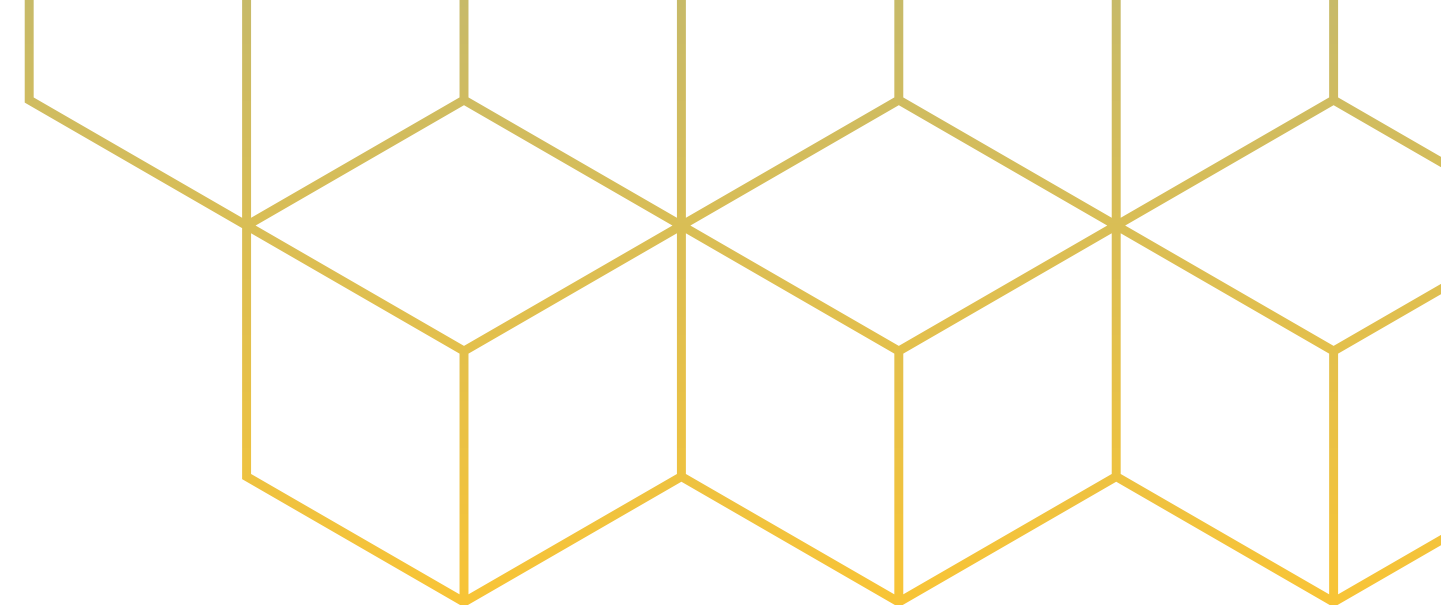




B.E.E



ISO



Comprehensive Audit Presentation and Case Study

Data Analytics as of 2023-2024



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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.



Comprehensive Audit Objectives

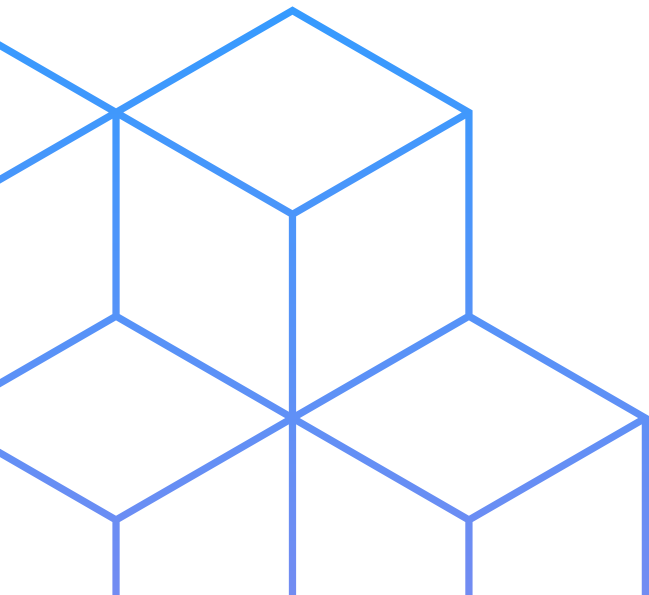


Client Challenges

- Increased Energy Consumption while production and utilities remain same.
- Increased Electricity Bills and Penalty Costs imposed by Power Companies.
- Recurring Machine Faults which affects production due to downtime.
- No Data list for specific consumption. (Machine wise data)
- No awareness about Electrical & Fire Safety.
- Lack of Solar Efficiency

BNN Power Objectives

- To evaluate & optimize total consumption to minimize energy exploitation and achieve Energy Efficiency.
- To analyze machine wise specific consumption and identify Energy Losses with on-site solutions reduce them.
- To provide 100% guaranteed solutions to reduce Energy Consumption and Production Costs.
- To identify Faults and machine Malfunctions to prevent major machine breakdowns.
- To analyze client's present Electrical setup for hazardous spots and offer solutions.



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

Energy Efficiency

Energy efficiency simply means using less energy to perform the same task – that is, eliminating energy waste. 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

Energy Saving Solutions

Poor power quality causes trouble in electrical power distribution systems, causing electronic equipments to malfunction. We as Energy Consultants trace such problems and offer guaranteed solutions. Our in-house manufacturing hub allows us to custom build specific solutions for client's new & existing design to implement efficient electrical solutions at a cost-effective price.



SCOPE OF WORK

| SEGMENTS → | ENERGY EFFICIENCY & ENERGY SAVING | 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 | To establish Guaranteed Energy Saving with BNNPower's Inhouse Energy Saving Solutions. | PCC/MCC Panel Wise Consumption Analysis | Harmonics Study and Analysis |
| Scope # 3 | To reduce Energy Consumption using On-site Resources | Production and Utility Machine wise Consumption Analysis | Earthing Assessment & Leakage Current Tests |
| Scope # 4 | Study to optimize system for reliability and energy conservation | Evaluate and Analyze Plant Power Quality | Assessment as per CEA 2010 Electrical Safety Guidelines |

Energy Saving Solutions

01

On-Site Solutions

BNN Power's observations and recommendations results energy saving by only using clients on-site resources, no capital investment was needed.

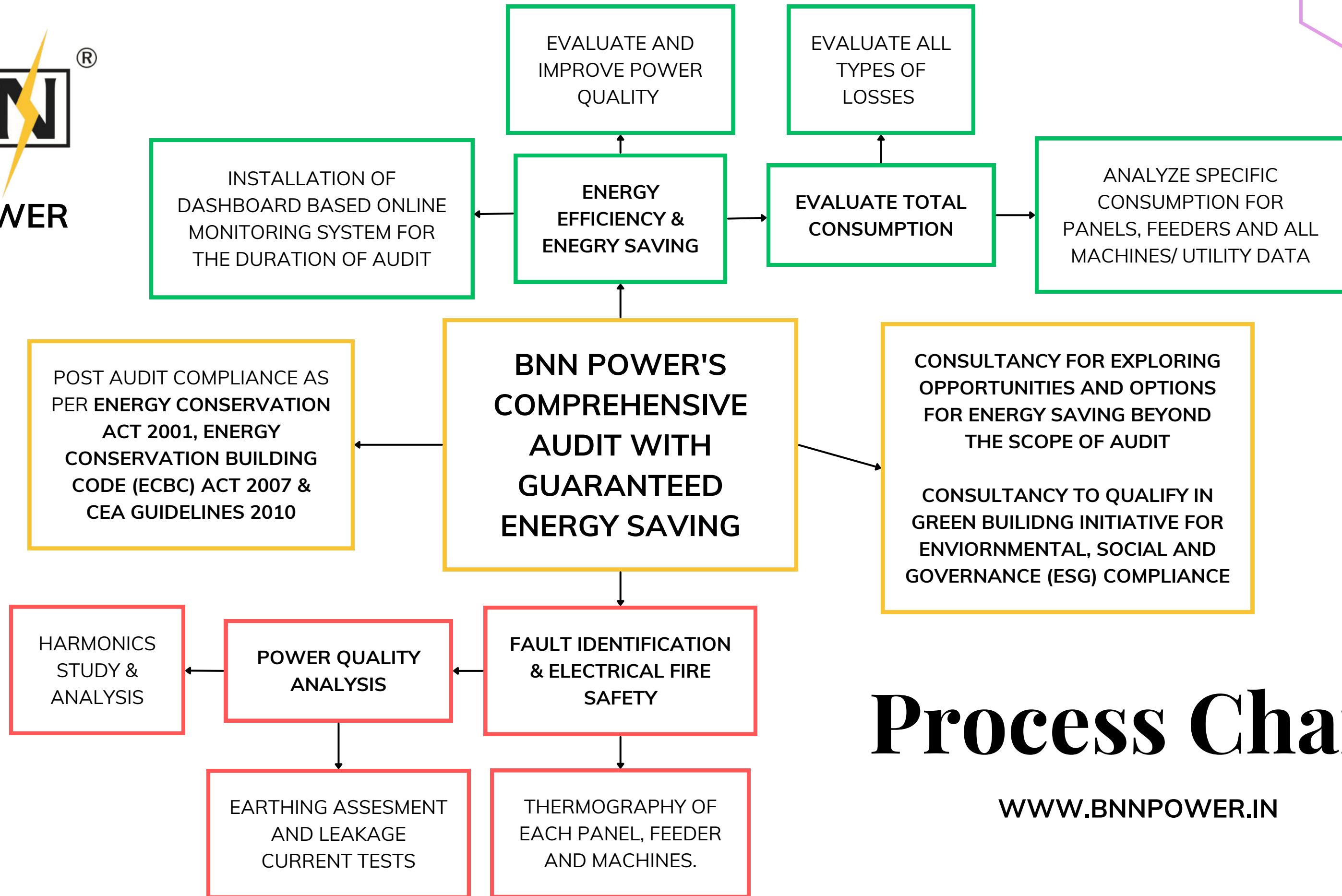
Our team of experts use the unique combination of daily data monitoring, Production analytics, and human expertise to bring value to its customers. This results in optimized machine lifecycle, Efficiency and improved performance.

02

BNN Power's In-house Energy Saving Solutions

Installation of BNN Power's inhouse designed Energy Saving Solutions results in Energy Saving by making Clients electrical setup more efficient by reducing major types of losses.

Costs for the Energy Saving Solutions is included into Audit costs so no additional capital investment is needed on the client side. All installations are done in collaboration of Clients Maintenance Team.



Process Chart

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Case Study 1

Creative Textile Mills Pvt Ltd., Gujarat

Type of Entity: Textile Weaving Units

Contract Demand KVA: 1500 KVA

Connected Load: 3200 KVA

Working Hours: 24 Hrs, 30 Days Operational

Pre-Audit Daily Consumption: 19,388 KWH Avg.

Post-Audit Daily Consumption: 17,658 KWH Avg.

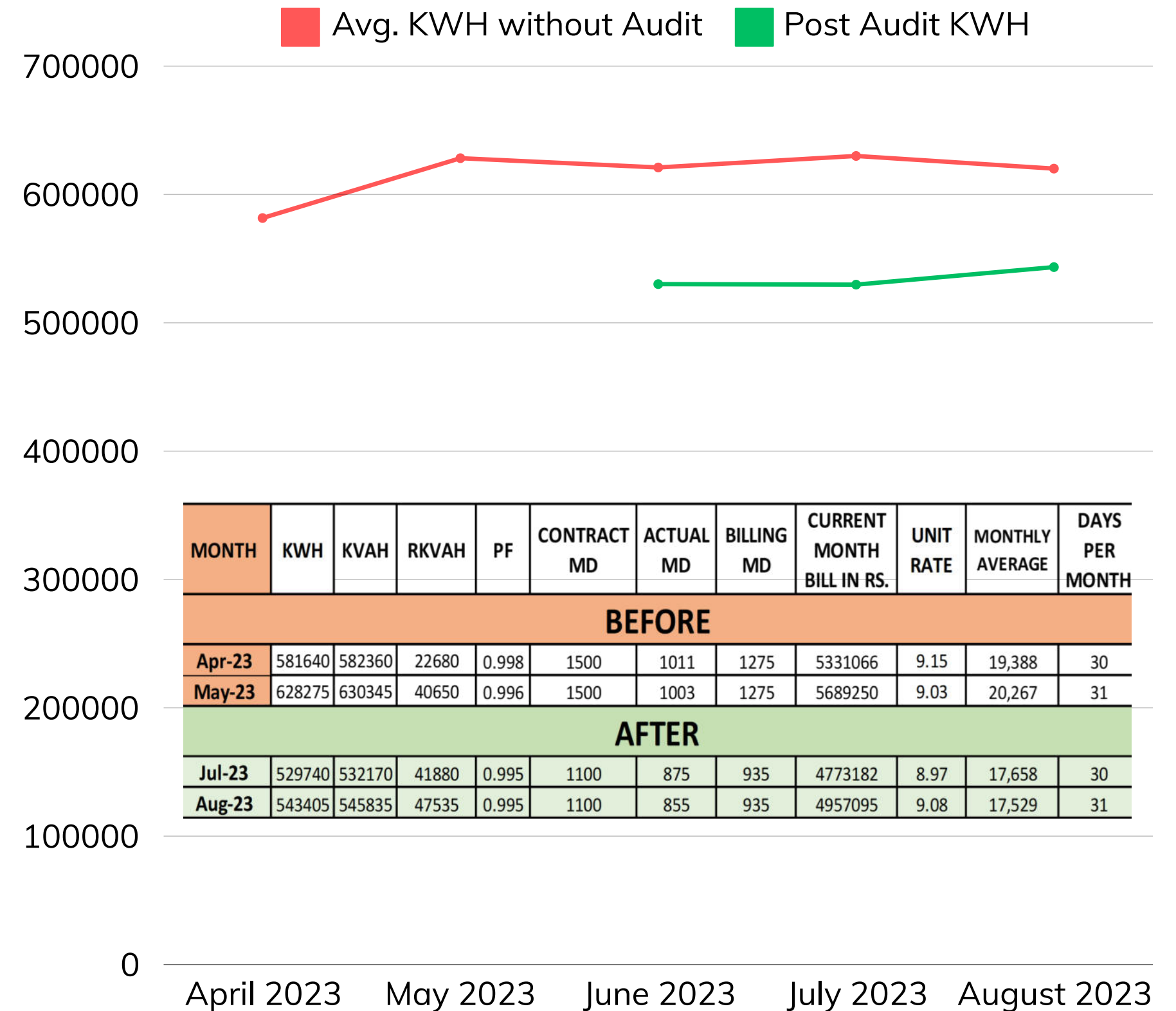
Established Daily Energy Saving: 1500 KWH Avg.

Cost Benefit Analysis:

1500KWH * 30 Days = 45,000KWH Saved @Rs.9/Unit

Avg. Monthly Benefit of Rs. 405,000/- per Month

Source: BNN Power Internal Records &
Client's Monthly Electricity Bills





Case Study 2

Shivshankar Textile Processors Pvt Ltd.

Type of Entity: Textile Dyeing & Processing Unit

Contract Demand KVA: 725 KVA

Connected Load: 1500 KVA

Working Hours: 24 Hrs, 27 Days Operational

Pre-Audit Daily Consumption: 13,300 KWH Avg.

Post-Audit Daily Consumption: 12,300 KWH Avg.

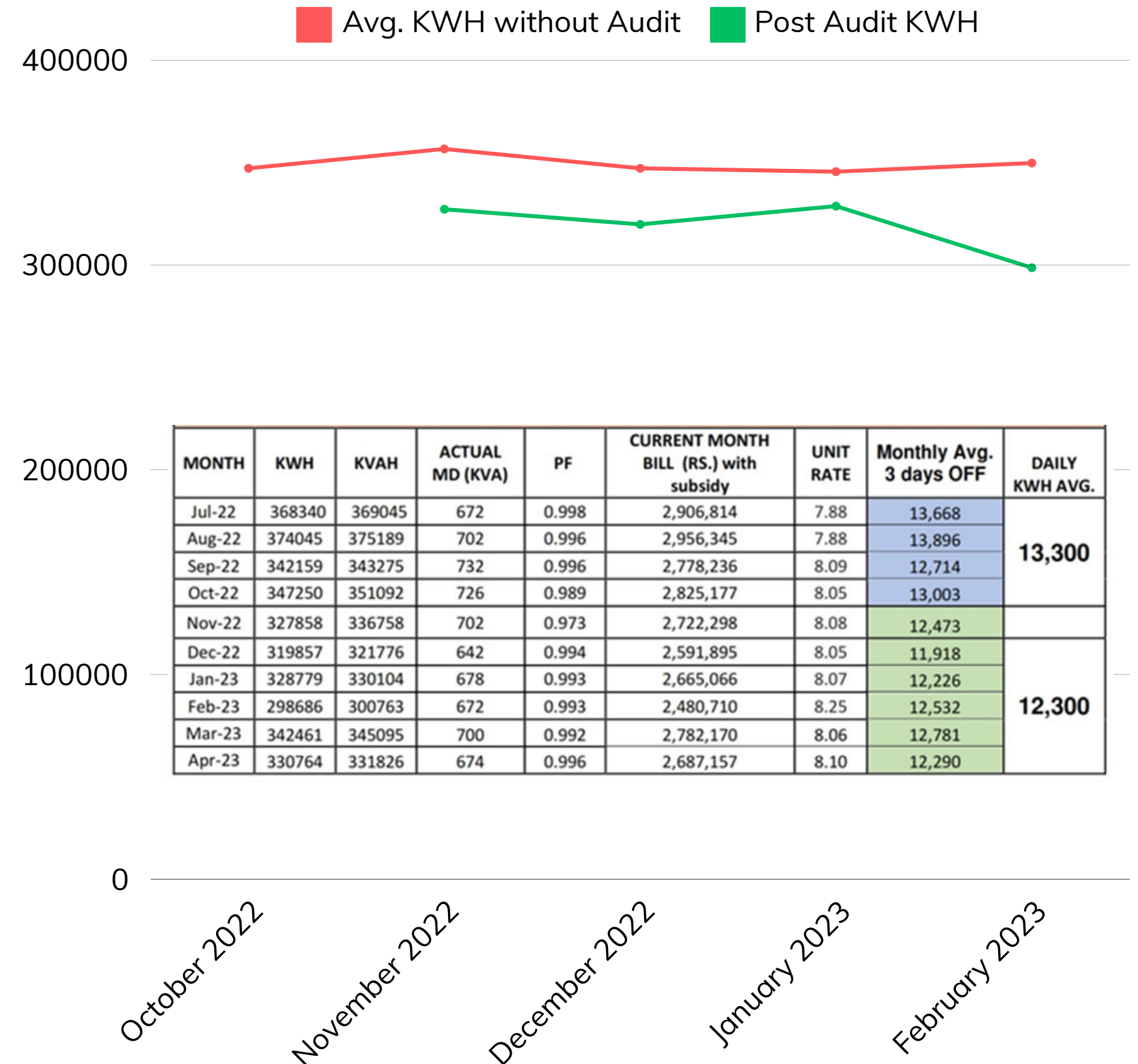
Established Daily Energy Saving: 1000 KWH Avg.

Cost Benefit Analysis:

1000KWH * 27 Days = 27,000KWH Saved @Rs.8/Unit

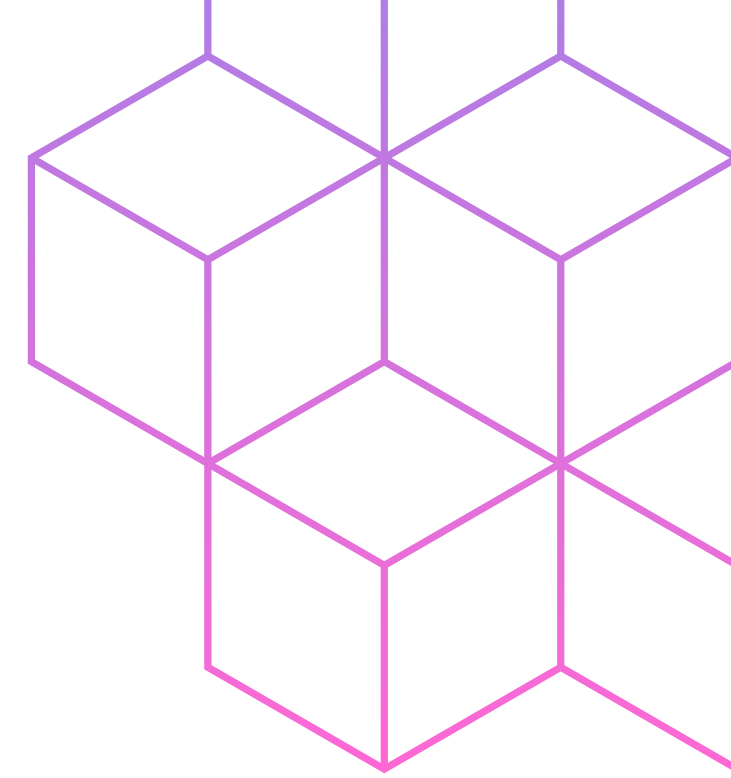
Avg. Monthly Benefit of Rs. 216,000/- per Month

Source: BNN Power Internal Records &
Client's Monthly Electricity Bills





Project Specifics



Comprehensive Audits Available for all sectors - Commercial, Government, Industrial and Manufacturing.

Project Duration: 3-4 Months
Project Payback/ROI : 6-8 Months



On-going projects in Transformative, Pharma and Metal Industries.

Contact us for Detailed Case Studies and more information

Info@bnnpower.in

www.bnnpower.in



Lets Work Together



Email
info@bnnpower.in



Website
bnnpower.in



Address

Plot No. 6, Satyam Industrial
Estate, Station Road, Govandi,
Mumbai - 400088, Maharashtra