

China Turns to Solar Power

100-megawatt project will be world's largest
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On Tuesday, China revealed a plan to build the world's largest solar power station in the sunny northwestern province of Gansu. According to Xinhua News Agency, the 100-megawatt project will be located in Dunhuang, a city on the Silk Road. The project will cost approximately 6.03 billion yuan (US\$766 million) and take five years to build.

"In China, the proven coal reserve will be exhausted in the coming 81 years, petroleum in 15 years and natural gas in 30 years on the current development speed," said an expert of the Institute of Electrical Engineering, which is part of the Chinese Academy of Sciences (IEECAS). Fortunately, there is a huge invisible solar power reserve to exploit.

The electricity supply shortage in 2010 and 2020 may reach 37 million kilowatts and 100 million kilowatts, respectively, an IEECAS report forecasts. The report points out that the total solar power reserve in China may equal 170 billion tons of coal. To make solar power viable, it is important that it be widespread, clean, and used circularly.

In the mid-1990s, China stopped exporting oil and began trying to secure energy globally. Meanwhile, the vast, sunny desert -- nearly 1 million square kilometers -- remained underdeveloped. According to experts, if just 1 percent of that desert can be exploited to generate solar power, it would cover the total electricity consumption of China in 2003.

"The desert areas such as Hexi Corridor in Gansu and Taklimakan Desert in Xinjiang Uygur Autonomous Region are suitable to run the big solar projects," said Dr. Gan Lin of WWF. A field reconnaissance in 2004 on these areas, he added, revealed that the total annual irradiation is above 1,600 kilowatts per square meter.

The city of Dunhuang was chosen as the venue for an 8-megawatt project in February 2004 because of its strong sunshine, low wind speeds, and few days of dust. The project is part of the "China Desert Photoelectricity Project," supported by the National

Development Reform Commission, IEECAS and WWF.

Although solar power has many merits, the obstacles standing in the way of these huge projects are still considerable. High construction costs and high future electricity prices are the biggest challenges that will deter potential investors.

"It is meaningful for all aspects of China, not just for the economy," said an expert working on the 8-megawatt project, last year. Policies need to be made to enhance the progress, he added.

The solar project is good news to the people of Dunhuang because solar power will replace its deteriorating thermal power stations.

If China can make use of just 10 percent of its deserts to absorb sunshine and generate solar power, it will be like building 257 Three Gorges Dams.

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