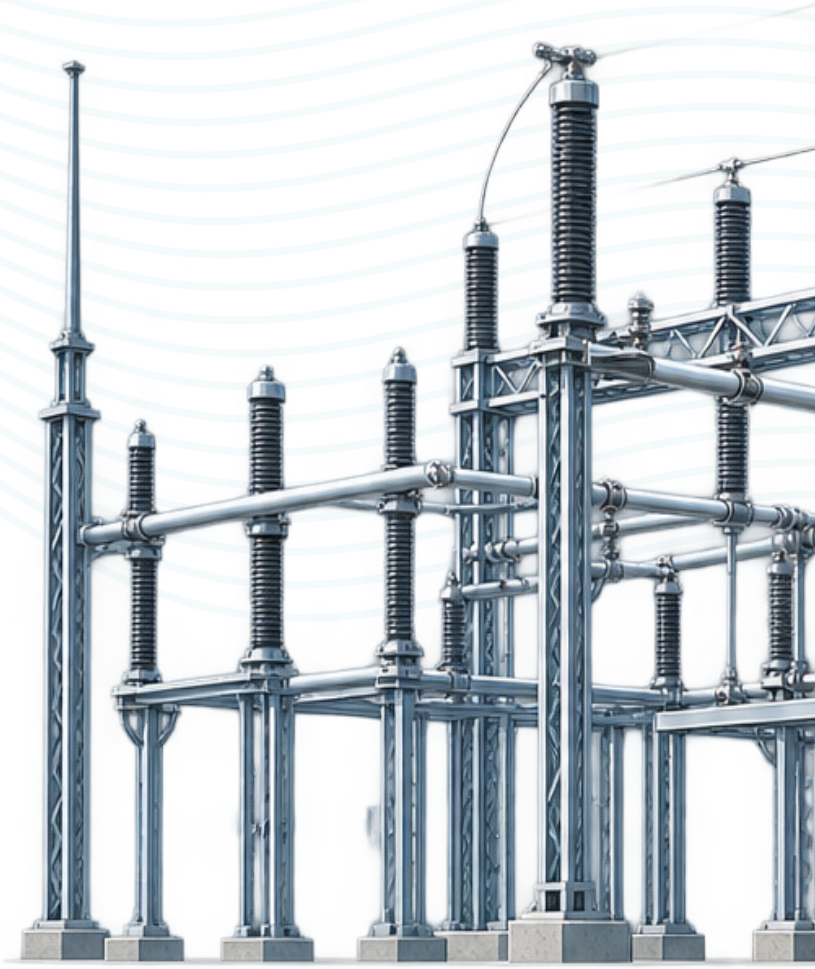
Distributes power to downstream load networks.

15 CONTROL & RELAY PANEL

Monitors, controls and protects substation equipment.

SELECTED EQUIPMENT & MATERIALS

Representative equipment and materials across the substation system.

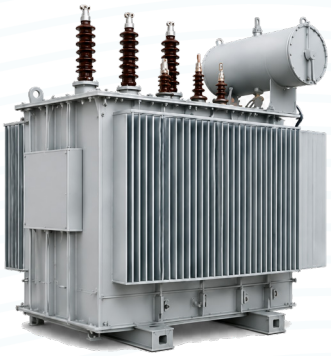




EQUIPMENT & MATERIALS

01 POWER TRANSFORMERS

Transformers for substation and electrical-network applications, selected according to project requirements.



02 HIGH- & MEDIUM-VOLTAGE SWITCHGEAR

Switching, isolation, control, and protection equipment for substation systems.



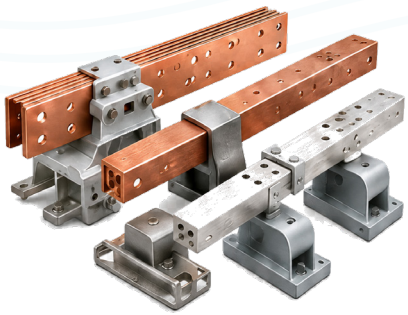
03 PROTECTION & CONTROL PANELS

Panels and associated equipment supporting protection, control, monitoring, and system operation.



04 BUSBARS, GANTRIES & STRUCTURAL HARDWARE

Busbar-related materials, support structures, gantries, fittings, and associated hardware.





05 INSULATORS & FITTINGS

Insulation, connection, and support components used across high-voltage equipment and conductor interfaces.



06 HV CONNECTORS

Insulation, connection, and support components used across high-voltage equipment and conductor interfaces.



07 AUXILIARY POWER SYSTEMS

Supporting AC and DC auxiliary-power equipment for substation operation and control requirements.



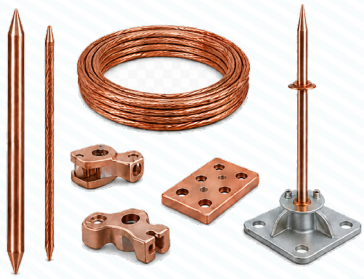
08 PREFABRICATED SUBSTATION BUILDINGS

Prefabricated buildings and enclosures for electrical, control, and auxiliary equipment.



09 EARTHING & LIGHTNING PROTECTION

Earthing conductors, rods, clamps, connectors, and lightning-protection materials for substation applications.



02

POWER DISTRIBUTION EQUIPMENT & ACCESSORIES

Equipment & Materials for Distribution Networks

ERA supplies selected equipment and accessories supporting medium- and low-voltage distribution networks, rural electrification, overhead lines, cable systems, service connections, metering, earthing, and public lighting.











1 **DISTRIBUTION TRANSFORMER**
Steps down medium voltage to low voltage for distribution.

2 **MEDIUM-VOLTAGE SWITCHGEAR**
Switches, protects, and isolates medium-voltage circuits.

3 **LOW-VOLTAGE SWITCHGEAR / LV DISTRIBUTION BOARD**
Distributes and protects low-voltage circuits.

4 **RING MAIN UNIT (RMU)**
Compact, sealed unit for switching and protecting MV network loops.

5 **LOAD-BREAK SWITCH**
Manually operated switch for making/breaking load current.

6 **FUSE CUTOUT**
Overcurrent protection for distribution lines and transformers.

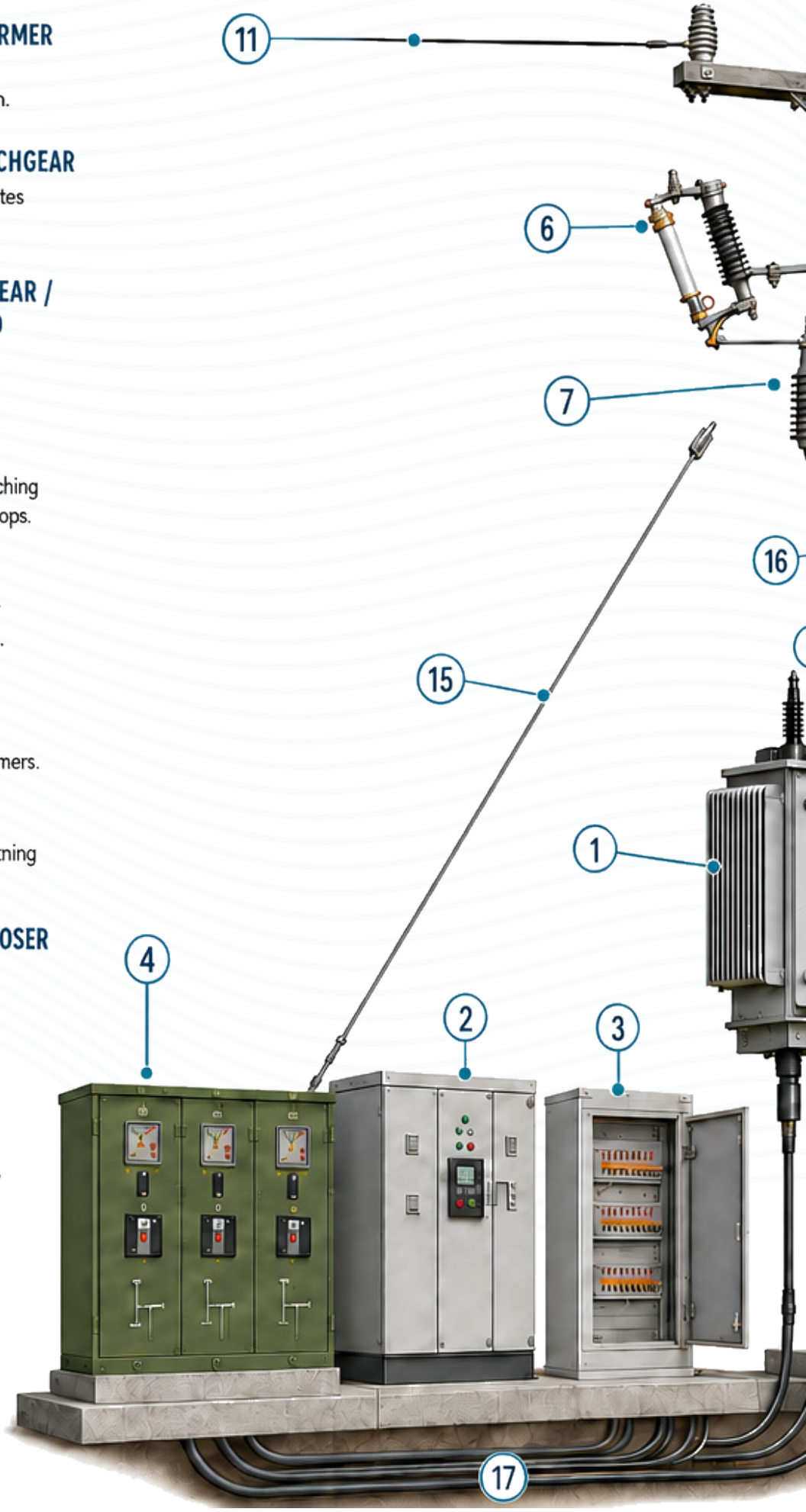
7 **SURGE ARRESTER**
Protects equipment from lightning and switching surges.

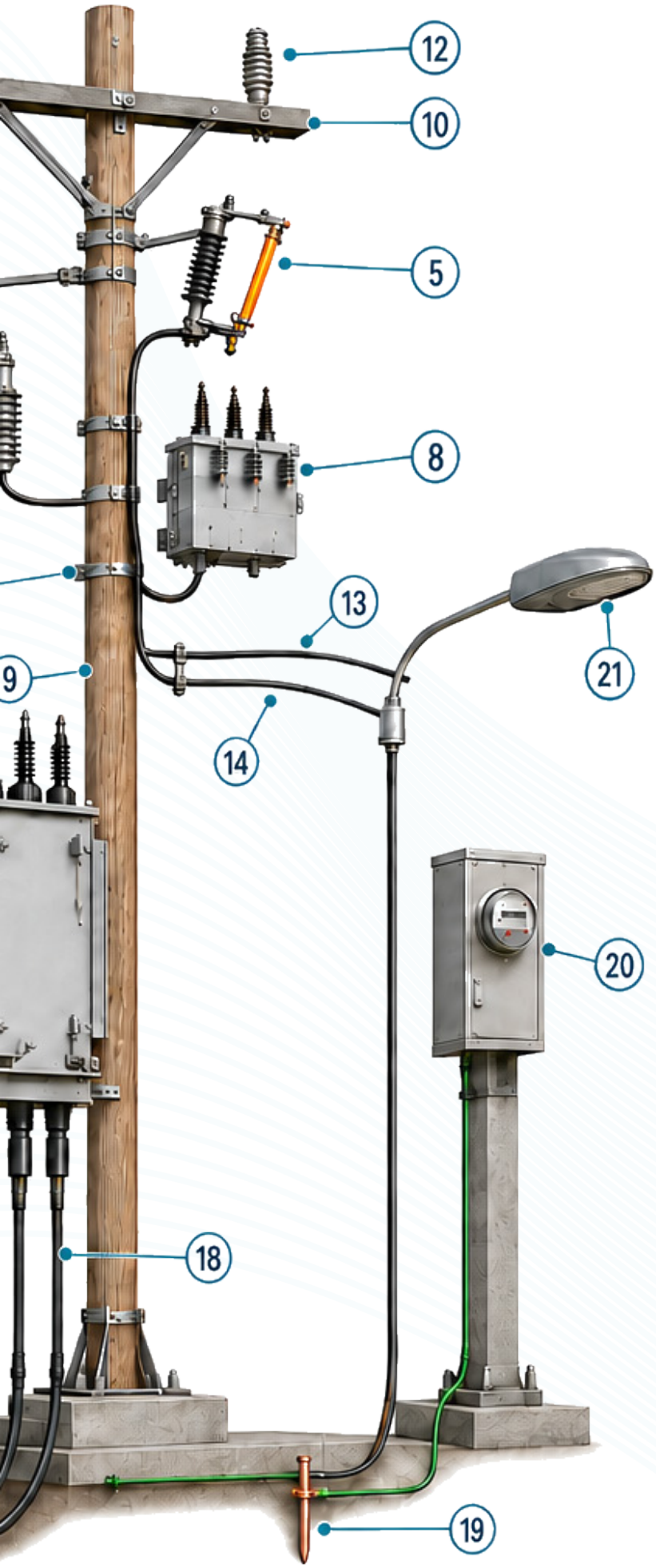
8 **CIRCUIT BREAKER / RECLOSER**
Automatically interrupts fault current and can reclose.

9 **UTILITY POLE**
Supports overhead conductors and distribution equipment.

10 **CROSSARM AND BRACKET**
Supports insulators and line hardware.

11 **PRIMARY CONDUCTOR / OVERHEAD LINE**
Carries medium-voltage power to the distribution area.





12 INSULATOR
Insulates conductors from pole and crossarm.

13 SERVICE DROP / LOW-VOLTAGE SERVICE CONDUCTOR
Delivers low-voltage supply to a customer.

14 NEUTRAL WIRE
Provides the return path for balanced load current.

15 GUY WIRE AND ANCHOR
Stabilizes the pole against lateral loads.

16 POLE-LINE HARDWARE
Clamps, connectors, and fittings for secure installation.

17 MEDIUM-VOLTAGE CABLE / UNDERGROUND CABLE
Conveys underground power to and from equipment.

18 CABLE TERMINATION OR CONNECTOR
Provides a safe, insulated connection at equipment.

19 EARTHING / GROUNDING ROD AND CONDUCTOR
Ensures equipment and system safety by dissipating fault energy.

20 ELECTRICITY METER / METERING CABINET
Measures energy consumption for billing and monitoring.

21 STREET-LIGHTING LUMINAIRE / PUBLIC-LIGHTING FITTING
Provides area illumination for public safety.

SELECTED EQUIPMENT & MATERIALS

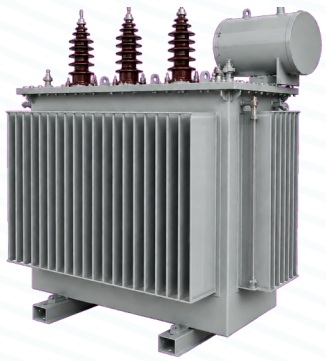
Representative equipment and materials across the power-distribution system.





EQUIPMENT & MATERIALS

01 SWITCHING, PROTECTION & TRANSFORMATION



Distribution Transformers

Transformer solutions for distribution networks and associated infrastructure applications.



Medium-Voltage Switchgear

Switching, protection, control, and distribution equipment for medium-voltage systems.



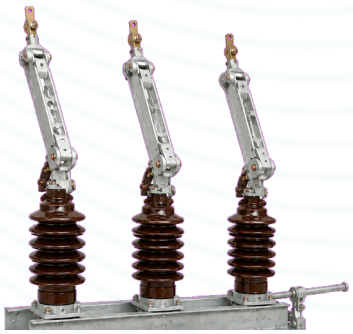
Low-Voltage Switchgear

Switching, protection, control, and distribution equipment for low-voltage systems.



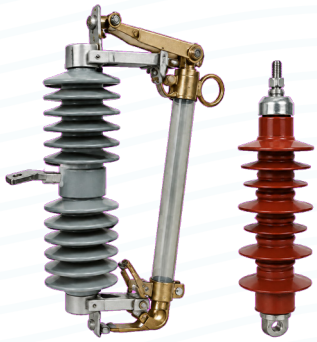
Ring Main Units

Compact switching equipment for medium-voltage distribution networks.



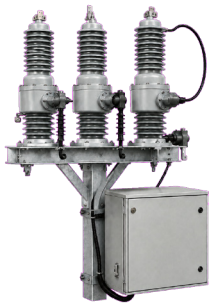
Load-Break Switches

Switching equipment for isolation and control within distribution applications.



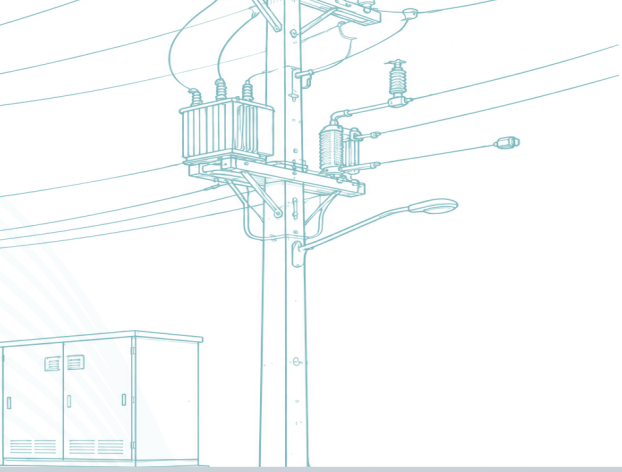
Fuse Cutouts & Surge Arresters

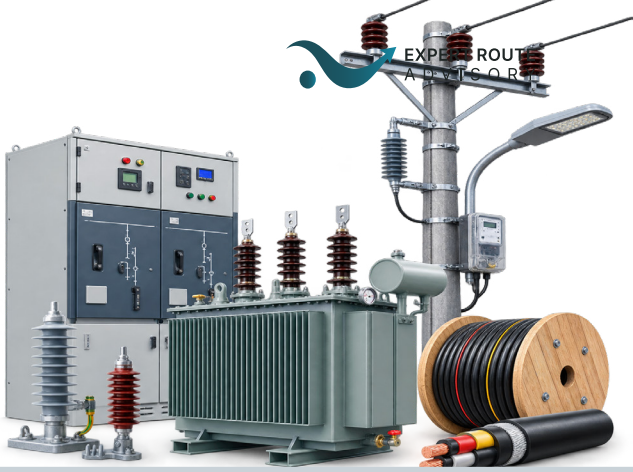
Protection equipment supporting overhead distribution systems and connected assets.



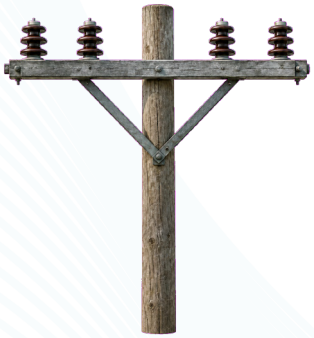
Automatic Reclosers / Sectionalizers

Automatic switching and protection equipment for overhead distribution networks.





02 OVERHEAD-LINE SYSTEMS



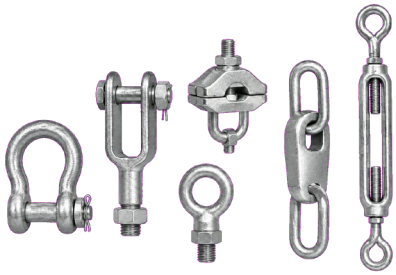
Utility Poles & Crossarms

Poles, crossarms, and structural supports for overhead distribution applications.



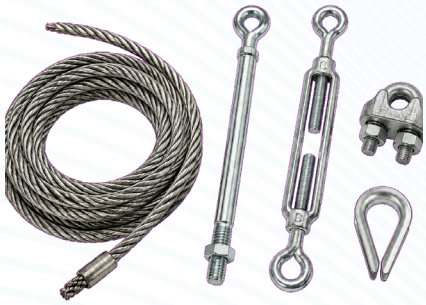
Insulators & Fittings

Insulation and support components for overhead conductors and distribution equipment.



Overhead-Line Hardware

Clamps, brackets, connectors, fittings, and associated line-support components.



Guy Wire & Anchoring Materials

Guy wires, anchors, clamps, and related materials supporting pole stability.



Public-Lighting Components

Luminaires, mounting arms, brackets, and associated components for public-lighting applications.

EQUIPMENT & MATERIALS

03 CABLE SYSTEMS, CONNECTIONS & EARTHING



MV & LV Power Cables

Power cables selected according to voltage level, installation conditions, and project requirements.



Cable Joints & Terminations

Accessories supporting cable connection, termination, and system integration.



Cable Lugs, Connectors & Glands

Connection and installation accessories for cable and conductor systems.



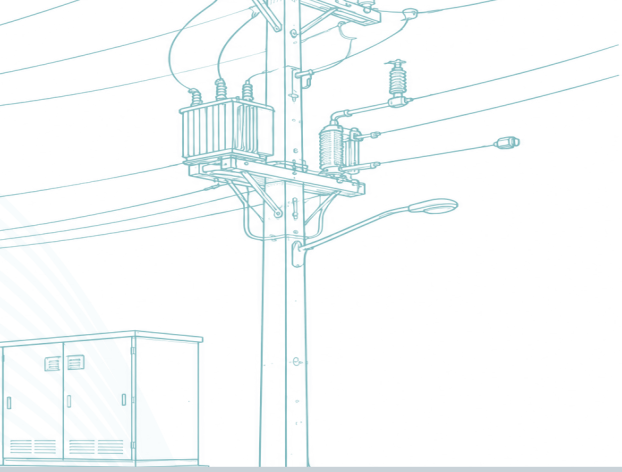
Earthing & Grounding Materials

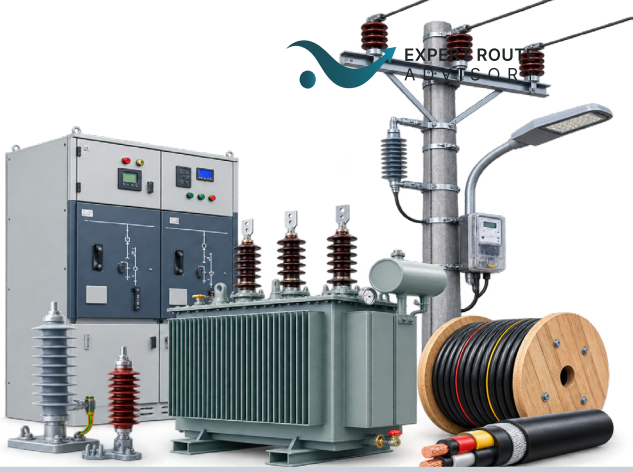
Earthing rods, conductors, clamps, connectors, and associated grounding materials.



Earthing Pits / Inspection Chambers

Access and inspection components supporting earthing-system installation and maintenance.





04 DISTRIBUTION, METERING & PUBLIC LIGHTING



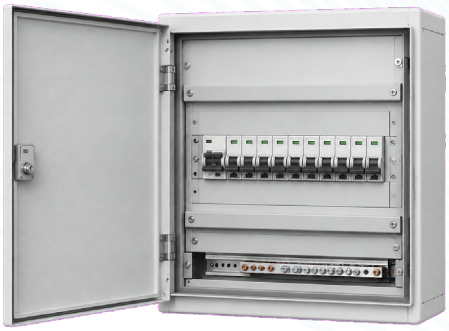
Metering Systems

Metering equipment supporting measurement, monitoring, and distribution applications.



Meter Boxes

Enclosures supporting electricity meters and associated service equipment.



Low-Voltage Distribution Boards

Boards for low-voltage distribution, protection, and service applications.



Street-Light Poles, Arms & Luminaires

Poles, mounting arms, luminaires, and associated equipment for public-lighting installations.

03

SOLAR PV & ENERGY STORAGE SYSTEMS

Equipment for Solar Generation, Conversion & Storage

ERA sources selected equipment and balance-of-system components for grid-connected, off-grid, hybrid, and storage-integrated renewable-energy applications.

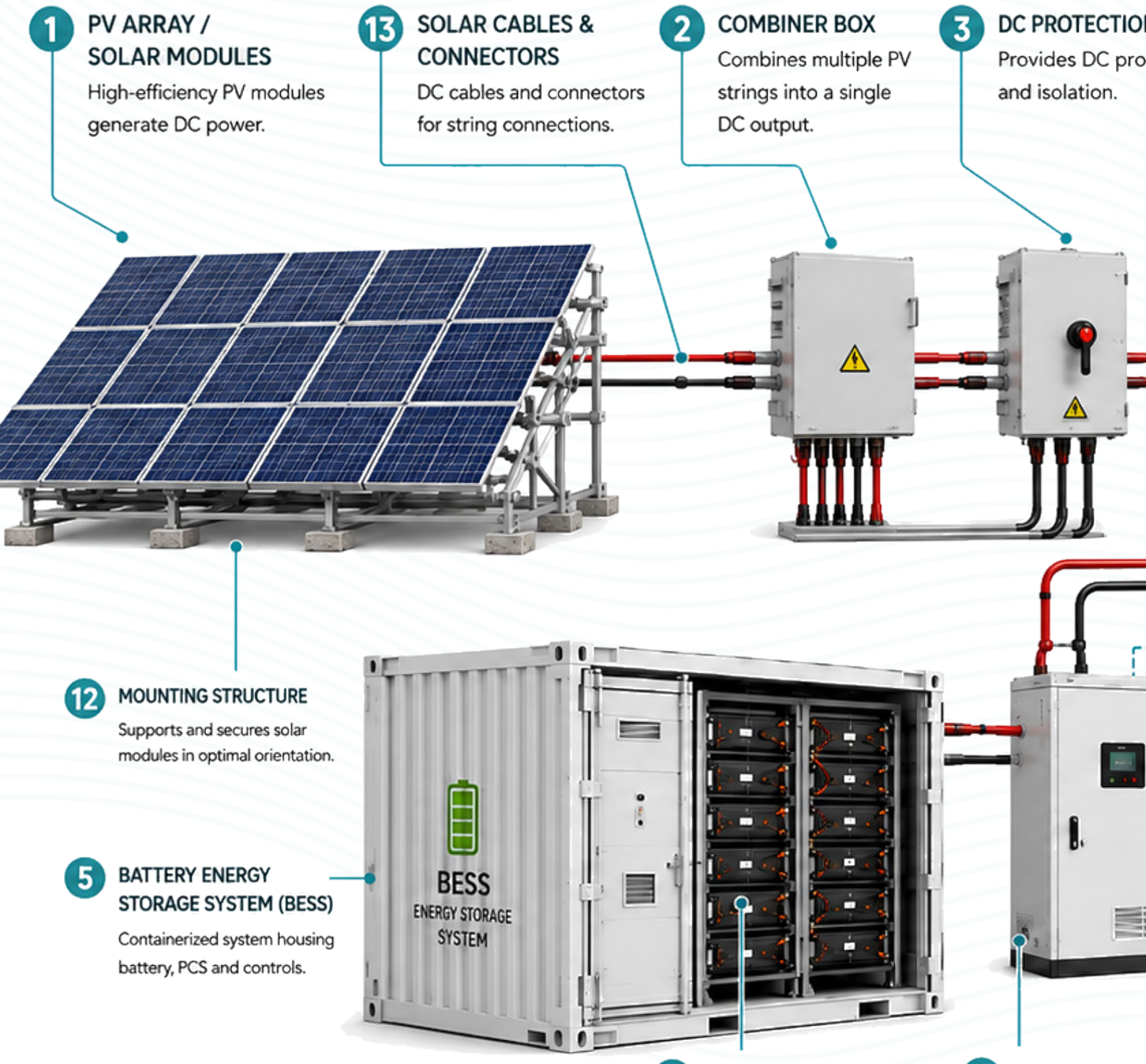












1 PV ARRAY / SOLAR MODULES
High-efficiency PV modules generate DC power.

13 SOLAR CABLES & CONNECTORS
DC cables and connectors for string connections.

2 COMBINER BOX
Combines multiple PV strings into a single DC output.

3 DC PROTECTIO
Provides DC pro and isolation.

12 MOUNTING STRUCTURE
Supports and secures solar modules in optimal orientation.

5 BATTERY ENERGY STORAGE SYSTEM (BESS)
Containerized system housing battery, PCS and controls.

6 SOLAR BATTERY / BATTERY BANK
Stores energy using high-capacity battery modules.

7 BATTERY INVER
Bidirectional con between battery AC system.

DC POWER AC POWER COMMUNICATION

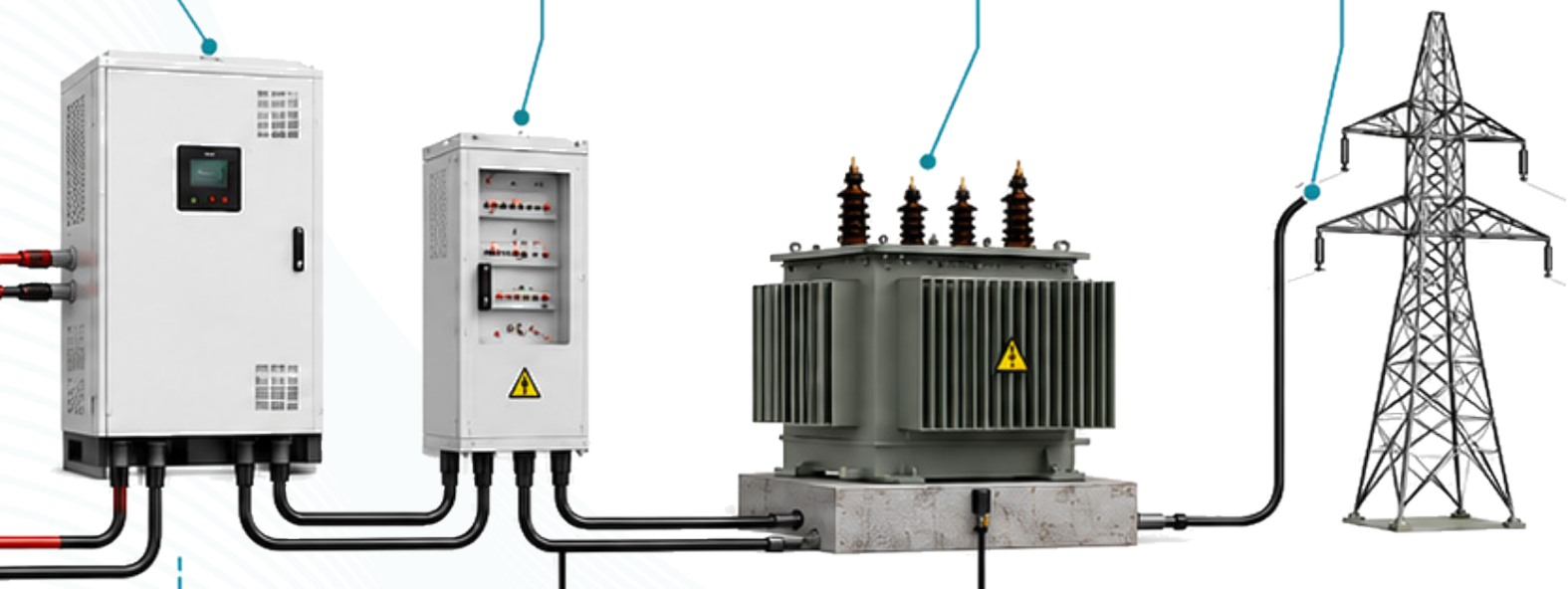
N BOX
tection

4 SOLAR INVERTER
Converts DC power from PV to AC power.

8 AC PROTECTION PANEL
Provides AC protection and isolation.

14 TRANSFORMER / STEP-UP TRANSFORMER
Steps up voltage for efficient grid connection.

10 GRID CONNECTION POINT
Point of connection to the utility grid.





TER / PCS
version
DC and

15 AUXILIARY CONTROL / MONITORING CABINET
Manages system control, communications and data.

9 ENERGY METER / MONITORING SYSTEM
Measures and monitors energy flows and system performance.

11 LOAD / OUTPUT CONNECTION
Optional connection to facility loads.

SELECTED EQUIPMENT & MATERIALS

Representative equipment and materials across the solar PV and energy-storage system.





EQUIPMENT & MATERIALS



01 SOLAR PV MODULES

Photovoltaic modules for project-specific solar-generation applications.



02 SOLAR INVERTERS

Power-conversion equipment for solar PV systems and related grid or load interfaces.



03 BATTERY ENERGY STORAGE SYSTEMS

Integrated battery-storage equipment for energy-management and storage applications.



04 SOLAR BATTERIES

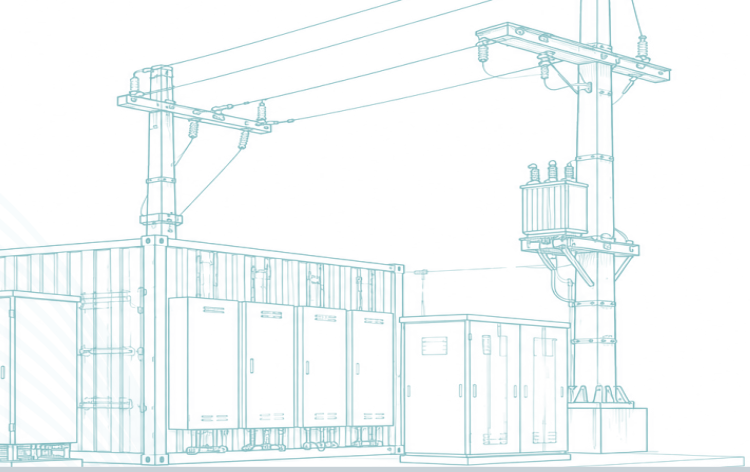
Battery solutions for suitable standalone, backup, hybrid, and storage applications



09 MOUNTING & RACKING SYSTEMS

Structures and mounting components supporting rooftop, ground-mounted, and project-specific PV installations.







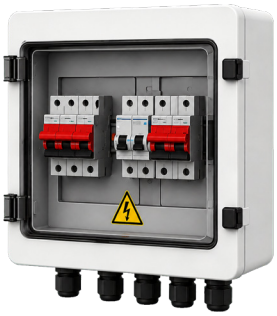
05 COMBINER BOXES

DC collection and connection equipment supporting PV-array configuration.



06 DC PROTECTION EQUIPMENT

Protection, isolation, and distribution equipment for solar and storage systems.



07 AC PROTECTION EQUIPMENT

Protection, isolation, and distribution equipment for solar and storage systems.



08 SOLAR CABLES & CONNECTORS

Cabling, connectors, and associated accessories for PV and energy-storage installations.



09 MONITORING & CONTROL COMPONENTS

Equipment supporting system monitoring, communication, measurement, and operational visibility.



04

EV CHARGING EQUIPMENT & INFRASTRUCTURE

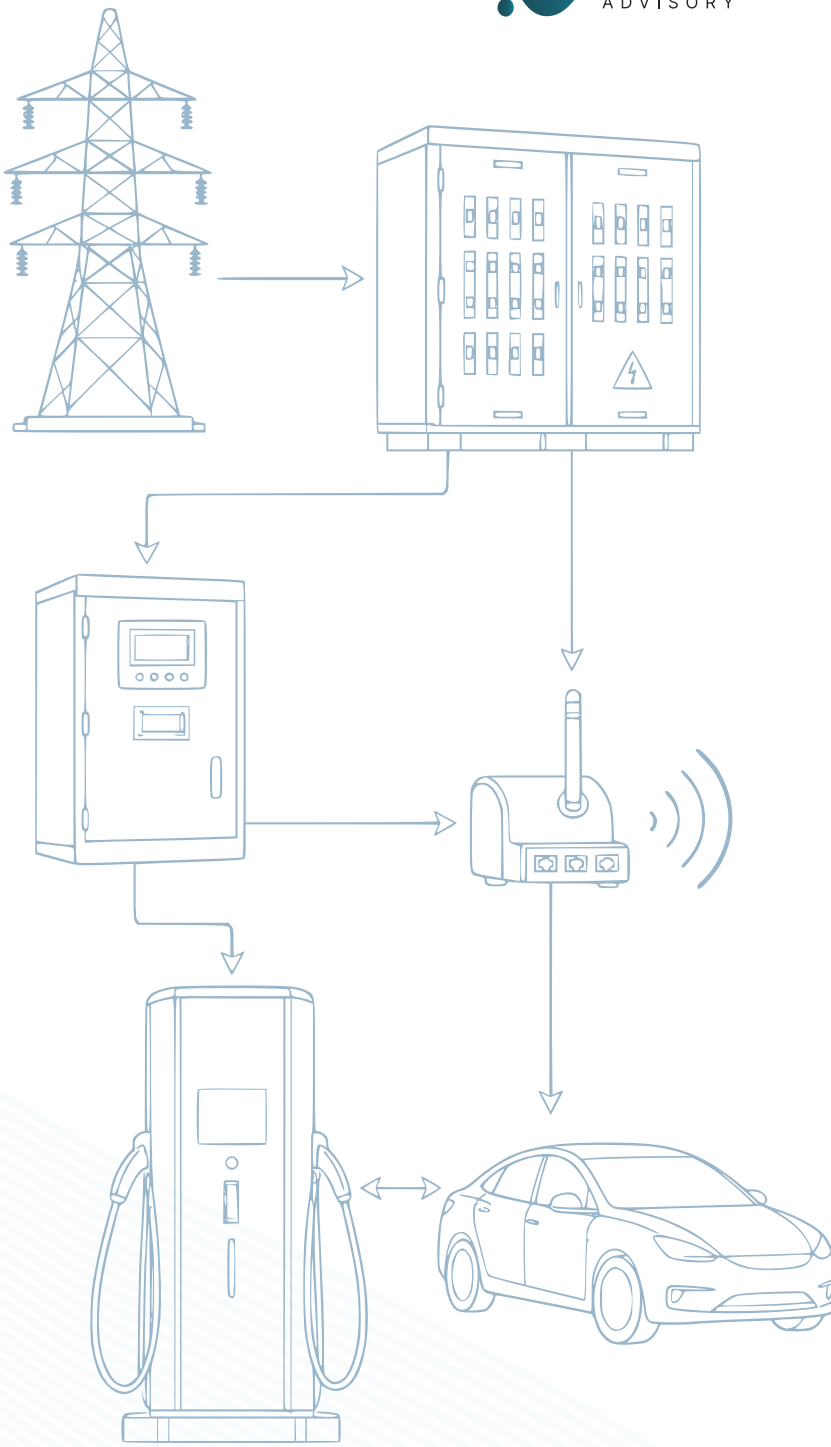
Charging Equipment & Supporting Electrical Systems

ERA supplies selected EV-charging equipment and associated electrical, protection, enclosure, mounting, and communication components for public, commercial, workplace, residential-development, and fleet applications.













1 GRID CONNECTION

Incoming power from utility grid medium voltage network.

2 MAIN DISTRIBUTION BOARD

Receives power from grid and distributes it to downstream protection and metering.

3 PROTECTION PANEL

Provides overcurrent, short circu and surge protection for the downstream system.



10 OPTIONAL MONITORING / COMMUNICATION UNIT

Enables remote monitoring, data logging, load management and system integration.



it

4 ENERGY METER

Measures and monitors energy consumption for billing and analysis.

5 CHARGING DISTRIBUTION CABINET

Distributes power to EV chargers with individual protection and control.

6 AC CHARGER

Delivers AC power for Level 2 charging of electric vehicles.

7 DC FAST CHARGER

Delivers high power DC charging for rapid EV charging.

11 EV VEHICLE

Electric vehicle connected for charging.



8 CHARGING CABLE

High quality, durable cable designed for safe and efficient power transfer.

9 CHARGING CONNECTOR / PLUG

Connects the charger to the vehicle inlet to deliver power safely and securely.

SELECTED EQUIPMENT & MATERIALS

Representative equipment and materials across the EV-charging system.







EQUIPMENT & MATERIALS

01 AC CHARGING STATIONS

Charging equipment for suitable residential, workplace, commercial, and destination-charging applications.



02 DC FAST CHARGERS

High-power charging equipment for suitable public, commercial, corridor, and fleet applications.



03 CHARGING CABLES & CONNECTORS

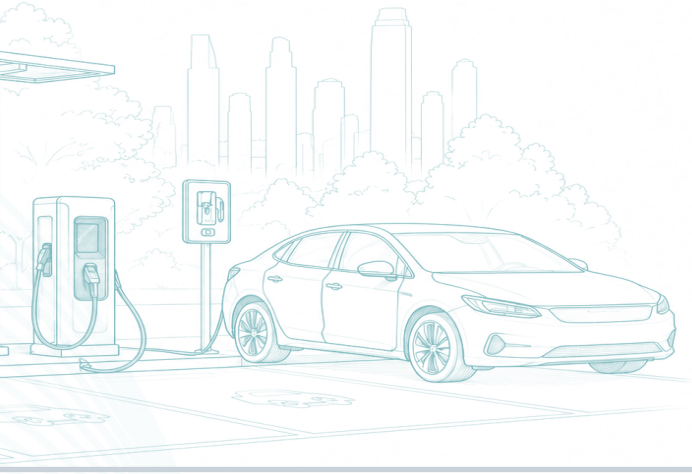
Charging cables, plugs, connectors, and associated interface components.



04 PROTECTION & DISTRIBUTION EQUIPMENT

Electrical protection, isolation, metering, and distribution equipment supporting charging installations.







05 CHARGING CABINETS & ENCLOSURES

Cabinets and enclosures supporting electrical and charging-system infrastructure.



06 MOUNTING SYSTEMS

Pedestals, mounting structures, brackets, and installation-support components.



07 MONITORING & COMMUNICATION COMPONENTS

Equipment supporting charger communication, monitoring, metering, and system-management requirements.



08 INSTALLATION ACCESSORIES

Cabling, glands, protection accessories, supports, and ancillary materials required for installation.



PRODUCT INQUIRY & CONTACT

Let’s Discuss Your Requirement

ERA supports project-specific equipment and material requirements across electrical infrastructure, renewable energy, and EV-charging applications.

For product availability, technical information, quotations, and supply requirements, contact our team. an initial requirement toward a suitable project-specific solution.

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EXPERT ROUTE
ADVISORY

POWERING PROGRESS.
DELIVERING SOLUTIONS.

Requirement-led sourcing for electrical, renewable-energy, and EV-charging infrastructure.



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