

Choice Case Study

Execution of Power Audit Projects Across India

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Power Audit Accomplishments

Choice Solutions Limited managed to surpass its last years **Power Audit** target within the first quarter of the current financial year 2011-12. This feat was made possible due to many factors working in favor of Choice Solutions Limited including the excellent relationship with the customer and its expertise in executing complicated power audit assignments within a specified time as per clients' technical requirement.

Despite being a **L2 player** and having to compete with other major companies for the contracts we managed to bag orders from exiting clients but also added new clients to our list of customers. Choice Solutions Limited managed a breakthrough despite facing stiff competition from other major power audit players. Choice Solutions Limited intends to promote the concept of **Distributed Power Management** in power audit.

Some of the major names in the client list include Bank of America, Deutsche Bank, Punjab National Bank, Dena Bank, and Bank of Maharashtra. With Punjab National Bank-Kolkata; Choice Solutions Limited made its first foray into Eastern India power audit scene. Choice Solutions Limited then followed it up with additional power audit orders from Punjab National Bank-Mumbai for 85 locations and then another 14 locations in Kolkata.

Power Audit Facts

Power Audit also called Power Quality is a concept of powering & grounding of electronic equipment, in manner which is suitable to its operation & compatible with premise wiring system & other connected equipments.

In today's scenario Power Quality is one of the major concern to all type of commercial offices, industries & datacenters, especially those operating with critical machinery & critical ITEs. The quality of equipment power can make big difference in its performance.

Power audit involves electrical inspection of complete electrical distribution & power quality (Sag, Swell, Transient, noise, Power, PF etc.) monitoring as well as harmonics analysis. It involves inspection of source changeover techniques, UPS configurations, cable routing, maintenance feasibility, interlocking of electrical operations, redundancy assessment etc. It also comprises of identifying power conservation opportunities under energy savings program.

The Challenge

The challenge for Choice Solutions Limited to successfully execute a **Power Audit** project was based on the need to assess the operational effectiveness of the existing electrical infrastructure issues and propose a solution that mitigates the consistent problems that plague the electrical setup.

Choice Solutions was required to quantify and cut down energy consumption and ultimately reduce cost.

Power Audit contracts generally consist of an assessment of the client datacenter or facility by identifying various utilization gaps, glaring safety concerns or potential sources of power quality problems. This is then followed up by providing a variety of remedial measures that include:

1. Improve prospects of power availability, efficiency and life of electrical components.
2. Reduction in power outages, single points of failure at critical locations.
3. Reduce electricity expenses associated with the electrical equipment.
4. Exactly identify the points of high power consumption and if possible find out ways of how they can be optimized.
5. Improve safety, grounding etc and recommend solutions.
6. Identify harmonics level that can create problems & recommend the solution to mitigate the same.
7. Identify high EMF (Electro Magnetic Fields) that exceed equipments EMC limit & recommend the solutions.
8. Measure temperature variations at cable & bus bar terminations at breakers, switches, SFUs etc & recommend to the solution to rectify it.

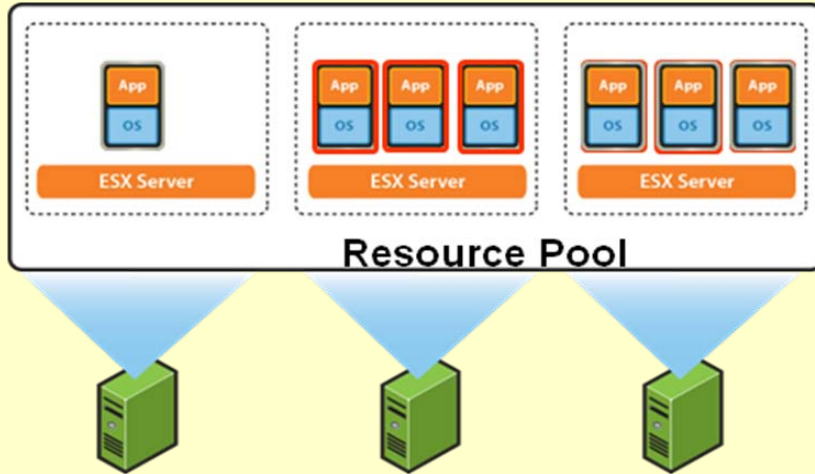
Another challenge was to harmonize the IT equipment and recommend filters.

Its known that every client wants to reduce its energy consumption figures and ultimately reduce cost, this where Choice Solutions Limited comes in and is keen to provide products that help in reducing the energy consumption for lighting load also. Choice Solutions Limited hopes the type of product provided by it as energy saving solution, when installed between panels and the distribution board can help enhance energy savings by anywhere between 20 and 40% of the existing level for the client.

Through power audit Choice Solutions Limited seeks to document things that are sometimes ignored, such as power consumption on a site per year, which processes use the power, and the virulent opportunities for cost savings. By following such practices, Choice Solutions Limited assesses the effectiveness of equipment towards energy optimization and implements desired changes. The power audit report allows customers to institutionalize the power saving practice and hence, save money in years to come. The power audit action plan also lists the steps and sets the preliminary budget for an effective power management program.

Account Background

With the start of the new financial year, **UNE Services** division of Choice Solutions Limited aimed to pursue its list of existing **Power Audit** customers, in an effort to further enhance its reputation as an efficient power audit service provider. As a result of the excellent relationship with the clients in various levels Choice Solutions Ltd. was able to secure all the Power Audit orders from its existing clients. By gaining Power Audit contract from clients across India, Choice Solutions Ltd. managed to surpass the target that was achieved in the last financial year within the first quarter of the current financial year. Along with its existing clients Choice Solutions also managed to garner newer clients in the process namely Bank of America, Deutsche Bank, Punjab National bank, Dena Bank, and Bank of Maharashtra. Choice Solutions intends to more than triple its power audit orders in the current year.

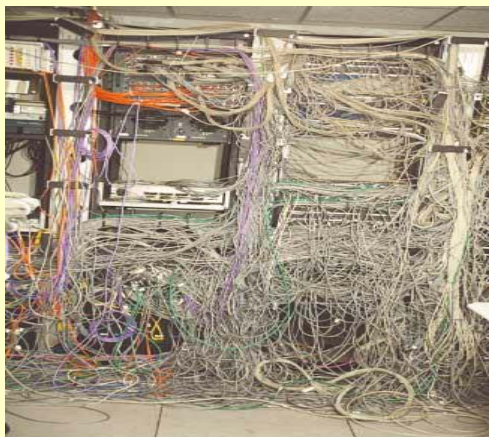


Distributed Power Management

Execution of Power Audit Orders

As in last year, this year also the **Power Audit** team comprising of Navnath Chaudhary, Sandeep Chaugula, Prabhakar Mayekar, Prashant Mohite, Srikanth Achrekar, Rakesh Yadav, and Govindaraj worked hard to pursue the existing Power Audit clients. After gaining the orders Choice Solutions Limited ensured that the orders were successfully executed within a prescribed time. The front-enders also got desired support from other Choice Solutions divisions with regards to successful execution of the power audit orders.

An Example



Before Audit is Carried Out



After Audit is Carried Out

Achievement

The biggest achievement for Choice Solutions Limited was not in surpassing the total number of **Power Audit** orders executed last year, within the 1st quarter of the current financial year, but actually it was in executing numerous **Power Audit** orders across the country at the same time, some of these include:

- 1) Bank of Maharashtra for Hyderabad – 39 locations
- 2) Dena Bank for East – 29 locations
- 3) Dena Bank for West – 75 locations
- 4) P. N. Writer - Kolkata

Analysis

The need to conduct a power audit should be based in terms of the costs of implementing the project versus the benefits that can be gained. Based on that analysis an exact action plan was developed to execute power audit project for every individual client.

Choice Solutions Limited also ensured that the implementation of power audit plan covers all the major steps that are needed to make users responsible towards power conservation.

Also Choice Solutions Limited intends to ensure that there is a constant monitoring the systems and equipment after the successful execution of the power audit program.

Projects Executed

Case 1 - Power Audit & Thermography Test at Karnataka Bank

About the Organization

Karnataka Bank, a leading 'A' Class Scheduled Commercial Bank in India, was incorporated on February 18th 1924 at Mangalore, a coastal town of Dakshina Kannada district Karnataka State. The bank took shape in the aftermath of patriotic zeal that engulfed the nation during the freedom movement of 20th Century India. The bank grew further by merging with Sringeri Sharada Bank Ltd., Chitradurga Bank Ltd. and Bank of Karnataka. Managed by a dedicated, professional management team, the bank has over 5,844 employees; 86,868 shareholders and over 4.84 million customers.

Project Background

Mini Circuit Breakers (MCBs) supplying power to datacenter tripped at Karnataka Bank, Mangalore. The client wanted Choice Solutions Ltd. to carry out Power Audit to check the quality of power supply to the datacenter.



Projects Executed

Case 1 - Power Audit & Thermography Test at Karnataka Bank

The Solution

Choice Solutions Ltd. conducted Power Audit and checked quality of power and identified the root cause of failure/tripping of MCBs.



Case 2 - Air Quality Analysis at Bharti Airtel

Bharti Airtel is a leading global telecommunications company with operations in 19 countries across Asia and Africa. The company offers mobile, voice, data services, fixed-line, high-speed broadband, IPTV, DTH, turnkey telecom solutions for enterprises and national and international long distance services to carriers. Bharti Airtel was ranked among the 6 best performing technology companies in the world by Business Week. Bharti Airtel serves over 200 million customers across its operations. Their datacenter services include entire suite of managed hosting, storage, business continuity, data protection and security services.



Project Background

Choice Solutions Ltd. conducted the Air Quality Analysis at datacenters of Bharti Airtel and classified their corrosion levels. Choice Solutions Ltd. also gave solutions to the client on how to reduce the corrosion level.



The Solution

Choice Solutions Ltd. conducted the Air Quality Analysis at datacenters of Bharti Airtel and classified their corrosion levels. Choice Solutions Ltd. also gave solutions to the client on how to reduce the corrosion level.



Projects Executed

Case 3 - Thermography Test at DSP Merrill Lynch

DSP Merrill Lynch Ltd. is a subsidiary of Bank of America and it is one of the leading wealth management, capital markets and advisory company in India. DSP Merrill Lynch Ltd. is a full service investment banking and brokerage firm and holds a leading position in helping its clients to raise capital, mergers and acquisitions, securities research, sales and trading and investment advisory activities.



Project Background

Client wanted Choice Solutions Ltd. to carry out Thermography Test and Earth Pit Test at Electrical Panels (Utility, Emergency and Critical) at their facilities (across India) as well as rectify the points of abnormal temperature rise/earth pits with higher resistance.



The Solution

Choice Solutions Ltd. conducted the Thermography Test & Earth Pit Test at client facilities. After identifying the points where remedial action is needed, necessary remedial work was done on those points with in-house electrical team. Choice Solutions Ltd. also carried out the Post Analysis to ensure the proper functionality of panels and earth pits.



Types of Audit Services Provided

1. Power Audit
2. Thermography Test
3. Air Quality Analysis
4. Harmonics Study
5. Energy Audit
6. Cooling Audit
7. Datacenter Audit
8. Electrical Safety Audit
9. Earth Pit Test
10. Static Charge and EMI Assessment



The Benefits

The clients will be able to take advantage of the following benefits from the execution of power audit projects

Power Quality Solutions:

1. Reduction in the magnitude or frequency of power variations.
2. Improvement in the susceptibility of load equipments.
3. Enhanced power conditioning to mitigate power quality problems.
4. Increased savings in energy bills due to reduced losses.
5. Enhancement in safety standards
6. Reduction in expenses towards maintenance of the power equipment.
7. Minimization of business work interruption.

Benefits to Choice Solutions Ltd.

There are several benefits Choice Solutions Limited can expect to gain by executing such Power Audits projects. These include

1. Increase in client install base.
2. Choice expects to get more customers from BFSI vertical where it did not have very strong base.
3. Choice expects that clients will have more confidence in asking us for other execution of projects (network audit) in the near future.
4. Choice expects an increase in top line and bottom line.
5. Choice expects to sell more products to the same customer after the power audit order is executed as far as implementation is concerned.

Benefits to Customers

Benefits to Choice Solutions Ltd.

About Choice Solutions

Established in 1991 Choice Solutions Ltd. is a leading IT and Facilities solutions provider. Choice Solutions Ltd. business comprises of Six different practices, namely

IMS

- Desktop, Server, Network, Storage, Support, OS, Assets, Apps, Non IT
- Hardware - A-Add, M-Modify, I-Install, C-Change, R-Repair
- Assets, Security, Software Distribution, Upgrades

Networking

- Packaged Services Monitoring & Management
- Products, Security, Design, Deploy, Maintain
- Auditing & Compliance, SOC

Datacenter

- DC Audit, Monitor & Manage, Training
- Assess, Design, Built, Deploy, Disaster Recovery

Consulting

- Business Consulting, CIO & Technology Services, Physical Security, Power Devices, IT Consulting
- DC Consulting, ERP, CRM & Custom Apps

Cloud Computing

- Cold Site – Backup, Disaster Recovery
- Hot Site – HaaS, Software, Manage
- Public Cloud, Private Cloud, Hybrid Cloud
- CaaS, License Software, IaaS
- Disaster Recovery

Power

- Power Audit, Equipment Management
- Physical Security, Power Devices
- Power Saving Devices
- Design & Audit
- Renewable Energy Products