

Power generation

Feeding the grid from river water

The German Federal Government supports the use of regenerative energy. Two prototype river turbines were installed in the river Rhine, near the German town of St Goar. The turbines successfully provided the town with electric power from river water, prompting the company who designed them to put them into commercial operation.

Near the German town of St. Goar on the river Rhine, KSB Aktiengesellschaft, Frankenthal, has put two river turbines into operation. They convert the energy of the river water into electric power and feed that into the power supply system. To do this, there is no need for any water to be impounded or diverted.

Following the successful operation of the two prototype turbines, KSB now wants to prepare the newly developed power generators for commercial use. "We believe in a type of power supply that aims

at economic effectiveness, reliability of supply and ecological compatibility all at once," said Prof Dr Dieter-Heinz Hellmann, a member of the KSB AG board of management. He added that development of the river turbine put his company in a position to offer a new means of generating power within the scope of small hydropower as it is not only clean, but is also capable of providing base load.

The project is being supported by the Ministry of Environment, Forestry and Consumer Protection of the German

Federal State of Rhineland Palatinate. Minister Margit Conrad travelled to Frankenthal specially to attend the commissioning ceremony where she was asked to give the starting signal for the feed-in of electricity controlled from the company headquarters. Conrad acknowledged the pilot installation set up for the purpose of testing two river turbines designed to generate power without affecting climatic conditions or the environment. "The river turbine pilot installation is a good example of how, through the use of cutting-edge technology, a body of naturally running water can be utilised in a highly efficient manner, yet without harming the fish population or getting in the way of passing ships," Conrad said.

In Germany, hydropower is the second most important regenerative energy, only surpassed by wind power. KSB believes that the hydropower share offers potential for further growth. In Germany alone, there is the potential to generate hydropower in the range of 6.8 TWh per year without cross-structures, i.e., without major changes to the natural landscape. The German Federal Government supports power stations of this type with a total output of less than 500 kW by paying a feed-in compensation of €0.1267 per kWh. However, KSB also believes there is a market for small hydropower internationally, for example in China, India or Russia, where the problem of supplying rural areas with electricity calls for creative solutions.



Installation of a river turbine made by KSB in an arm of the river Rhine at St.Goar.

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