Telecommunications

Energy STEP Data Center Assessment

Customer
- Europe-based telecommunications company
- Provides millions of homes with access to high speed internet, television and landline phone service
- Provides cellular service to over 20 million customers

Challenges
- Maximize efficiency and reliability
- Reduce operating costs
- Understand and communicate the global environmental impact of their data centers

Solution
- EnergySTEP Data Center Assessment
- Optimized air management plan
- Optimized cooling plan
- Energy Management System

Results
- 221K Euro annual savings
- 3556 MWH Annual Energy Savings
- PUE improved from 2.3 to 1.6

This case study focuses on a Europe-based telecommunications company. With a business model that aims at being a leading provider of both cellular service and "triple play" residential services – landline telephone, high speed internet and television – this company is facing stiff competition. Reducing costs in order to offer competive rates, a key to attracting new customers and maintaining customer loyalty, remains an ongoing, critical challenge.

In this tough business environment the company is convinced that the quality and performance of its networks will make all the difference for its customers – both businesses and consumers. So maximizing reliability in their data centers is essential.

Schneider Electric performed an EnergySTEP Data Center Assessment in 10 IT rooms, across 3 data centers, with the goal of identifying measures

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The Challenge

Environmental conservation is a strategic initiative for this telecommunication company. Stabalizing their energy usage at a time when demand for digital services was skyrocketing was a huge challenge, but one they were determined to meet.

Yet energy efficiency, with its positive impact on costs and the environment, was not their only concern. Any efficiency improvements had to be carefully considered in the context of their impact on data center reliability and capacity planning.

The objective was two part – first to determine and implement ways they could maximize performance, reliability and efficiency in their data centers and second to better understand and communicate the environmental impact of their data centers as part of their green initiatives. The company was looking for a partner to help and Schneider Electric was selected based on capabilities and decades of data center experience.

The Solution

Schneider Electric's EnergySTEP Data Center Assessment is designed to address these kinds of challenges head on. A comprehensive assessment was performed in each of three targeted data centers and 10 IT rooms.

Recommendations which were implemented in each data center were:

- An Energy Management System for tracking and

reporting energy usage which consisted of Power Meter + StruxureWare Energy Operation.
- Optimized air management solution by implementation of best practices to avoid any cold air by-pass and hot air recirculation (8% energy savings, ROI < 1 year)
- Optimized cooling plant which enabled them to benefit from free cooling and maximize cooling efficiency

The Result

- Received recommendations for ways to correct deficiencies in power, cooling, airflow and physical infrastructure which were causing an inefficient use of energy or impacting reliability
- Recommendations implemented resulted in approximately 221 K Euro in annual savings
- Return on Investment for projects recommended = 3.8 years.
- Significant PUE improvement from 2.3 to 1.6
- Ongoing, accurate measurement and reporting of energy usage to ensure continuous efficiency
- Utility bill optimization

Two key objectives were met - first to determine and implement ways they could maximize performance, reliability and efficiency in their data centers, and second, to better understand and communicate the environmental impact of their data centers as part of their green initiatives.

Schneider Electric