



Electrical Power Distribution System Checklist

General System Overview & Documentation

Reviewing system documentation and assessing overall system health.

Describe the overall electrical power distribution system layout.

Write something...

Date of Last System Design Review

Enter date...

Total System Capacity (kVA or kW)

Enter a number...

System Voltage Level(s)

- ☐ 120V
- ☐ 208V
- ☐ 480V
- ☐ Other

Upload Single Line Diagram

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Document any known issues or limitations of the system.

Write something...

Date of Last Comprehensive System Review

Enter date...

Type of System Architecture (e.g., Radial, Ring)

☐ Radial

☐ Ring

☐ Other

Main Incoming Service

Inspection of the main electrical service entrance and related equipment.

Main Service Voltage (V)

Enter a number...

Main Service Amperage (A)

Enter a number...

Main Meter Reading

Enter a number...

Last Meter Reading Date

Enter date...

Service Entrance Condition (Visual)

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor
- ☐ Unacceptable

Notes/Comments on Service Entrance Condition

Write something...

Disconnect Switch Operability

- ☐ Operates Normally
- ☐ Needs Lubrication
- ☐ Needs Repair
- ☐ Inoperative

Service Entrance Photo

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Switchgear & Distribution Panels

Detailed examination of switchgear, distribution panels, and circuit breakers.

Panel Voltage (V)

Enter a number...

Panel Ampacity (A)

Enter a number...

Panel Condition (Visual)

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor
- ☐ Needs Attention

Notes on Panel Appearance/Condition

Write something...

Circuit Breaker Operation Test Result

- ☐ Pass
- ☐ Fail
- ☐ N/A

Number of Breakers Tripped (if any)

Enter a number...

Details of any Breaker Trips or Abnormalities

Write something...

Last Maintenance Date

Enter date...

Busbar Condition

- ☐ Clean
- ☐ Slight Discoloration
- ☐ Significant Discoloration
- ☐ Evidence of Corrosion

Transformers

Assessment of transformers, including visual inspection, oil level, and temperature.

Transformer KVA Rating

Enter a number...

Input Voltage (Primary)

Enter a number...

Output Voltage (Secondary)

Enter a number...

Oil Level (inches from sight glass)

Enter a number...

Oil Temperature (°C/°F)

Enter a number...

Oil Condition (Visual Inspection)

- ☐ Clear
- ☐ Slightly Cloudy
- ☐ Cloudy
- ☐ Milky
- ☐ Presence of Sediment

Cooling Method

- ☐ ONAN
- ☐ ONAN/ONAF
- ☐ Other (Specify in Long Text)

Any unusual noises or smells?

Write something...

Date of Last Oil Analysis

Emergency Power System (EPS) / Generator

Verification of EPS functionality and generator performance (if applicable).

Generator Run Time (Hours)

Voltage Output (V)

Frequency Output (Hz)

Last Exercise Date

Exercise Start Time

Exercise Results/Observations

Fuel Level (Approximate)

- ☐ Full
- ☐ 75%
- ☐ 50%
- ☐ 25%
- ☐ Empty

Coolant Level

- ☐ Normal
- ☐ Low
- ☐ Critical

Generator Performance Report (if available)

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Uninterruptible Power Supply (UPS)

Inspection and testing of UPS systems (if applicable).

UPS Input Voltage (VAC)

Enter a number...

UPS Output Voltage (VAC)

Enter a number...

UPS Capacity (kVA or kW)

Enter a number...

UPS Load Percentage (%)

Enter a number...

UPS Status (Online, Standby, Test, Fault)

- ☐ Online
- ☐ Standby
- ☐ Test
- ☐ Fault

Last Battery Replacement Date

Enter date...

Observations/Notes on UPS Performance

Write something...

UPS Event Log (if available)

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Battery Type

- ☐ VRLA
- ☐ Flooded
- ☐ Gel
- ☐ Other

Grounding & Bonding

Verification of proper grounding and bonding throughout the electrical system.

Ground Resistance Measurement (Ohms)

Enter a number...

Bonding Resistance Measurement (Ohms)

Enter a number...

Grounding Electrode Type

- ☐ Ground Rod
- ☐ Plate
- ☐ Concrete Encased Electrode
- ☐ Water Pipe
- ☐ Other (Specify)

Description of Grounding System Configuration

Write something...

Visual Inspection of Grounding Connections

- ☐ Good
- ☐ Fair
- ☐ Poor
- ☐ Corrosion Present

Areas Checked for Bonding

- ☐ Metallic Water Pipes
- ☐ Gas Piping
- ☐ Structural Steel
- ☐ Building Shell
- ☐ Equipment Grounding

Last Grounding System Inspection Date

Enter date...

Wiring & Conduit

Visual inspection of wiring, conduit, and related supports.

Conduit Installation Condition Rating (1-5, 1=Poor, 5=Excellent)

Enter a number...

Conduit Damage Observed?

- ☐ None
- ☐ Minor Dents/Scratches
- ☐ Cracks
- ☐ Kinks
- ☐ Corrosion
- ☐ Other (Specify in Long Text)

If 'Other' damage selected above, please specify:

Write something...

Number of Conduit Supports Securely Attached

Enter a number...

Wiring Condition (Overall)

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor

Wiring Degradation Observed?

- ☐ None
- ☐ Brittle Insulation
- ☐ Cracked Insulation
- ☐ Discoloration
- ☐ Fraying
- ☐ Rodent Damage
- ☐ Other (Specify in Long Text)


If 'Other' degradation selected above, please specify:

Write something...

Wire Identification (Color Coding) Consistency

- ☐ Consistent
- ☐ Mostly Consistent
- ☐ Inconsistent

Upload Photo(s) of Conduit/Wiring (if issues found)

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Load Monitoring & Energy Management

Reviewing load monitoring data and energy management system performance.

Total Facility Power Consumption (kWh)

Enter a number...

Peak Demand (kW)

Enter a number...

Power Factor

Enter a number...

Energy Management System (EMS) Status

- ☐ Operational
- ☐ Degraded
- ☐ Offline
- ☐ Not Applicable

Notes on Recent Energy Usage Trends

Write something...

Last EMS Software Update Date

Enter date...

Energy Saving Initiatives Implemented?

- ☐ LED Lighting Upgrade
- ☐ HVAC Optimization
- ☐ Occupancy Sensors
- ☐ Power Factor Correction
- ☐ None

Baseline Energy Consumption (kWh)

Enter a number...

Safety & Compliance

Verification of safety measures and compliance with relevant codes and standards.

Last Safety Audit Date

- ☐ Within Last Year
- ☐ More Than a Year Ago
- ☐ Not Applicable

Number of Safety Violations Found in Previous Inspection

Enter a number...

Details of Any Safety Concerns Identified

Write something...

Arc Flash Risk Assessment Up-to-Date?

- ☐ Yes
- ☐ No
- ☐ Not Applicable

Date of Last Arc Flash Study

Enter date...

Lockout/Tagout (LOTO) Procedures Reviewed?

- ☐ Yes
- ☐ No
- ☐ N/A

Upload of Relevant Safety Certifications (e.g., NFPA 70E)

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Compliance with Local Electrical Codes?

- ☐ Yes
- ☐ No
- ☐ Unsure