WINGAS GmbH

mP Energy®

Case Study

metalogic
better forecasts for sure

WINGAS Forecasting Highly Automated

Leading European natural gas trader optimises sales and portfolio management with mP Energy

371 billion kilowatt hours of natural gas sales, with 185 billion in Germany alone: WINGAS GmbH, a joint venture of BASF/Wintershall and Gazprom, is among the largest natural gas distributors and suppliers with a market share of approximately 20 percent in Germany today.

The company, headquartered in Kassel, Germany with some 330 employees, serves a highly diversified customer base. Customers range from midsize companies to large industrial groups and generation plants to re-distributors such as municipal utilities, regional gas suppliers and international wholesalers. Through local branches and subsidiaries, the energy company is also active with natural gas trading outside of Germany in Belgium, Denmark, France, Great Britain, Austria, the Netherlands and the Czech Republic.

Significant forecasting needs for Sales and Nomination Management

WINGAS has been relying on the forecast solution **mP Energy** from metalogic since 2007. The software is used to support the business processes from calculating the scope of contractual terms and pricing, as well as for the most exact possible nomination in the course of day-to-day business. Load profile forecasting covers the periods: short term (intra-day to one week), medium term (up to one month) and long term (entire contract term, up to several years). Some 1000 forecasts are currently calculated per day – partially on the basis of aggregated positions.

For achieving better forecast results for consumers with very unique load profiles, deviating from any standards, **metaScript Master** option was developed in close cooperation with metalogic in 2010. This sophisticated feature enables various predictors to be utilized and reflected in the forecast process plus it supports the creation of synthetic load profiles. Consequently WINGAS is now able to create forecasts for customers with very unique energy demands that could not be reliably forecasted by applying normal statistical methods.

The Growth Challenge: Handling the increase of more contracts

The WINGAS business is characterized by strong expansion.
Sales growth rates of up to ten percent per year combined with a general trend in favour of shorter contract terms have led to a significant increase in the absolute number of customers and transactions. At the same time, very different markets with contrasting and diverse individual rules have to be served. More contracts and more customers automatically mean more data that has to be forecasted with the highest level of accuracy possible. This clearly represented a challenge for forecast Management.

"The entire Forecast operation enjoys a very high level acceptance within our firm because the results we produce flow into other core processes", explains Mari Plümacher, Head of Forecast Management at WINGAS. "Furthermore, we are facing the situation that the market has become extremely transparent due to the wealth of data that has been made available by the market players within the course of liberalisation. At the same time, the growing pressure on margins has to be compensated by ever-improving efficiency in the back-end processes."

For this reason the persons responsible at WINGAS initiated a new project with the objective of automating the forecasting process as far as possible, from the load profile analysis to producing bid estimates plus continuous nomination forecasting. This required on one hand the greatest possible degree of standardisation with regard to modelling. On the other hand, it demanded an optimum, bi-directional interface between the forecasting solution and the energy data management system (EDM) used by WINGAS. The resulting implementation was realised in cooperation with the IT service provider HAKOM Solutions GmbH, responsible for fulfilment, integration and testing of all related functions, as the link between WINGAS and the **mP Energy** producer metalogic GmbH.

Forecasting models are generated direct from EDM

The former scenario consisted of producing separate models for each and every customer. This elaborate process tied up employee resources and resulted in prolonged periods when the downstream processes simply had to wait. This "Manual" process also had an impact on quality fluctuations for the forecasts produced in accordance with such models.

The **mP Energy** option "meta Assessment" for supporting automated load profile analysis and the automated generation of forecast templates, was defined and developed in cooperation with metalogic commencing in early 2012. The templates are generated according to the commonality between customers and other definable criteria. Even the selection for the most suitable forecasting method, which is an extremely important factor for determining the quality of the forecast, is fully automated in the new system. Multivariate Regression, artificial neural networks and other forecast methods can all be applied here.

The amount of time WINGAS has saved with the new process is considerable. With **meta Assessment**, the time required to process a forecast – which previously was dependent on the work load and availability of the responsible employee – has been reduced from several days to a few hours or even minutes depending on the type and scope of the forecast.

A significant improvement in forecast quality has also been observed. An important aspect for WINGAS was the ability to "manually" fine-tune individual models on a case-by-case basis afterwards with **mP Energy** notwithstanding any standards. This applies to nearly ten percent of the customers. Their load profiles are so specialised and inconsistent with other customers (for example due to special operating conditions or processes) that the forecasting results must be refined by means of manual adaptation.

"Another advantage of our largely automated forecasting process is the positive effect on the employee motivation and satisfaction," Mari Plümacher reports. "The new intelligent processes ensure that our experts now have sufficient capacity for truly demanding, creative and at the same time wide variety of other tasks. Collecting data and other less significant tasks which used to tie up valuable resources, is now history. This not only had a very positive impact on sales and portfolio management, but also on the forecasting team directly."

Mari Plümacher, WINGAS

mP Energy® – Better Results Quicker.

Forecasting system linked directly to the central EDM data hub

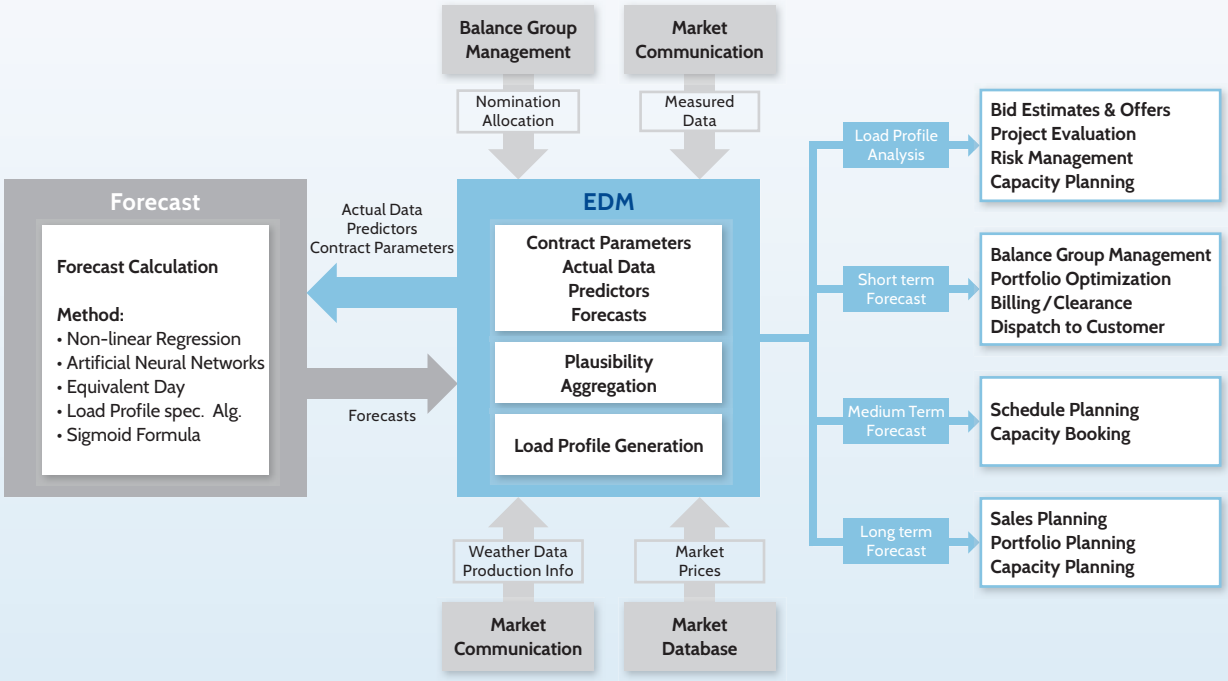
The energy data management system plays a major role in controlling all processes at WINGAS. Within this central data hub – based on the system from a leading supplier – all consumption data for compilation and further processing are centralised. That made it even more important to integrate the forecasting system as closely as possible to the EDM in the course of the meta-assessment implementation. Only with such close-knit integration was it possible to achieve the desired sustainable and full level of automation for the forecasting process.

With its IT partners, WINGAS was able to establish a direct interface between the forecasting solution **mP Energy** and the EDM system. The exchange of data between these central systems is now fully automated and operates around the clock.

This means: new contracts and actual data from the EDM no longer have to be transferred first. The forecasting solution simply utilizes any new information from the EDM system independently as soon as such data is available.

*"The automation of customer analysis, bid estimation and forecasting supports our processes in sales, balance group management, portfolio management and risk management," says Plümacher in conclusion. "High quality and forecasting speed offer us such important competitive advantages that we were prepared to work with the manufacturer on the definition and development of additional functions. We have now achieved the status of an optimum integration of the **mP Energy** forecasting solution in our central EDM system."*

Forecast Dataflow



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