

## CASE: O&M FOR SASOLBURG OPERATIONS. SHARED PARTNERSHIP GUARANTEES SUCCESSFUL PLANT MANAGEMENT



**Wärtsilä signed a three-year Operations & Maintenance (O&M) agreement with Sasolburg Operations in South Africa. Besides being a full O&M agreement, the deal also covers the training of local employees to enable them to become competent operators of the 175 MW power plant. This was the first O&M agreement for Sasol in South Africa, where Wärtsilä was fully responsible for the management of the Sasol staff and facility.**

Sasolburg Operations is a subsidiary of international integrated energy and chemicals company Sasol SA (Pty) Ltd. Established in 1950 in South Africa, Sasol leverages the talent and expertise of more than 31,000 people in 37 countries. The company develops and commercialises technologies, and builds and operates world-scale facilities to produce a range of high-value product streams, including liquid fuels, chemicals and low-carbon electricity.

### **IMPLEMENTING THE BEST O&M PRACTICES**

During the Copenhagen Climate Change Conference 2009 the President of South

Africa made a commitment to reduce carbon emissions in South Africa. This commitment resulted, among other things, in Sasol initiating the construction of the Sasolburg Gas Engine Power Plant (SGEPP).

Wärtsilä successfully built the gas power plant in 18 months from the order date (against the planned 21 months) and within budget. The power plant was designed to have 18 Wärtsilä 20V34SG engines producing a cumulative output of 175.5MW. The operational philosophy, however, is to run only 16 engines at a time, having one on standby and one on maintenance. The SGEPP facility is one of three power plants generating the

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- ■ ■ supply necessary for Sasolburg Operations; additional electricity generated can be exported onto the grid to support the country's demand. The SGEPP facility has been in full operation since the commissioning of the plant in December 2012.

After the commissioning, Wärtsilä took on the responsibility to operate and maintain the power plant at the highest levels of quality and efficiency achievable. In this respect Wärtsilä was able to implement its best practices to ensure that the maximum efficiency of the design output resulted in high availability, reliability and full capacity, without compromising safety.

During the negotiations it was clearly stated that the O&M agreement had to comply with the law of “Black economic empowerment” (Broad Based Black Economic Empowerment Act: 2003). To ensure this Sasol recruited local people and the Wärtsilä O&M team guided, trained and supervised them in the day-to-day maintenance.

Joint organisation was initially a challenge for both companies, not only relating to using another company's policy and procedures, but also in terms of managing situations where staff from more than five different cultures speak various languages.

– Wärtsilä O&M systematically enabled Sasol management to take responsibility for operating the power plant. In addition, Wärtsilä also managed the plant according to Sasol policies and procedures while complying with South African legislation, says **Aditya**

Challenges	Solution	Benefits
<ul style="list-style-type: none"> <li>– Ensuring high plant availability</li> <li>– Ensuring a continuous and reliable power supply</li> <li>– Enabling the customer's employees to be able to operate and maintain the power plant with minimum support from Wärtsilä Field Services</li> </ul>	<ul style="list-style-type: none"> <li>– Signing a three-year shared Operations and Management agreement including an extensive and flexible training programme for local Sasol employees.</li> </ul>	<ul style="list-style-type: none"> <li>– Transfer of know-how to SASOL personnel</li> <li>– Implementation of a nationalization plan</li> <li>– High plant availability and reliability</li> <li>– High expertise level for the personnel</li> <li>– Sasol's own employees are able to independently operate and maintain the power plant</li> </ul>

**Pal Singh**, General Manager, Business Development, Power Plant Agreements.

#### **MORE THAN 98% PLANT AVAILABILITY**

The performance of the plant has been very good, with more than 98% plant availability at all times. Contractually, Wärtsilä O&M has fully complied with all the requirements. Thanks to the professionalism of the Wärtsilä O&M team and the direction of Sasol management, all the challenges during the initial operation of the plant were overcome. Wärtsilä O&M managed to follow the scheduled maintenance programme at all times, despite the added difficulty of Sasol implementing a second project phase at the SGEPP facility: 18 heat exchanger boilers were installed while the plant was in operation.

The fact that both companies handled the agreement in a professional manner ensured success, meaning that the SGEPP facility has been able to generate the required capacity as originally planned.

#### **SEAMLESS COOPERATION TO BE CONTINUED**

Wärtsilä has had a seamless cooperation with the customer. To ensure that Sasol can meet its objectives, it is critical that a relationship of this nature is reinforced by professionalism. This extends across contractual obligations to technical assistance and support to Sasol.

Wärtsilä's professional customer service, ability to adapt itself to unique circumstances, delivering on its commitments, and empowering its customers to manage facilities, form the basis for a continued cooperation. In addition, Sasol is proud of SGEPP as it represents excellence in project execution and power plant management.

Wärtsilä delivered on its commitments during construction and during the three-year period in the operation and maintenance phase. The working partnership of Wärtsilä and Sasol is an example of a successful delivery of an important project that will benefit not only Sasol, but contribute to South Africa's energy landscape.