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Case Study: BMW AG

Energy efficiency analyses

TÜV SÜD supports the BMW Group with energy efficiency analyses at its manufacturing plant in Rosslyn, South Africa. This is part of the key measures the BMW Group is undertaking to achieve its ambitious energy efficiency targets.

Business challenges

For the BMW Group, efficient and economical energy use represents a key success factor. Improved energy efficiency contributes significantly to cost reduction. The BMW Group has set itself the target of reducing its 2006 baseline energy use per vehicle produced by 45 per cent by the year 2020. To reach this ambitious target, the Group must continuously identify further opportunities for energy savings across all of its locations. To this end, the BMW Group commissioned TÜV SÜD to undertake an energy efficiency analysis at its plant in Rosslyn, Pretoria.

BMW World Plant Rosslyn, which has won quality awards on three separate occasions, was selected for additional energy efficiency improvements by way of identifying potential areas for energy savings and gathering possible approaches to improving energy efficiency. As part of the Rosslyn factory's production process, vehicles go through specific stages in each of three distinct shops to ensure completion to BMW's high quality standards: the body shop, the paint shop and the assembly shop. In this case, the body shop and the paint shop were chosen as focus areas for the energy efficiency analysis.

OVERVIEW

Client name	BMW AG, Munich
Industry	Car manufacturer
Key technical data	Rosslyn plant, South Africa: Body shop, paint shop, assembly
Business challenge	Improvement of energy efficiency
Our solution	Energy efficiency consulting services provided by a team of experts from Germany and South Africa: <ul style="list-style-type: none">▪ On-site inspection, screening analysis▪ Identification, evaluation and prioritisation of opportunities for energy savings according to customer specifications▪ Feasibility studies/cost/benefit analyses▪ Support of investment measures
Business benefits	Identification of 28 possible starting points for cost-efficient energy saving measures

TÜV SÜD's solutions

TÜV SÜD's energy efficiency experts offer realistic and realisable solutions to increase energy efficiency. These include drawing up energy management policies, assessing energy efficiency, and designing and developing the necessary structures and processes to control energy use. TÜV SÜD works closely with clients to define savings targets aimed at improving energy efficiency.

For this project, a team of experts from TÜV SÜD Industrie Service GmbH and TÜV SÜD South Africa (Pty) Ltd worked with the BMW employees at the Rosslyn plant to conduct the energy efficiency analysis. The three-step analysis comprised screening analysis, identification of opportunities for energy savings, and the determination and definition of improvement measures.

Within the scope of the energy efficiency analysis, the experts reviewed technical documentation and energy consumption data. On-site inspections covering all technical systems in both production and infrastructure were also carried out.

The energy efficiency professionals then evaluated the opportunities for energy savings they had identified, and prioritised them in line with the requirements specified by BMW. The TÜV SÜD experts also proposed suitable actions to unlock potential energy savings and assessed them by means of cost-benefit analyses. The team developed possible solutions on how to implement these actions and identified any need for further analysis on this basis.

Business benefits

The analysis resulted in the identification of 28 potential areas for energy savings that were organised in a catalogue of proposed actions. The energy efficiency team determined the potential savings realised by each of these actions, as well as the investment cost and break-even time involved. The experts then used these data as a basis for a feasibility study and proposed a sequence in which to implement the actions. The team also developed conclusions on how to proceed with further efficiency gains, including more detailed assessments. In addition, they made recommendations on the future design of energy management in the organisation.

This case study illustrates how a comprehensive set of energy efficiency consulting services can help an organisation to find realisable opportunities for improving the energy efficiency of its processes. TÜV SÜD's extensive technical know-how, along with its interdisciplinary team of experts, can enable your organisation to maximise energy usage and gain reliable insight into the costs and potential savings of improvement measures, allowing informed investment decisions. Our understanding of national legislations and compliance requirements in key markets will also assist you in meeting energy targets mandated by these requirements.

Add value. Inspire trust.

TÜV SÜD is a trusted partner of choice for safety, security and sustainability solutions. It specialises in testing, certification, auditing and advisory services. Since 1866, the company has remained committed to its purpose of enabling progress by protecting people, the environment and assets from technology-related risks. Through more than 24,000 employees across over 1,000 locations, it adds value to customers and partners by enabling market access and managing risks. By anticipating technological developments and facilitating change, TÜV SÜD inspires trust in a physical and digital world to create a safer and more sustainable future.