



Smart Grid Deployment Verification Checklist Template

Planning & Design Verification

Ensuring alignment with initial design specifications and regulatory requirements.

Design Load Factor Accuracy

Compliance with Industry Standards?

- ☐ Yes
- ☐ No
- ☐ Pending

Original Design Approval Date

Detailed Description of Design Assumptions

Approved Design Documents (e.g., schematics, drawings)

 Upload File

Site Survey Validation?

- ☐ Yes
- ☐ No
- ☐ N/A

Voltage Drop Calculation Verification

Enter a number...

Communication Infrastructure

Validating the functionality and security of communication networks.

Network Latency (ms)

Enter a number...

Bandwidth Capacity (Mbps)

Enter a number...

Communication Protocol Used

- ☐ TCP/IP
- ☐ MQTT
- ☐ DNP3
- ☐ IEC 61850

Security Protocols Implemented

- ☐ TLS/SSL
- ☐ IPsec
- ☐ AES Encryption

Last Network Security Audit Date

Enter date...

Description of Redundancy Measures

Write something...

Advanced Metering Infrastructure (AMI)

Testing meter accuracy, data transmission, and network stability.

Meter Read Accuracy (Percentage)

Enter a number...

Data Transmission Success Rate (%)

Enter a number...

Communication Protocol Used

- ☐ Zigbee
- ☐ Wi-Fi
- ☐ Cellular
- ☐ PLC

Last Firmware Update Date

Enter date...

Typical Data Retrieval Time (Seconds)

Encryption Method

- ☐ AES
- ☐ RSA
- ☐ TLS

Notes on AMI performance issues (if any)

Write something...

Distribution Automation (DA)

Verifying automated switching, fault detection, and voltage regulation.

Voltage Regulator Response Time (seconds)

Enter a number...

Automated Switch Operation Success Rate (%)

Enter a number...

Fault Detection Algorithm Accuracy

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

Last Automated Switch Maintenance Date

Enter date...

Average Time to Restore Power after Fault

Automated Actions Verified

- ☐ Voltage Regulation
- ☐ Fault Isolation
- ☐ Load Shedding
- ☐ Reconfiguration

Cybersecurity Controls

Confirming implementation and effectiveness of security measures.

Firewall Configuration Verified?

- ☐ Yes
- ☐ No
- ☐ Not Applicable

Latest Vulnerability Scan Score

Enter a number...

Intrusion Detection/Prevention Systems (IDS/IPS) Enabled?

- ☐ Network IDS
- ☐ Host-Based IDS
- ☐ Signature-Based
- ☐ Anomaly-Based

Patch Management Process Followed?

- ☐ Yes
- ☐ No
- ☐ In Progress

Last Security Awareness Training Date

Enter date...

Summary of Security Incident Response Plan Review

Write something...

Data Analytics and Reporting

Checking data integrity, accessibility, and accuracy of reports.

Data Accuracy Score (%)

Enter a number...

Data Source Validation Status

- ☐ Valid
- ☐ Invalid
- ☐ Pending

Last Data Integrity Check Date

Enter date...

Notes on Data Anomalies Detected

Write something...

Reporting System Integration Status

- ☐ Integrated
- ☐ Not Integrated
- ☐ Partially Integrated

Report Generation Time (seconds)

Enter a number...

Integration with Existing Systems

Assessing compatibility and functionality across integrated systems.

SCADA System Integration Status

- ☐ Fully Integrated
- ☐ Partially Integrated
- ☐ Not Integrated

Data Synchronization Latency (seconds)

Enter a number...

Description of Integration Challenges Encountered

Write something...

GIS System Integration Status

- ☐ Fully Integrated
- ☐ Partially Integrated
- ☐ Not Integrated

Last Data Synchronization Date

Enter date...

Systems Integrated (Select all that apply)

- ☐ Billing System
- ☐ Customer Information System
- ☐ Work Order Management System

User Training and Acceptance

Evaluating user proficiency and system acceptance.

Number of Users Trained

Enter a number...

Training Delivery Method

- ☐ Online
- ☐ In-Person
- ☐ Hybrid

Training Feedback Summary

Write something...

Training Modules Covered

- ☐ System Overview
- ☐ Data Interpretation
- ☐ Troubleshooting
- ☐ Security Protocols

Date of Training Completion (Representative Sample)

Enter date...

Signature of Trainer

Performance Monitoring & Optimization

Reviewing initial performance data and identifying areas for improvement.

Average System Response Time (ms)

Enter a number...

Data Transmission Error Rate (%)

Enter a number...

Voltage Regulation Accuracy (%)

Enter a number...

System Uptime (%)

Enter a number...

Date of Last Performance Review

Enter date...

Summary of Performance Observations

Write something...

Overall Performance Assessment

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Needs Improvement

Regulatory Compliance

Confirming adherence to all applicable regulatory standards and requirements.

Applicable Regulations

- ☐ NERC CIP
- ☐ FERC Regulations
- ☐ State Energy Regulations
- ☐ Local Ordinances

Last Compliance Audit Date

Enter date...


Audit Score (e.g., out of 100)

Enter a number...

Summary of Audit Findings and Recommendations

Write something...

Copy of Compliance Audit Report

 Upload File

Status of Corrective Actions

- ☐ Completed
- ☐ In Progress
- ☐ Not Started

Date of Next Compliance Review

Enter date...