The Jülich Solar Power Tower

The Solar Thermal Test and Demonstration Power Plant Jülich (STJ) is both a research facility and a model for future commercial power plants in southern Europe and North Africa. Power plants of this kind also feature prominently in the DESERTEC initiative. The technology tested at Jülich and the knowledge gained thereby will be used in regions of abundant sunshine where the potential of solar-thermal power plants is greatest.

The plant was planned, built, and finally completed in 2008 by a co-operative consortium of research facilities and industry. While the German Aerospace Center (DLR) and the Solar-Institut Jülich (SIJ) of the Aachen University of Applied Sciences contributed their scientific expertise, Kraftanlagen München GmbH (KAM) acted as principal contractor and Jülich’s public energy and water supplier Stadtwerke Jülich (SWJ) played the part of owner and operator. In mid-2011, DLR took over the plant from the local utility in order to expand and intensify its research and development activities, making Jülich DLR’s 16th research site.

The project was funded by the Federal Ministry of Environment, Conservation, and Reactor Safety (BMU), the Ministry of Economics, Building, Housing, and Transport and the Ministry of Innovation, Science, and Research of the State of North-Rhine Westphalia as well as the Bavarian Ministry of Economics, Infrastructure, Transport, and Technology.

There are numerous projects under way to develop and optimise this technology in collaboration with the SIJ and industrial enterprises. In all of these projects, the focus is on increasing efficiency, reducing the cost of production and operation, and developing storage systems for demand-led power generation, which are of crucial importance for their eventual commercial success.