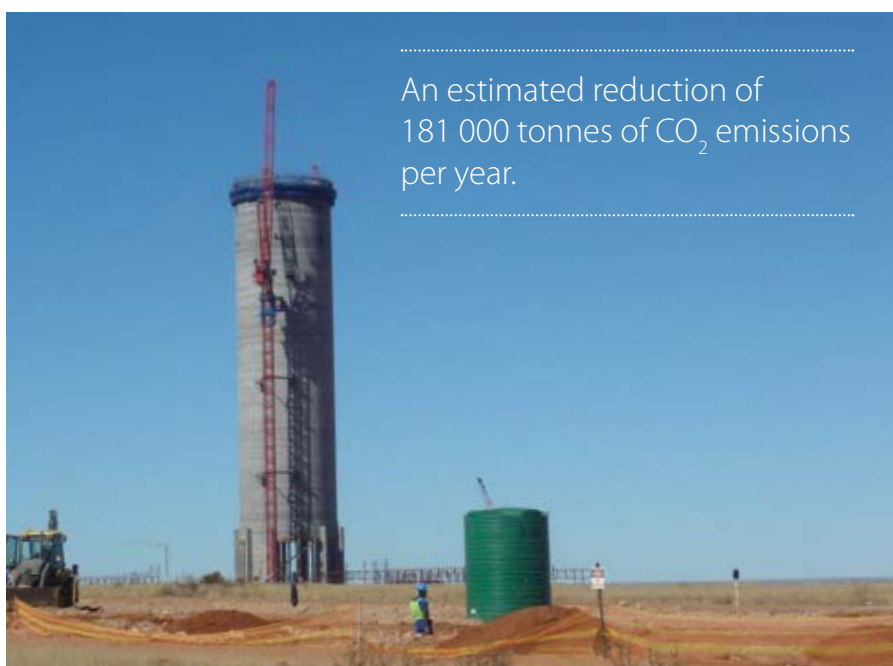




Backing South Africa's first solar tower project



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An estimated reduction of
181 000 tonnes of CO₂ emissions
per year.
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Khi Solar One tower, August 2013

South Africa has a shortage of electricity generating capacity, but some of the best solar resources in the world. To help fuel sustainable development in the country, the EIB is lending EUR 50m for the first large concentrated solar power plant in sub-Saharan Africa, through a project that is also designed to bring benefits to local communities.

Located on a 600 hectare site close to the town of Upington in South Africa's Northern Cape Province, the Khi Solar One power plant will have a capacity of 50 MW. It will help South Africa meet the renewable energy targets defined in the South African Renewables Initiative. This initiative seeks to boost the development of renewable energy to 15% of the country's power generation by 2020. This is a significant increase; in 2011, renewable energy accounted for less than 2% of total supply.

Khi Solar One is a joint venture between the constructor Abengoa, South Africa's state-owned Industrial Development Corporation (IDC) and the Khi Community Trust. It will be Abengoa's first commercial solar tower outside Spain and will have more than double the capacity of the last tower built by Abengoa in Andalusia.

The South African plant will consist of a 200 metre-high tower and more than 4 500 heliostats – moving mirrors to reflect light onto a receiver on top of the tower. It will use "concentrated solar technology". This means that it will harness solar radiation by focusing it onto a small area on the tower in order to produce steam. The steam, in turn, drives a turbine and produces electricity. Advanced dry cooling technology will reduce water consumption by 80%. The plant will

have two hours of thermal storage capacity and avoid approximately 181 000 tonnes of CO₂ emissions per year.

The plant will bring economic benefits, nationally and locally. It will help address the current shortage of electricity generating capacity in South Africa and improve the reliability of the power supply, an essential requirement for sustained economic development. The Khi Solar One scheme is financed using a project finance framework and is expected to attract developers, investors and lenders to other renewable energy schemes and secure broader support for financing innovative renewables projects in South Africa.

Locally, it is expected to create an average of 600 construction jobs a year during the construction period. When operating, the plant should employ around 35 full-time operatives, and is expected to create a further 40-60 full-time jobs for local suppliers and contractors.

Furthermore, one of the partners of the joint venture is the Khi Community Trust, a share-owning entity incorporated in South Africa for the exclusive benefit of the local communities around the project site. The Trust, which is funded by the IDC, promotes the personal development of the members of the communities. It provides assistance and training to improve skills and knowledge in areas such as entrepreneurship, leadership, education, and infrastructure.



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Artist impression of Khi Solar One

The European Investment Bank is the bank of the European Union. Our shareholders are the 28 Member States of the EU. We provide finance and expertise for sound and sustainable investment projects. We are the world's largest multilateral lender by volume, with loans totalling EUR 52bn in 2012.

Climate action is a key priority for the EU. Between 2008 and 2012, the EIB invested almost EUR 80bn in climate change mitigation and adaptation projects. We support low-carbon and climate resilient growth in Europe as well as in emerging and developing countries outside Europe. Moreover, our funding acts as a catalyst to mobilise finance for climate action, encouraging others to match our long-term investment. We complement our innovative financing instruments with a range of technical assistance tools to provide rounded solutions for commercially promising climate initiatives.

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