



B.E.E



ISO



Electrical Safety and Energy Audit Presentation

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Company Overview

BNN Power is a Mumbai - India based Energy Consultant recognized as a Energy Service Company (ESCO) empaneled with Bureau of Energy Efficiency, Govt. of India, Ministry of Power, specializes in Energy Saving & Electrical Auditing Services. With 15+ years of experience in the Energy Sector we bring Value Engineering to achieve desired results for our clients.

We also manufacture custom designed Energy Saving Solutions and develop an extensive range of innovative products suitable for Power Quality and Energy Efficiency Improvement.



Accreditation & Empannelment



Energy Service Company (ESCO) empaneled with Bureau of Energy Efficiency, Govt. of India, Ministry of Power

Empaneled membership with United States Green Building Council (USGBC) for L.E.E.D and E.S.G Compliances for Green Building Initiatives

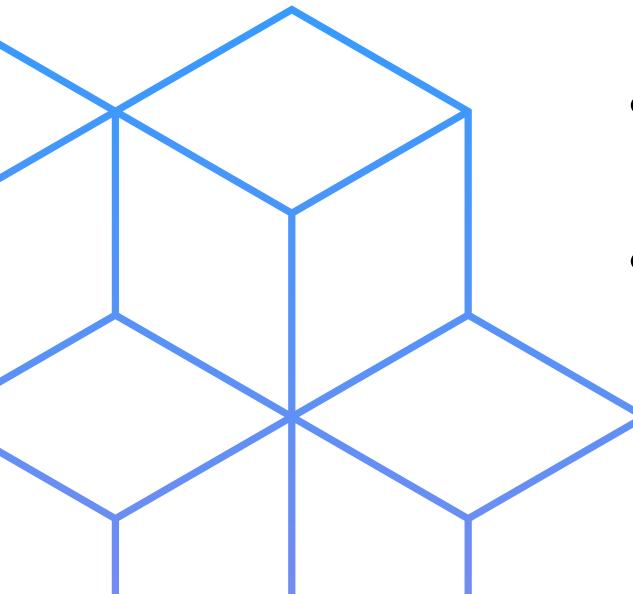




Audit Objectives

Client Challenges

- Increased Energy Consumption while production and utilities remain same.
- High electricity bills with no clarity on consumption patterns
- Frequent equipment breakdowns and overheating which affects production due to downtime.
- Power Factor penalties and reactive power charges
- Poor power quality (voltage dips, harmonics, imbalance)
- No awareness about Electrical Fire Safety & Compliances.
- No visibility on energy-saving opportunities



BNN Power Objectives

- To evaluate & optimize total consumption to minimize energy exploitation and achieve Energy Efficiency.
- Detailed energy consumption breakdown and savings roadmap.
- To provide Guaranteed solutions to reduce Energy Consumption and Production Costs to gain Up to 30% energy savings through effective interventions
- Load balancing, PF Correction, preventive maintenance insights, and thermal scanning.
- Power quality improvement solutions and mitigation strategies
- Customized, actionable recommendations with investment-cost analysis
- Ensure Regulatory Compliance, Safety and Sustainability.





Methodology

01

Thorough Data Analysis

Our team of experts use the unique combination of daily data monitoring, Production analytics, and human expertise to bring value to its customers. This results in optimized machine lifecycle, Efficiency and improved performance. From avoiding losses & wastage of electricity to providing solutions that improve circuit efficiency and to provide total system efficiency.

02

Analysis & Diagnosis

Analyze collected data to identify inefficiencies, power quality issues, wastages, and areas of excessive consumption using energy models and benchmarking. Energy efficiency brings a variety of benefits includes reducing demand for energy imports, and minimizing costs on a industry and economy-wide level. BNN Power with our 15 years of experience brings Value Engineering to achieve system reliability & total system efficiency.

03

Recommendations & Reporting

Present a detailed audit report with savings opportunities, investment estimates, ROI calculations, and an actionable roadmap for implementation. We as Energy Consultants trace such problems and offer guaranteed solutions. The report serves as a blueprint for clients to reduce energy costs, enhance reliability, and improve sustainability.



SCOPE OF WORK

SEGMENTS	ENERGY EFFICIENCY & IDENTIFICATION OF ENERGY CONSERVATION METHODS	TOTAL CONSUMPTION ANALYSIS & ENERGY LOSSES	FAULT IDENTIFICATION & ELECTRICAL FIRE SAFETY
Scope # 1	Electricity Bill Analysis and to explore opportunities for Bill Demand Reduction	Evaluate Cable Losses, Distribution Losses, Transformer Losses	Thermography of all Panels & Machines
Scope # 2	Load Profiling: Understanding when and where energy is used across your facility	PCC/MCC Panel Wise Consumption Analysis	Harmonics Study and Analysis
Scope # 3	Root Cause Identification: Pinpointing problems like oversized motors, idle loads, or system mismatches	Benchmarking: Comparing current energy performance against industry standards or best practices	Earthing Assessment & Leakage Current Tests
Scope # 4	Study to optimize system for reliability /energy conservation and compliances	Evaluate and Analyze Plant Power Quality	Assessment as per CEA 2023 Electrical Safety Guidelines



What you Gain ?

1. Significant Cost Savings

Reduce electricity bills by identifying and eliminating energy wastage. Typical savings range from 10–30%, depending on industry and operations.

2. High Return on Investment (ROI)

Most recommendations pay back in 6–18 months. Sustainable savings continue year after year with minimal ongoing costs

3. Improved Equipment Efficiency & Lifespan

Right-sizing motors, balancing loads, and improving power quality leads to fewer breakdowns and longer equipment life

4. Regulatory & ESG Compliance

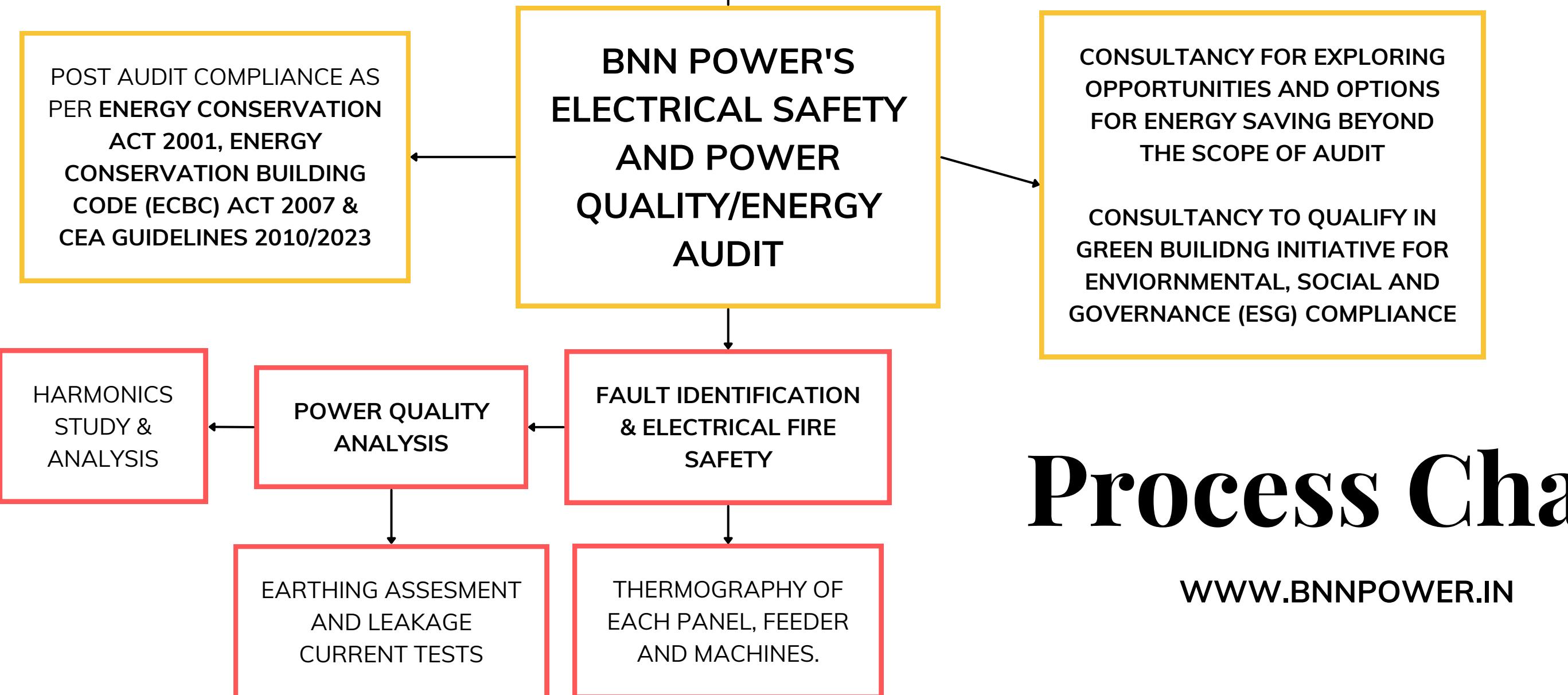
Align with BEE, LEED, and corporate ESG goals. Improve environmental performance and CSR profile

5. Operational Visibility & Control

Real-time monitoring systems provide detailed insights into usage patterns. Helps in making data-driven decisions for energy management

6. Enhanced Safety & Reliability

Early detection of potential faults through thermal imaging and load analysis. Safer electrical systems with optimized load distribution. A tailored energy plan that supports long-term goals, including decarbonization and net-zero strategies



Process Chart

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Achieved Compliances

01

National Compliances

- Energy Conservation Act 2001, Amended 2022
- Energy Building Conservation Building Code (ECBC) Act 2007, Amended 2023
- CEA Safety Guidelines 2010 (Amended 2023).
- PAT Guidelines for Carbon Emission

02

International & Global Compliances

- Review of IEC Standards
- ISO14064:2018 GHG emissions accounting and Removal
- Consultancy to Qualify in Green Building Initiative for Environmental, Social & Governance (ESG) Compliances & Leadership in Energy and Environmental Design (L.E.E.D) Certification.



Project Specifics

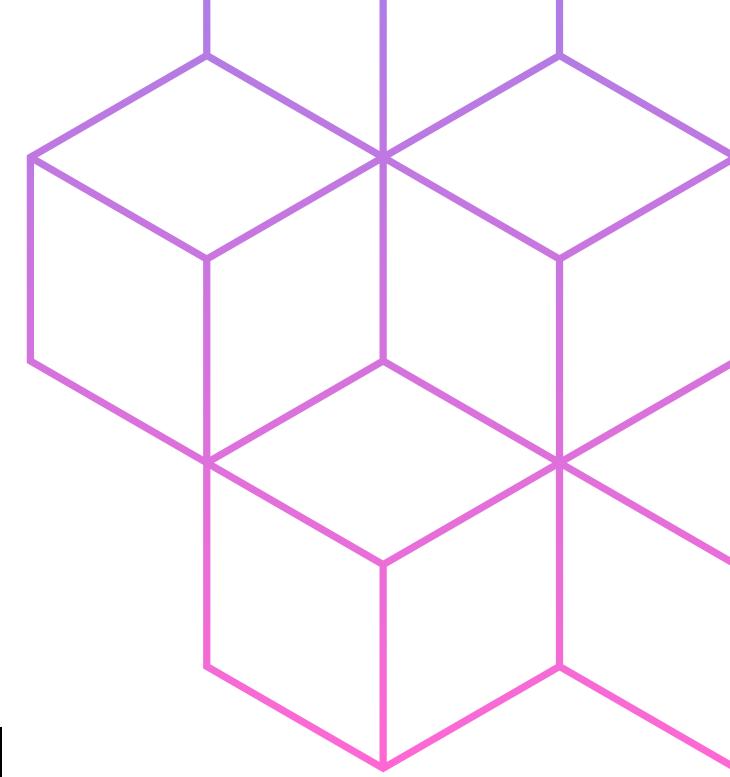
Electrical Safety and Power Quality Energy Audits Available for all sectors - Commercial, Government, Industrial and Manufacturing.

Project Duration: 3-4 Weeks

CONTACT US FOR SECTOR WISE - CASE STUDIES

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Lets Work Together !



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