

Efficient and safe connectivity of power and gas metering

Abstract

The public utility company of the city of Bielefeld has tasked the company MarcantT with finding a way to connect their gas and power meters in a secure and future proof way so that customers were able to access their data. The company came up with an idea involving roaming SIM-Cards.



Introduction

The public utility company of the city of Bielefeld (Stadtwerke Bielefeld GmbH) is an experienced provider of all kinds of energy. The company does not only rely on conventional power sources but also the use of renewable energy. In addition to that, the company is also known for supporting regional sports and environmental projects as well as local culture. With its subsidiaries, it has a broad range of services like telecommunication, public transport, recreational activities and waste disposal.

Challenges

In recent years, consumers have been getting more and more power in almost all areas. Modern communication technologies have enabled them to examine products and services in detail, find alternatives and compare them. In some cases, these comparisons even take place on a global level. The basis for all these activities is information. If consumers do not receive information, this decisively weakens the relationship of trust.



The most challenging part of this project was to combine maximum availability and maximum security.

Furthermore, energy providers need real-time information to managed energy production and energy consumption.

To cover the energy providers need and consumers' desire for information, the Stadtwerke Bielefeld GmbH wanted to connect their gas and power meters in a future-proof way so that all the data can be recorded, transmitted and monitored. Efficiency and the potential to further optimise processes were essential factors for the selection process of a suitable solution. In addition to that, the company

wanted to guarantee the maximum amount of security. The security of data traffic and the protection of energy infrastructures have become increasingly important over the last years.

How will solve the problem?

For the selection of a solution for the connection of the gas and water meters of the public utility company in Bielefeld, it was essential to limit the conversion and material costs to an absolute minimum, but at the same time to be as open as possible for future developments. However, the most critical requirement of the client was the reliability of the measuring technology to guarantee that the data is transmitted at all times and to protect against unauthorised access.

This challenge was solved employing measuring devices with built-in roaming SIM cards. In this way, installations could be realised at any location within the operating range of the Bielefeld public utility company, and at the same time, the availability could be increased.

MarcanT not only paved the way for a secure connection of the measuring devices but also enabled monitoring via its Communication Control Portal (M-CCP). This allowed a reduction in costs and working time, as maintenance personnel can plan service work early and failures are prevented.

For the customers, the solution also means a great advantage. They are now in a position to monitor their energy consumption and avoid being surprised by an unexpectedly high energy bill.

The meters are connected to MarcanT via a secure tunnel certified to ISO 27001. By implementing a "Fraud Protection" that binds a SIM card to a specific meter, MarcanT prevents any kind of tampering or unwanted misuse.

Through the fast and secure transmission of data, the municipal utilities are now in a position to determine extensive consumption data and, based on the knowledge gained, to have enough control power available to react to increased energy requirements.



References

- Reference 1 www.marcant.net