

# Meeting Electrical Maintenance Needs

Your facility requires preventive electrical maintenance.



It's a **compliance** issue



It's a **health and safety** issue



It's a **liability** issue.

You facility benefits from preventive electrical maintenance.



We know what electrical maintenance you need.

We're accredited testers, certified technicians, and qualified risk assessment professionals.  
And we put it all together for cost-effective asset management.

Now you know who to call.



Reduce costs and risks with ABM electrical maintenance and asset management solutions.

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Are You Testing All of This?

- Automatic Transfer Switches
- Battery Banks
- Bus Bars
- Bus Ducts
- Circuit Breaker Panels
- Circuit Breakers
- Disconnect Switches
- Distribution Panels
- Distribution Switch Boards
- Generators
- Ground Fault Protection
- Main Fuses
- Main Panels
- Motor Control Centers
- Power Distribution Units (PDUs)
- Power Meters
- Relays
- Switchgear
- Transformers
- UPS (Uninterruptible Power Supply) Backups
- Voltage Meters

See Our Expanded Testing Checklist on the Other Side

# We Test and Maintain All of This Electrical Distribution Equipment

Electrical maintenance saves costs, extends equipment life, and reduces the risk of fines, liability, and medical expenses from an incident. To ensure your business benefits, you'll need certified, qualified people checking your electrical assets. The list below is just a sampling of what our teams do.

Every asset below is required to be maintained in accordance with recognized standards. In addition to the tests below, each asset also needs a (1) visual inspection, (2) cleaning, and where appropriate, (3) tightening.

## All Bus Bars and Bus Ducts

- Connection and contact resistance
- Insulation resistance
- Thermographic survey

## Automatic Transfer Switches

- Contact resistance
- Insulation resistance

## Battery Banks

- Connection resistance
- Impedance
- Load bank
- Voltage to ground and equalizing voltage

## Circuit Breakers (Including Main Breakers)

- Connection, control wiring, and contact resistance
- Drop values, ground fault, and short- and long-time pickup values
- Insulation resistance
- Static contact/pole-resistance
- Trip unit programming and settings
- Verify operation

## Disconnect Switches

- Contact resistance
- Insulation resistance
- Fuse verification

## Generators

- Connection resistance
- Insulation resistance
- Load bank
- Winding resistance

## Grounding Systems

- Soil resistivity
- 4-point method
- 3-point (fall of potential)
- 2-point (dead earth)

## Motor Control Centers

- Connection resistance
- Insulation resistance
- Test control devices and motor protection parameters

## Power Cables

- Point to point verification
- Insulation resistance
- Phase identification
- Additional tests for Medium Voltage:
  - i. High potential (DC and VLF)
  - ii. Partial discharge
  - iii. Tan delta/dissipation factor

## Power Meters

- Current ratio
- CT performance

## Protective Relays

- Circuit, coil, and contact resistance
- Overcurrent and overvoltage pickup
- Pickup times and time delays
- Trip resistance

## Switchgear, Main Panels, Distribution Panels, and Switch Boards

- Connection resistance
- Control wiring insulation resistance
- Insulation integrity
- Ground resistance and fault relays
- Test all meters, instrument transformers, and control power transformers

## Transformers

- Insulation integrity (Megger test)
- Oil analysis (unless dry-type)
- Power factor (Doble test)
- Relay testing
  - i. Temperature
  - ii. Pressure
- Turns ratio
- Winding resistance

## Voltage Meters

- Insulation integrity
- Turns ratio

## There's So Much More

For instance, the 2019 NETA guidelines for inspecting switchgear lists 19 points.

## For a More Complete Look

Please refer to the 2019 Standard for Maintenance Testing Specifications for Electrical Power Equipment & Systems (ANSI/NETA MTS-2019)

There's a lot to do. Let's get started.

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