

Energy Urgency: Cleaner Coal Technology Needed in the UK by 2015

Posted on Thursday 4th June 2009

Engineers at the University of Birmingham have been awarded £750,000 to conduct research on analysing and optimising the performance of supercritical coal fired power plants - a cleaner way of using coal to produce electricity.

As the UK is facing a shortfall in electricity production by 2015 due to projected economic growth, life expectancy of existing power stations, and because it will take a further 10 years to build new nuclear power stations, coal will play an important role in electrical power generation.

But to use coal without harming the environment it needs to be made cleaner. Supercritical coal fired plant technology is one of the leading options and possible solutions, with improved energy efficiency and reduced CO₂ emissions. These boilers cost less than other clean coal technologies and can be fully integrated with appropriate means of CO₂ capture.

Dr Jihong Wang, lead investigator from the University's School of Electronic, Electrical and Computer Engineering, says, "Between 2015 and 2020 the UK will lose 25% of its power generation capacity. We need reliable and affordable power technology to fill the gap. Although there is currently a wide variety of new generation technologies being considered, cleaner coal fired power generation is a viable and realistic choice. The main objective of the project is to gain a clearer picture of the plant's dynamic performance through mathematical modelling and to develop optimal control strategies."

Dr Bushra Al-Duri from the University's School of Chemical Engineering says, "We propose to build a small scale model of a supercritical water cycle in our laboratory, which will help us to monitor and ascertain the feasibility and efficiency of this new technology to improve the performance of existing systems."

As China already has 24 supercritical units in operation, the engineers will collaborate with Chinese universities and energy companies to discover more about how this new technology could be integrated into the UK electrical power supply system.

Ends

Notes to Editors

The funding for this project has been awarded by the Engineering and Physical Sciences Research Council.

For further information

Kate Chapple, Press Officer, University of Birmingham, tel 0121 414 2772 or 07789 921164.

[Privacy](#) | [Legal](#) | [Cookies and cookie policy](#) | [Accessibility](#) | [Site map](#) | [Website feedback](#) | [Charitable information](#)

© University of Birmingham 2015

