

EnergyICT® Provides Carrefour France with All-in Energy Management Solution



Introduction

Carrefour is the number one European retailer and number two worldwide. It has a consolidated sales figure of € 93.614 billion incl. VAT and employs over 436,000 people. This sales figure is realized through approximately 7000 shops which are split up in 4 major formats: Hypermarkets, Supermarkets, Hard Discount and Convenience Stores.

But next to generating sales, these shops also produce costs; and energy consumption is one of them. In France, home country of the Carrefour group, hypermarkets and supermarkets have a combined electricity consumption of 1.5 TWh per year. That is the equivalent of the electricity consumption of approximately 250,000 households.

Managing this massive energy consumption is consequently of the utmost importance. To perform this task, Carrefour France teamed up with EnergyICT®.

Carrefour requirements

Carrefour France required a full energy management solution for the electricity consumption of the hyper- and supermarkets. The solution primarily included the remote data collection of metering data for approximately 600 stores. In these stores EDF energy meters with client access interfaces and equipped with a modem ensure that the energy consumption data can be collected using a central collection system.

The collected data must then be used to forecast the monthly bill. This forecast will be used by the financial department to make the necessary provisions. When the actual invoice arrives, Carrefour required it to be compared with the registered energy consumption and the bill that is drawn up based on this energy consumption data.

Next to the forecasting and verification of the monthly bill, the energy management solution Carrefour France was looking for also needed to be able to deal with benchmark reporting. For every store, it had to be able to report on its general energy performance. Moreover, presentations had to be delivered giving an overview for each of the districts where for instance the top and flop five of stores on energy performance are shown.

Last but not least, Carrefour France required the complete energy management solution to be operated by the provider. This meant that Carrefour France expected the bill verification and forecasting reports to be available monthly and some consumption reports to be available to the shops all the time, without having to deal with the burden of operating the software themselves.

EnergyICT® solution

Carrefour France relies on EnergyICT® to provide and operate the complete energy management solution. The EnergyICT® solution consists of 3 major parts:

- ComServerJ is the first element of that solution. This remote meter reading software is a multi-protocol, vendor independent application that is able to communicate with virtually any meter in the field and store the collected data in a centralized database. Its open architecture makes it easily extendable and has no theoretical limitation meaning that the application can handle the data collection of two meters but can deal with collecting data from 300,000 meters as well. In the case of Carrefour France, the meters are read out on a weekly basis.
- The second element is EnergyICT®'s flagship: EIServer®. This energy management software platform allows creating reports of any kind, is designed to draw up bills based on the data consumption and is equipped with forecasting abilities. EIServer® makes use of the collected meter reading data that is stored in the central database.

Every last week of the month the values of the last 4 days of that month are forecasted so that a forecasted bill allows the financial department to make the necessary provisions. When the actual bill arrives, it is compared with the bill drawn up from the consumption data stored in EIServer®. If necessary, EnergyICT® contacts EDF to discuss the differences.

Next to the forecasting and bill verification abilities, EIServer® is equipped with a powerful reporting engine. This engine allows the creation of all possible reports. Based on the electricity consumption and store properties, such as the store surface, it is possible to draw up benchmarking reports and sort the stores based on their energy performance. These reports can then be exported to for instance MS Excel and be used in presentations.

Another feature of EIServer® that will be used by Carrefour France is the Project Tracking Module. This module allows following up energy saving projects. Using statistical analysis, the outcome of for instance a project where lights are replaced with economical ones can be derived from the collected data. Consequently, it is easy to decipher whether a project obtains the predicted results.

- The third and last element of the energy management solution is its operation. The EnergyICT® Operations Business Unit operates, maintains and manages the applications. It takes care of the daily readings of the energy meters, draws up the reports and delivers the finished results to the Carrefour France Management.

Conclusion

Carrefour, the largest European retailer, needed a solution for managing its electricity consumption for its French division. EnergyICT® provided such a solution. The solution consists of three main elements. The first, ComServerJ, reads the electricity meters remotely and stores the energy consumption data in a central database.

The second element, EIServer®, forecasts the monthly bill, verifies it when it actually comes in, generates reports and tracks projects. The final element of the EnergyICT® solution is the operation. EnergyICT® maintains, operates and manages the complete solution. Delivering the solution to Carrefour, EnergyICT® now provides solutions to the retailer top 5 worldwide.



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