

Media Release

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Voith to Modernize Generators for Second Largest Pumped Storage Power Plant in South Africa

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- **Voith concept aims to solve vibration and temperature issues**
- **Project to be realized during normal plant operation**
- **Underground pumped storage power plant increases quality and reliability of South African energy supply**

Heidenheim/Drakensberg: Voith received orders for modernizing three generators of the South African pumped storage power plant Drakensberg. The order covers manufacture, installation and commissioning of the three machines which take place step by step and during normal operation until mid of 2018. The contract has a volume of around 11 million Euros.

It is Voith's first order for Drakensberg power plant placed by the South African energy supplier Eskom. During the bid phase Voith convinced the operator with a technical concept improving the performance of the machines by dedicated measures.

"These measures ensure a reduction of operating temperature and machine vibrations so that their lifetime can be extended significantly. After the modernization the generators will show at least 40 further years of operation", says Martin Althoff, generator expert and technical offer manager of the Drakensberg project at Voith Hydro Germany.

The pumped storage power plant Drakensberg, has a total installed capacity of 1,000 MW and therefore is the second largest of its kind in South Africa. The most unique feature of Drakensberg is that the power plant is built completely underground. Only shafts and transmission lines can be seen on the surface whereas the four reversible pump turbines are placed approximately 52 floors below ground. The power plant has been in operation since 1981 and considerably contributes to energy grid stabilization. It can react quickly to fluctuations by generating required

energy or storing a surplus. This flexibility of the multipurpose plant is highly important for grid stability and subsequently the quality of energy supply in South Africa.

Voith has been active in pumped storage technology for many years. The company has made vital contributions in this field, developed many innovations and continuously works on optimizing them. Voith invests in research and development in this area, because so far, pumped storage technology is the only long-term, technically proven and cost-effective form of storing energy on a large scale and making it available at short notice.

Voith sets standards in the markets for energy, oil & gas, paper, raw materials, transport & automotive. Founded in 1867, Voith employs around 20,000 people, generates €4.3 billion in sales, operates in over 60 countries around the world and is one of the largest family-owned companies in Europe.*

*Without the discontinued Group Division Voith Industrial Services.

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Caption 1: Voith's measures at Drakensberg will ensure a reduction of operating temperature and machine vibrations so that lifetime can be extended significantly.



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Caption 2: The hydropower plant Drakensberg is built completely underground.

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