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Open Grid Europe

Efficient handling of hourly, daily and monthly energy calculation and allocation processes

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Ongoing regulation in the energy sector demands processes that can prepare information with increasing pace and reliability. The solution: Data-driven agility. Sopra Steria has come up with an integrated high-availability solution that both fulfils the requirements of the largest German transmission system operator and paves the way to digital excellence.

Due to the market rules defined by European and German regulatory authorities, the processes of network operators in the gas market are accelerating year after year. Today, metering values need to be available to end users in an hourly granularity. This requires reliable high-availability solutions.

Based on GAS-X, Sopra Steria has designed a solution for Open Grid Europe, the largest German TSO. The solution enables hourly energy calculation and allocation processes – 24 hours a day, seven days a week.

Key points

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- Complete support of energy calculation and allocation processes for gas grid operators

- Highly automated process flow
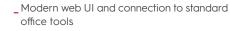
- Compliance with German DVGW G685, GABi and GeLi Gas

- Process safety regulations for hourly, daily and monthly processes

- High-availability and scalable GAS-X cluster based on standard IT technologies (Intel/LINUX)

- Modern web UI and connection to standard office tools

Challenge

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Open Grid Europe GmbH operates the largest gas pipeline network in Germany with a length of around 12,000 kilo-metres. The total annual withdrawal quantity amounts to around 758 billion kWh, which equals more than two thirds of the annual German gas consumption.

At Open Grid Europe, the processes for energy calculation and allocation on a daily and monthly basis were carried out in various IT systems. The workload that resulted from duplicate master data management and data synchronisation was no longer maintainable for hourly processes.

Open Grid Europe was looking for a solution to standardise and streamline hourly, daily and monthly processes while meeting all legal requirements for data quality and market communication.

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The solution

Based on GAS-X GDM and GAS-X Grid, an integrated system was introduced to implement the hourly, daily and monthly processes for energy calculation, allocation and market communication. To ensure the requested high availability of 99.86% and additional scaling capabilities, GAS-X was implemented as a cluster solution. All interface workflows and individual interface monitors are based on GAS-X APM (an OEM version of the Bosch BPM Suite). The solution was rounded off with the implementation of GAS-X portal components. These components offer direct access for customers and partners of Open Grid Europe to their data and a means to provide meter readings.

The consulting services provided by Sopra Steria included:

_ Design and planning of the solution based on GAS-X
_ Design and implementation of a scalable high-availability GAS-X cluster architecture
_ Migration of master data and integration of GAS-X into the IT landscape
_ Implementation of interfaces for the exchange of master data and dynamic data
_ User training and support
_ Implementation and go-live of the solution

"With GAS-X we calculate the best available energy and allocation data every hour. On this basis we can fulfil national and European requirements efficiently."

Ralf Werner,

Head of IT Management, Open Grid Europe

How we worked together

Two implementation stages were set up for the project, which was jointly managed by Open Grid Europe and Sopra Steria. Due to the competent, close and goal-oriented cooperation, all challenges were solved quickly and permanently. Open Grid Europe has left behind a highly manual, interactive approach in favour of a highly automated mode of operation. Users now observe the system, check the results and intervene only in error situations.

This radical new process approach demanded extraordinary foresight from all parties involved and the courage to abandon familiar concepts.

Results and benefits

Today, Open Grid Europe carries out the entire process between metering and allocated energy in a fully integrated system on an hourly, daily and monthly basis, 24 hours a day, seven days a week. In order to make this possible, the system provides comprehensive automated mechanisms for tasks such as the calculation of energy values, generation of substitute values and quality assurance of imported and generated data – all highly customisable.

The GAS-X cluster system comprises three servers, each with two CPUs with six cores each. The Oracle RAC system is designed for a growth of up to 1 TB per year. With the current hardware, the system can handle a significantly higher quantity structure in order to cushion peak loads. As a result, Open Grid Europe was able to increase significantly its data-driven agility – a crucial milestone for digital excellence.

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About Sopra Steria

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