

CASE: TRAINING FOR SASOLBURG OPERATIONS. TRAINING ENABLED INDEPENDENT OPERATION AND MAINTENANCE OF GAS POWER PLANT



Wärtsilä signed a three year Operations & Maintenance (O&M) agreement with Sasolburg Operations in South Africa. Besides a full O&M, the agreement also covers training of local employees 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.

O&M AGREEMENT WITH EXTENSIVE TRAINING

Wärtsilä built the Sasolburg Gas Engine Power Plant (SGEPP) in 18 months from date of order, 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. SGEPP is one of three power stations generating the demand for Sasolburg Operations and additional electricity generated can be exported into the grid to support the country's demand. SGEPP has been in full

operation since commissioning of the plant in December 2012.

Wärtsilä took responsibility for operating and maintaining the power plant, implementing its best practices to ensure design output with maximum efficiency. The extensive training package delivered by the Wärtsilä Land and Sea Academy (WLSA) for the local employees of Sasol Operations included gas engine courses for 40 employees. Thanks to this flexible training program customized for the individual's position and current competence level a total of 28 production staff and 12 maintenance staff were trained.



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

■ ■ ■ The joint management was initially a challenge for both companies relating to not only using another company’s policy and procedures, but also managing situations where staff from more than five different cultures speaks various languages.

– Wärtsilä O&M trained the local Sasol staff during the three year period and 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 **Dino Postogna**, Manager, Training Sales Support at Wärtsilä.

SUCCESSFUL KNOWLEDGE TRANSFER

Sasol identified a training gap due to continual staff turnover. Sasol knew that due to the shortage of technical skills in South Africa, there will be a continual turnover of staff, requiring training to continue. Therefore Sasol needed to enable themselves to do sustainable training after the three year period by training local Sasol supervisors and teaching practitioners to become ‘trainers’.

The knowledge transfer has been successful and with a final handover plan for the last six months of the agreement, Sasol and Wärtsilä management will be able to assess the readiness of the Sasol staff in operating and maintaining the SGEPP facility. Sasol’s intention was to be in a

position to fully operate and maintain SGEPP after a three year period. For this a detailed training programme was required and to be implemented by the Wärtsilä O&M team. Over the last three months the Wärtsilä O&M management will be in a position to observe how the Sasol staff are performing and making daily decisions, while still being in a position to assist with additional training where required.

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 complied with all the requirements completely. All the challenges during the initial operation of the plant were overcome, thanks to the readiness of the Wärtsilä O&M team and the direction of Sasol management.

The fact that both companies handled the agreement in a professional manner ensured success. The SGEPP 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.