

Notes for PIU Energy Policy Reviews

A Submission By Tower Colliery

With worries over long term availability, security of supply and price of U.K gas and oil there is an opportunity for coal to "fill the gap" between 2005 and 2050, by which time Renewables will be expected to be attractively priced (due to technical advance and widespread use in the developing countries, though various initiatives like that proposed by The World Bank and others.) However, for coal to play an effective role within the context of U.K. overall Energy Policy, U.K Energy Poverty, U.K Environment and U.K Energy Sustainability, several technical, financial and political issues will need to be addressed:

1. Generally to enable long term developments within the U.K coal industry to be encouraged, government investment in the industry needs to be extended beyond the one-off "quick fix" subsidy approach, if we are to achieve self sufficiency.
2. Looking at individual energy market sectors, the following issues are relevant:
 - a. In Power Generation, further substantial investments in the so-called "clean coal". Technologies are needed including NOX and SOX abatement, using over fire air staging and reburn techniques. Supercritical (p.f.) boiler technologies, coal bed methane extraction and utilisation techniques, and underground gasification are all areas where further investment, to take these "developed" technologies into commercially-attractive forms, would result in reduced greenhouse gas emissions.
 - b. The Industrial (heat and process) applications for coal require further improvements in combustion efficiency and controllability of shell, watertube and f.b.c boilers to reduce emission levels.
 - c. Commercial Markets require the development of modular design coal firing equipment to achieve those "load-matching" features that are characteristic of gas and oil systems.
 - d. In the Domestic sector, government should provide public sector opportunities for coal to embrace "energy poverty" and local Agenda 21 initiatives. This can be done by including full opportunity for energy-efficient solid fuel "cassettes" to replace open-fire installations. Widely

used on the continent, these units enable low-cost conversions to take place, with minimum disruption and installation times. The resultant efficiencing gains reduce Co2 emissions by 40%. A number of U.K companies manufacture these units with price, quality and results proven and guaranteed.

Developers should be encouraged to include chimneys in all new housing developments. These enable fuel-switching options to be maximised, reduce condensation problems and improve the health of occupants.

- e. Where group developments take place in the Quasi-Domestic sector including sheltered accommodation, housing associations, and multi-occupancy projects, the government should encourage the promotion of district, group and community heating, preferably linked to electrical power generation in combined heat and power installations. The proven technologies of flexible pipework, electronic metering and c.h.p sets enable such developments to be particularly energy efficient on coal, achieving social cohesion and sustainability within the community as well.
 - f. Local councils should be encouraged to apply "life-cycle analysis" to all refurbishment and new projects. The long-term stability of energy prices based on coal, coupled with the positive effects of coal heating on occupier health and building fabric protection, make coal a prime candidate for such schemes.
 - g. The combination of fine coals with municipal and other "wastes" to form briquettes or pellets for use in domestic, quasi-domestic, commercial and industrial markets can provide positive advantages in lowering fuel cost, reducing the waste burden on landfill as well as reducing greenhouse gases. Such schemes could provide low temperature, low-risk solutions in Energy-from-Waste projects throughout the U.K. They fit compliance with the E.U Waste Directives, local authority waste management initiatives, and provide opportunities for expansion of S.M.E's engaged in recycling and re-use activities.
3. Summary: All of the foregoing are projects or areas of work currently being undertaken at Tower Colliery in conjunction with dedicated partnerships. Some are close to the point of delivery whereas others require further support to conclude development trails before bringing the technologies to the market place.

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