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## **Eagerly confronting challenge**

First the bad news: if you're producing coal, the price is at once too low and too high - too low for you and too high for your potential customers. Then the good news: if you're using coal, it's now cheaper and cleaner to use than ever before. Both these conclusions emerged at Coal '87.

The first day was given over to keynote speeches. Jose Sierra, European Commission director for coal, launched the twin themes of the conference: efficiency and environment. Sir Kenneth Couzens, deputy chairman of British Coal, gave a quirky and engaging presentation of British Coal's outlook - although he declined emphatically to speculate on the implications of transferring British Coal to private ownership. Dr Peter Chester, director for environment of Britain's Central Electricity Generating Board, described the CEGB's approach to coal and the environment. He insisted that the CEGB had to have unambiguous evidence about the causes of acid rain and other environmental impacts before spending large sums of money to mitigate them. However reasonable this position, it came across as much too complacent - more so than any of the coal-industry speakers.

### **UK's casual clean up?**

The CEGB intends to backfit flue gas desulphurization (FGD) to three existing plants. Dr Chester noted, however, that the CEGB, awaiting the results of seven design studies, will not even put the first FGD plant out to tender until the end of 1987, nor apply for planning permission until 1988. Building the plant will then take more than four years. The other two FGD plants will be up to five years later and not necessarily built by the same supplier.

It all sounded remarkably casual, especially in the context of other presentations at the conference. Speakers from the European Commission and the International Energy Agency left no doubt that coal will have to clean up its act. Problems include not only the well known sulphur and nitrogen oxide, but also chlorine, trace elements and carbon dioxide. Some developments nevertheless look very promising. Research organizations and plant manufacturers described the current status of innovations that are already changing the face of traditional coal use. The two technologies now attracting most attention are undoubtedly circulating fluidized bed combustion (CFBC) and integrated coal gasification combined cycle (IGCC).

### **Ahlstrom sell to UK**

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Ahlstrom of Finland, one of the originators of CFBC, revealed that since their first unit started up in 1979 they have sold 48. The forty-eighth is their first order from Britain, a 43 megawatt steam-raising plant for Caledonian Paper in Scotland, to burn 30% bark and 70% local coal. Leif Bengtsson of Ahlstrom also announced that they had just begun firing coal at their 291 megawatt CFBC backfit of the Nucla power station of Colorado-Ute in Colorado, making Nucla the largest CFBC unit thus far in operation.

In California, the Cool Water IGCC plant continues its impressive performance. Nevil Holt of the US Electric Power Research Institute reported on the upsurge of interest in IGCC, using any of several different designs of gasifier, notably those from Texaco, Shell, and British Gas/Lurgi (BGL). Cool Water, the only coal fired plant now permitted to operate in California, has sulphur, nitrogen and particulate emissions so low they are difficult to measure reliably. BGL reminded delegates that their Westfield gasifier offers advantages for IGCC; the BGL design incorporates heat recovery in

the gasification process itself and does not therefore depend on finding a use for steam to achieve high conversion efficiency.

While coal users heard encouraging news, coal producers and traders reflected on the precarious market conditions they now confront. Gerard McCloskey, editor of *Financial Times International Coal Report*, suggested that coal prices might be bottoming out and the market brightening up somewhat. He warned, however, that the advent of new supplier countries - especially Colombia, Venezuela, Indonesia and the People's Republic of China - would intensify the prevailing global buyers' market for coal. He then refereed a lively forum of suppliers and buyers about coal price, quality and transport. International trade in coal has grown severalfold in the 1980s and all the signs point to continuing expansion.

Despite the technical and economic problems coal still confronts, the mood of the conference was surprisingly cheerful. The conference demonstrated vividly a crucial difference between nuclear power and coal; the attitude of the people involved. Unlike nuclear power people, coal people accept without question that their energy technology still leaves a lot to be desired. Coal people start from the premise that coal has serious economic and environmental problems, and that the responsibility for finding valid solutions to the problems lies with those in the coal industry. Coal '87 indicated that they are eager to meet the challenge.

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