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SHIVSHANKAR TEXTILE PROCESSORS PVT LTD, NAVI-MUMBAI
CASE STUDY

Company Details

M/s SHIVSHANKAR TEXTILE PROCESSORS PVT. LTD., Located at TTC Industrial area, Pawne MIDC, Navi Mumbai. The processing unit established in the year 1985. The processing unit offered finishing of Textile operations such as bleaching, dyeing, calendaring, napping, shrinking or printing etc.

PROJECT SPECIFICS

Load Details
Contract Demand KVA: 725 KVA
Connected Load: 1500 KVA

Pre-Audit KWH Consumption
Daily Consumption: 13,300 KWH Avg.
Monthly Consumption: 359100 KWH Avg.

Energy Saving Method
Comprehensive Energy Audit with Guaranteed Energy Saving

POST-AUDIT RESULT

Direct Comprehensive Audit Benefit

- Detailed analysis of total load with specific machine consumption.
- 10% reduction in total power quality & plant harmonics.
- 15% Increase in energy efficiency w.r.t distribution losses and cable losses.
- 12% Increase in production efficiency w.r.t Energy.
- 9% reduction in monthly maintenance costs.
- Reduced incidences related to machine breakdown and machine malfunctions due to poor power quality.
- Reduced fire incidences after Electrical Safety Assessment.
- Maintenance team awareness for new technological advancements in Electrical & Energy Sector.

Post Audit KWH Consumption & Saving
Daily Consumption: 12,300 KWH Avg.
Monthly Consumption: 332150 KWH Avg.

Cumulative Benefit & Returns
Avg. Monthly Benefit of Rs. 216,000/- per Month
Avg. Yearly Benefit of Rs. 25,92,000/- per Year

AUDIT APPROACH

- Analyze Energy Consumption & Monitoring
- Strategy Development for Energy Saving
- Recommendation & Implementation
- Results and Evaluation

CONTACT US
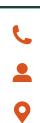
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COMPREHENSIVE AUDIT SUMMARY

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Sr. No.	Working Load Details	Qty	Total Load in KVA
1	Jet Machines	14	190
2	Jumbo Jet Machines	10	70
3	Jigar Machines	18	85
4	Stenter Machine	3	260
5	Thermopack & Boiler	2	300
6	Utility Load	-	255
7	Other Load	-	120
8	Fire Fighting Pump Load		220
TOTAL			1500 KVA

SHIVSHANKAR TEXTILES PROCESSORS PVT LTD.
Connected Load Data

ENERGY AUDIT FINDINGS

1. **Distribution & Cable Losses**
2. **Transformer losses**
3. **Excess harmonics & related Energy losses**
4. **Heating losses**
5. **Power Factor & Reactive Power fluctuations due to load variation**
6. **Voltage Drop and fluctuations at Machines and PDBs**
7. **Fault Identification to prevent machine breakdowns.**
8. **Excess Electricity Billing due to surcharges and penalties.**
9. **Excess consumption in Boiler due to mechanical faults.**
10. **Multiple thermography hotspots which could've resulted in Fire incidences.**

SOLUTIONS FOR ENERGY SAVING

"1000 KWH Per Day total saving achieved"

On-Site Solutions

BNN Power's observations and recommendations resulted in 400 KWH saved per day out of total 1000 KWH per day Saving saving by only using clients on-site resources, no capital investment was needed.

BNN Power's In-house Energy Saving Solutions

Installation of BNN Power's inhouse designed Energy Saving Solutions resulted in 600 KWH saved per day out of total 1000 KWH per day Saving.

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.

CONCLUSION

BNN POWER 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.

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COST BENEFIT ANALYSIS

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SHIVSHANKAR TEXTILES PROCESSORS PVT.LTD.

CONTRACT DEMAND:725   Cons. No:000119017904

MONTH	KWH	KVAH	ACTUAL MD (KVA)	PF	CURRENT MONTH BILL (RS.) with subsidy	UNIT RATE	Monthly Avg. 3 days OFF	DAILY KWH AVG.
Jul-22	368340	369045	672	0.998	2,906,814	7.88	13,668	
Aug-22	374045	375189	702	0.996	2,956,345	7.88	13,896	
Sep-22	342159	343275	732	0.996	2,778,236	8.09	12,714	13,300
Oct-22	347250	351092	726	0.989	2,825,177	8.05	13,003	
Nov-22	327858	336758	702	0.973	2,722,298	8.08	12,473	
Dec-22	319857	321776	642	0.994	2,591,895	8.05	11,918	
Jan-23	328779	330104	678	0.993	2,665,066	8.07	12,226	
Feb-23	298686	300763	672	0.993	2,480,710	8.25	12,532	12,300
Mar-23	342461	345095	700	0.992	2,782,170	8.06	12,781	
Apr-23	330764	331826	674	0.996	2,687,157	8.10	12,290	

SHIVSHANKAR TEXTILES PROCESSORS PVT LTD.
Source: MSEB Monthly Electricity Bills

PAYBACK / RETURN ON INVESTMENT

Established Daily Energy Saving: 1000 KWH Avg. per Day
Working Hours: 24 Hrs, 27 Days Operational

Cost Benefit Analysis
1000KWH * 27 Days = 27,000KWH Saved @Rs.8/Unit
Avg. Monthly Benefit of Rs. 216,000/- per Month

Cumulative Returns
Comprehensive Audit Investment Cost - Rs. 10,80,000/-
Cumulative Monthly Returns - Rs. 2,16,000/- Avg.
Total ROI for Shivshankar Textiles Pvt Ltd. is 5 Months
Yearly Benefit of Rs. 25,92,000/- Cumulative Avg.

PRE-AUDIT ELECTRICITY BILL

POST-AUDIT ELECTRICITY BILL
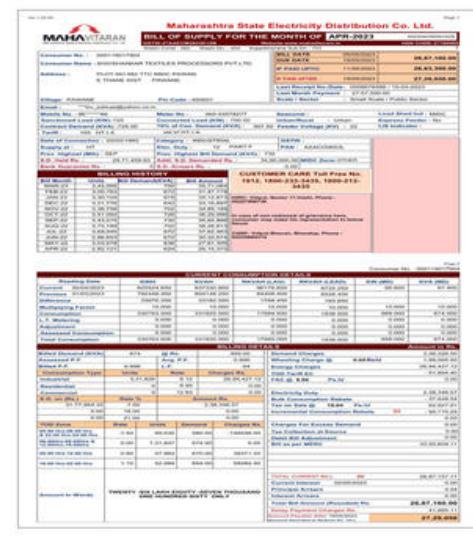
ABOUT US

BNN Power with 15 years of experience in the Energy Sector we bring Value Engineering to achieve Energy Saving, system reliability & total system efficiency for our clients. We offer 24x7 support for our clients, with our credentials BNN Power can offer all types of consultancy related to the Energy Sector.

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