UK ADVANCED POWER GENERATION TECHNOLOGY FORUM

FORUM ON CARBON ABATEMENT FOR FOSSIL FUELS

DTI Conference Centre, 1 Victoria Street, London,
25 November 2004

REPORT ON PANEL SESSION

INTRODUCTION

The UK Advanced Power Generation Technology Forum (APGTF) provides the focus for the Power Generation sector in the UK on the research and development activities on fossil fuel, including biomass and waste, and associated technologies including carbon sequestration. Currently, it is working with the UK Government to help define a national carbon abatement technology strategy. The APGTF members are also involved in developing a similar EU approach and are co-operating with the US through links with the US Department of Energy.

The APGTF organised this workshop to:

- To present a UK perspective for RD&D for carbon abatement in power generation from fossil fuels (to include advanced technologies, CO_2 capture and CO_2 storage)
- To identify key national/international activities relevant to the UK's proposed approach
- To discuss its implementation and to identify the costs and benefits to the UK
- To indicate the immediate priorities for a UK carbon abatement technology programme

The Forum consisted of invited presentations covering strategy and perspectives for carbon abatement RD&D for power generation in the UK and EU, together with an overview of other international activities. The Forum agenda is given in the attachment and the presentations are on the APGTF website, www.apgtf-uk.com

The presentations were followed by a panel session, which discussed the priorities for a UK carbon abatement RD&D programme and the benefits that could be expected. This session was led by members of the APGTF giving their views after which all delegates were invited to participate.

This document is a report of the panel session; it will be fed into the Government for consideration in the development and implementation of its carbon abatement technology strategy.

THE PANEL SESSION

Four APGTF members representing different parts of the supply-chain, were given 2-3 minutes each at the start of the session to make points which they thought were a priority. The session was then opened up for comments and questions from the delegates.

APGTFf Members' Comments

TONY ESPIE – BP

There are enough fossil fuels (coal and gas) to supply the world's needs for at least the next 50 years. Several different technologies will be needed for power generation and CCS will be one of the important ones. Technologically, CCS can be done today but the cost needs to be reduced and the value of carbon emissions needs to increase – CCS will happen when they crossover. The policy-makers can affect the crossover for example through the ETS, technology development programmes, directives etc.

Further key issues are:

- will demonstrations in Europe lead to sales elsewhere eg China? Policy makers may need to get involved
- will stakeholders accept CO_2 storage? Stakeholders need to be fully engaged
- the OSPAR and London conventions need to be addressed
- mechanisms are needed for long term responsibility of stored gas – industry cannot take this on by itself.

ALLAN JONES – EON-UK

The UK used to be a technology leader, now we are not. Liberalisation has benefited the consumer but it has not benefited long term strategy – industry is left with no incentive to invest for the medium to longer term. Government needs to "pick up the (strategy) baton" and give longer term certainty and leadership and then industry will follow.

Further key issues are:

- certainty is needed in the market place and positive instruments are needed to make it happen
- following this, industry must get its act together
- also academe and industry must get their acts together jointly.

There is huge potential in the market; Government must lead and then industry will engage.

JOHN MCMULLAN - UNIVERSITY OF ULSTER

Nationalised industries, which were not liked by many, had major RD&D programmes and strong support for universities; privatisation stopped all this. UK plc is now trying to improve its position and EPSRC is driving in the right direction.

Universities are not in business just to support industry and there is a concern that a Government strategy with a strong focus on industry may lead to a loss of freedom in academia to do new research.

Care must be taken not to lose the education and training base, the provision of which is a key role for academia.

MIKE FARLEY – MITSUI BABCOCK ENERGY LIMITED
Coal will remain the most important fuel globally for the foreseeable future and the Carbon Abatement Technology (CAT) strategy must recognise this. In the UK, supporting coal ensures cheap supplies and security of supply. The Government needs to ensure that all the policies that relate to the CAT strategy, are 'joined up'.

Further key issues are:

- too much money is spent on research and not enough on demonstration; the programme must have demonstrations included in it
- the APGTF has proposed a programme of £10-20mpa ; this is not enough to achieve leadership which will require ~£50mpa (this is still significantly less than other programmes such as renewables)
- 20-30% CO_2 reductions can be achieved with retrofits and this increase to 40-50% if biomass is included. This needs to be encouraged in the short term, with CCS being a longer term target
- coal should be supported alongside renewables and the equivalent of a renewables obligation should be introduced

Finally, UK plc is well placed to take advantage of a substantial CAT programme, which should also include support for exports.

Open Discussion

The following points were made either by delegates or by panel members during the open discussion session.

Some delegates commented that the importance of fossil fuels, particularly coal appeared not to be getting through to senior persons in the Government or in Government departments. More effort needs to be expended in engaging these people and also in getting the message across to the media. One delegate raised the example of UCG as a technology with real potential that was not getting sufficient support.

Financial stakeholders, such as the Treasury and the City of London should also be targeted. A mechanism is also required to ensure investors get a return.

Several comments were made supporting the panel members views that mechanisms and greater Government support are required to get the technologies from the R&D stage to the market place.

Some delegates made the point that to sell new technology into SE Asia, such as China or India, demonstrations need to be carried out first in the home market or the developed world first.

A concern was raised with the new plant currently being built in SE Asia not being capture ready and therefore not being able to achieve large emissions reductions in the future. The DTI is part funding engineering studies to look at retrofit of capture plant and it will be important to ensure this gets into the market place.

Most delegates appeared to accept the need for CCS in the future but the Government does not yet appear convinced. One delegate urged UK plc to get itself ready for when the Government did realise its potential importance.

Chairman's Summing –up

2005 is likely to be an important year for the UK as it has the leadership of the EU and G8 and global warming is expected to be high on the agenda. This means that a CAT strategy is needed as soon as possible.

It will also be a time for important international and EU RD&D developments and the UK must be in a position to get maximum benefit from these initiatives.

Finally, successful deployment of new technologies into the market place is key and must be a priority.