

# **Product Profile Bharat Electricity Summit -2026**

## **1. Power Generation Technology:**

### **➤ Equipment:**

- **Turbines:**
  - Steam Turbines
  - Gas Turbines
  - Wind Turbines
  - Hydro Turbines
- **Generators:**
  - Gasoline Generators
  - Diesel Generators
  - Propane Generators
  - Natural Gas Generators
  - Solar Generators
  - Wind Turbine Generators
  - Hydroelectric Turbine Generators
- **Boilers:**
  - Water-tube boilers
  - Fire-tube boilers
  - Subcritical Boilers
  - Supercritical Boilers
  - Ultra-Supercritical Boilers
  - Pulverized Fuel Boilers
  - Fluidized Bed Combustion (FBC) Boilers
  - Gas Boilers, Oil Boilers, and Biomass Boilers
- **Solar Panels (PV Modules)**
  - Monocrystalline Solar Panels
  - Polycrystalline Solar Panels
  - Thin Film Solar Panels
  - PERC (Passivated Emitter and Rear Cell) Solar Panels
  - Bifacial Solar Panels
- **Wind Turbines:**
  - Horizontal-axis Wind Turbines (HAWTs)
  - Vertical-axis Wind Turbines (VAWTs)
  - Bladeless Wind Turbines

- **Hydroelectric Turbines:**
  - Impulse Turbines
  - Reaction Turbines
  
- **Biomass Generators:**
  - Direct Combustion Generators
  - Thermochemical Conversion (Gasification & Pyrolysis) Generators
  
- **Nuclear Power Plants:**
  - Pressurized Water Reactors (PWRs)
  - Boiling Water Reactors (BWRs)
  - Pressurized Heavy Water Reactors (PHWRs)
  - Gas-Cooled Reactors (GCRs)
  - Fast Breeder Reactors (FBRs)

➤ **Raw Materials:**

- Coal, Natural Gas, Oil (such as diesel or heavy fuel oil), Chemicals such as Ammonia, hydrazine, acids, and alkalis, Uranium, (specifically the isotope U-235), Thorium, Moderators, Construction materials, Turbine components, Structural materials (Predominantly steel and cast iron, Blades, Magnets (Neodymium and dysprosium for turbines), Silicon, Cadmium Telluride Glass, Aluminum, Copper, CSP mirrors etc.

## **2. Power Transmission:**

➤ **Equipment for overhead transmission lines:**

- **Conductors:**
  - All Aluminum Conductor (AAC)
  - All-Aluminum Alloy Conductor
  - Aluminum Conductor Steel Reinforced (ACSR)
  - Aluminum Conductor Aluminum-Alloy Reinforced (ACAR)
  - Copper Conductors
  - Galvanized Steel Conductors
  - Copper-Clad Steel

- **Transmission towers and poles**
  - Suspension towers
  - Dead-end terminal towers
  - Tension towers
  - Transposition towers
  - Special towers
  
- **Circuit Breakers**
  - Sulphur Hexafluoride (SF<sub>6</sub>) Circuit Breakers
  - Vacuum Circuit Breakers (VCBs)
  - Air-Blast Circuit Breakers
  - Oil Circuit Breakers (OCBs)
    - Bulk Oil Circuit Breakers (BOCBs)
    - Minimum Oil Circuit Breakers (MOCBs)
  
- **Circuit Breakers**
  - Pin insulators
  - Suspension insulators
  - Strain insulators
  - Post insulators
  - Shackle insulators
  - Stay insulators
  
- **Circuit Breakers**
  - Step-Up Transformer
  - Step-Down Transformer
  - Three-Phase Transformer
  - Power Transformer
  
- **Panel Boards & Distribution Units**
  - Power Control Centre (PCC) Panels
  - Motor Control Centre (MCC) Panels
  - Automatic Power Factor Control (APFC) Panels

- Auto Mains Failure (AMF) Panels
  - Synchronizing Panels
  - High Tension (HT) & Low Tension (LT) Panels
  - Distribution Boards
  - Panel Boards & Distribution Units
- Other Mechanical equipment
    - Gears and Gearboxes
    - Bearings
    - Belts, Ropes, and Pulleys
    - Chains and Sprockets
    - Clutches and Brakes

➤ Raw Materials:

Steel, Aluminum, Copper Ceramics (like porcelain), glass, Synthetic polymers (like silicone rubber), Plastics like PVC and other polymer compounds, Specialized resins, gases, and fluids for cooling and insulation in equipment like transformers. Lubricants and fluids, Fasteners and hardware

### 3. Power Distribution:

➤ Substation equipment and materials

- Distribution transformers
- Circuit breakers
- Isolating switches (disconnectors)
- Switchgear
- Busbars
- Lightning arresters
- Capacitor banks
- Protective relays
- Instrument transformers
- Control panels and batteries
- Earthing equipment
- Gantry and support structure

➤ Overhead distribution systems

- Line conductors
- Line support
- Insulators
- Crossarms and braces
- Pole-mounted transformers
- Fuses
- Reclosers
- Service drops

➤ **Underground distribution systems**

- Underground cables
- Conduits and ducts
- Pad-mounted transformers
- Switchgear and junction boxes
- Service laterals
- Enclosures and cabinet

➤ **Raw Materials:**

Steel, Aluminum, Copper Ceramics (like porcelain), glass, Synthetic polymers (like silicone rubber), Plastics like PVC and other polymer compounds, Specialized resins, gases, and fluids for cooling and insulation in equipment like transformers. Lubricants and fluids, Fasteners and hardware

## **4. Energy Storage & Battery Tech**

➤ **Charging Infrastructure**

- Power Source
- Power Converters and Transformers
- Charging Points
- Connectors.
- Charging/Energy Management System (EMS)
- Network Connectivity & Server

➤ **Battery Storage**

- Battery modules
- Battery Management System (BMS)
- Power Conversion System (PCS)
- Energy Management System (EMS)
- Safety systems
- Storage enclosure

## 5. Energy Efficiency Solutions

- Manufacturers and solution providers offering advanced technologies,
- AI-driven platforms,
- Efficient smart home systems and interconnected appliances that optimize electricity use and enable a smarter, more connected power ecosystem.
- Manufacturers of LED and charge controllers
- Green information & communications technologies (ICT)

## 6. Digital Solutions

- Innovators delivering smart meters,
- Digital twins,
- IoT platforms, SCADA systems,
- AI and machine learning-based forecasting tools,
- Data analytics, cybersecurity and other advanced digital solutions powering a smarter, connected and resilient electricity ecosystem.

## 7. Renewable & Clean Energy:

### ➤ Solar Energy

- Manufacturers of cell and module encapsulation, crystal growth equipments, diffusion furnaces, laminators, mounting systems, concentrators, trackers and collectors
- Wire saws and consumables
- Silicon feedstock, ingot and wafer manufacturing
- Inverters, charge controllers, batteries and module connectors
- Photovoltaic (PV) modules, hybrid systems, materials and equipments
- Screen-printing and metallization equipments
- Solar cells manufacturers
- Solar drying and desalination systems

- Solar water heating/cooling systems and solar pumps Testing, monitoring systems, project consultants, suppliers of building integrated photovoltaic (BIPV) and solar thermal engineering
- Suppliers of raw materials
- System integrators, assemblers and distributors
- Glass, substrates, coatings, resins, encapsulation materials, films, gasses
- Software solutions and providers of irradiation data
- Turnkey solution providers
- Solar farm developers and owners
- Annual maintenance contractors
- Emission monitoring systems
- Electrical test and measuring systems
- Solar street and billboard lighting systems

#### ➤ Wind Energy

- Wind Energy
- Buyers and sellers of old WEGs
- Civil engineering surveyors and contractors
- Component repairers (other than OEMs)
- Consultants and certification agencies
- Electrical and electronics items manufacturers
- Freight forwarders
- Hydraulic and mechanical items manufacturers and suppliers
- Insurance companies, surveyors, valuers, Operations and maintenance providers
- Stand-alone small aero-generator manufacturers & Training providers
- WEG erection contractors, spares, components, tools and lubricants manufacturers
- Wind electric generator (WEG) manufacturers
- Wind monitoring and analysis systems suppliers
- Assessment and forecasting service providers
- Wind-Solar hybrid power system integrators
- Wind farm owners

#### ➤ Bio Energy

- Analytical instruments manufacturers and service providers
- Bio-diesel / bio-ethanol distributors or refining companies
- Bio-diesel dispensing and mixing equipment manufacturers
- Biomass heating and drying equipment manufacturers
- Bioreactor, boiler, turbine and turbo-generator manufacturers & consultants

## **8. Power Startups & Innovation**

- **Startups & Incubators**
- **R&D Centers**
- **Digital Solutions and enablers introducing breakthrough technologies,**
- **Bold ideas and next-generation electricity solutions shaping the future of power**
- **Future Energy Tech**