Case Study: Industrial Factory

Chinese Factory Saved Up Significant Utility Costs with Billion's Smart Energy Solution

A 23,000 Sqm cable manufacturing factory located in Shenzhen installed Billion Smart Energy Management Solution to visualize its utility consumption, separate the peak operational times and to detect any unusual energy activities. As a result, Billion successfully helped the cable manufacturing factory reduce the contracted electricity demand and minimize the cost of manpower inspections with the increased energy efficiency and the enhanced facility performance.

Location: China
Date: 2015

Challenges

Factories consume a vast amount of utility to run the manufacturing productions. Since there is a great variety of machines that are involved in the production process, it is hard to identify the root that results in an excessive amount of energy being consumed. The factory used to name its monthly electricity capacity without an explicit reference to knowing how much energy is needed to run the operations. The capacity was often not sufficient enough to support the electrical demands during peak hours, causing heavy penalties issued by its utility company. The factory wanted to increase its energy efficiency by searching for an energy management system that can improve its facility performance and notify when to renew the aged machines.

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Our Solutions

Billion provided Smart Energy Management Solution for the factory to monitor the energy consumption of six of the most energy-consuming machines, including main power cabinet, air conditioner, compressed air dryer, dry room, and two burners. Billion Smart Energy Management Solution tracked, audited, and analyzed the daily, monthly and yearly electrical consumption of these six machines on Billion Smart Energy Management Solution. The administrator was able to schedule an ideal timing to automatically turn machines power on and off, as well as log into the cloud-based platform to monitor the real-time energy consumption during non-working hours. When the current voltage was abnormally high and has exceeded the daily consumption range, Billion Smart Energy Management Solution was able to deliver automatic email alerts and SMS messages as real-time warnings. After receiving the system notification, the administrator can remotely stop the electricity supplied to the abnormal machines to prevent electrical fires.

As part of the Billion Smart Energy Management Solution, we

- Provided monitoring solution for the factory to customize a reasonable contracted energy demand and avoid potential energy wastes
- Controlled the peak demand times to prevent expensive penalties from going above the contracted utility
- Gained instant insights into realizing what machine ate up the most energy consumption
- Tested the efficiency status of different devices and retired the aging, failure facilities to improve system performance

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Benefits

Billion Smart Energy Management Solution has become one of the most successful energy-saving solutions for the factory. The value of energy which was saved can supply:

- 1/4 of the monthly utility cost.
- 30% of contracted utility demand was reduced.

Previously the factory was charged USD 5,926 for monthly service. Now the number has been reduced down to USD 4,379. Monthly saving is USD 1,548. After a year, this saving can be summed up to pay for the utility supplied to the factory for an entire quarter.

> *“ Billion Smart Energy Management Solution is the most advanced energy consumption auditor that monitors the electricity supporting the daily operation at my factory plants. It has helped us keep our utility costs within budgets and notified when to renew the factory facilities. It is the smartest investment that we have ever made with the visible ROI results at an affordable price."*

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