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COORETEC research venture sets out to achieve fossil fuel power stations with zero carbon dioxide emissions 3 March 2006



Model of a next-generation gas and steam turbine power station

Stuttgart - In the long term, fossil fuels are key to the guaranteed production of electricity but continued use of such fuels at today's levels is highly questionable given its impact on the environment. At the end of February, 30 experts from industry and academia met at a status seminar at the Stuttgart premises of the German Aerospace Center (DLR) to discuss ways of addressing this paradox through innovations in the power station sector. Power station research within the COORETEC initiative (CO2 Reduction Technologies) of the German Ministry of Economics and Technology is aimed at developing high-efficiency concepts for fossil fuel power stations which are highly efficient and produce no CO2 emissions.

In more specific terms, the national COORETEC programme aims to drive forwards technological development in two main vectors. Firstly, by increasing efficiency, the initiators promise a 20 percent reduction in carbon dioxide emissions and secondly, new technologies are to allow carbon dioxide to be cheaply drawn off at the power station and then safely stored. In order to greatly advance this ambitious plan by 2020 the Ministry has set up an advisory body comprising power station operators, manufacturers, research institutes and universities.



The five working parties, formed on the basis of the potential of the defined technologies, are now each led by one industrial and one research representative. The purpose of the seminar in Stuttgart was to achieve a level of transparency in research projects for combined gas and steam power stations. Various new ideas were exchanged which allowed numerous promising joint industry/research projects to take shape. The gas combined cycle power stations working party is being led by Armin Schimkat, Alstom Power Generation AG and Prof. Manfred Aigner. The head of the DLR Institute of Combustion Technology in Stuttgart is expecting important research projects in the areas of combustion, material development and gas and steam turbines to be submitted for approval this year. In his working party alone, Prof. Aigner is expecting project costs to run to between €20 and €40 million.

The research programme is intended to ensure that everything is in place for the anticipated extra capacities required amongst power stations from 2010 onwards and can be achieved at a high technological level and in line with climate protection targets. The COORETEC programme is already being held up as an example for future projects within the European Union. Given the expertise they have gained as part of this national programme, the German companies and research institutions involved will have a strong advantage when a new series of projects is passed at European level and the corresponding funds are handed out.

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