

**A FRAMEWORK
FOR
CLEAN COAL IN BRITAIN**

Paper prepared by Clean Coal Task Group

7 June 2006

A FRAMEWORK FOR CLEAN COAL IN BRITAIN

BRIEFING FOR MEETING WITH THE ENERGY MINISTER 6 July 2006

- Coal is secure, affordable and long-term. Clean coal power generation, with an important role for indigenous coal, will meet all of the Energy White Paper objectives, set an environmental example to global markets (where coal use is set to grow considerably) and offer substantial manufacturing and employment opportunities for UK industry.
- High level Energy Review endorsement for Clean Coal in Britain as part of a diverse generation portfolio is essential to signal the government's intentions. This will trigger
 - the planning of Clean Coal projects necessary to make significant progress towards meeting the Energy White Paper objectives over the next ten years
 - actions by generators and coal suppliers towards securing long-term supplies of indigenous coal at prices competitive with imported coal
- The Government's ambition should be to maintain at least the current coal-fired generation capacity in the UK (29 GW) whilst at the same time moving the whole coal fleet to clean coal technology and, ultimately, zero emissions.
 - This ambition can be achieved by a combination of new build and retrofits (11 GW in total over the next ten years) to replace plants scheduled to close by 2015, including up to 4GW with Carbon Capture and Storage and around 7GW of capture-ready plants.
 - Once all of these plants have CCS fitted and operating, the CO₂ savings will be 25 to 43 mt CO₂/year, dependent on which plants they displace.
- Action is needed by the government to remove the barriers to Clean Coal power plants, including
 - urgent adjustment to the UK ETS proposals for New Entrants to remove perverse disincentives for Clean Coal versus existing coal and gas
 - a support mechanism for the first CCS projects which will demonstrate the full range of technologies for capture, transport and storage in the UK environment.
 - within 2-3 years, the legal infrastructure for CO₂ storage needs to be established and planning in place for a CO₂ gathering and distribution network.

A FRAMEWORK FOR CLEAN COAL IN BRITAIN

EXECUTIVE SUMMARY

- An overall framework for energy in the UK needs a series of interlinked financial and policy instruments, some of which will be fuel or technology specific in order to ensure a diverse portfolio of power generation, including clean coal.
- Coal is secure, affordable and long-term. Clean coal power generation with an important role for indigenous coal will meet all of the Energy White Paper objectives, set an environmental example to global markets, where coal use is set to grow considerably, and offer substantial manufacturing and employment opportunities for UK industry.
- The Government's ambition should be to maintain at least the current coal-fired generation capacity in the UK (29 GW) whilst at the same time moving the whole coal fleet to clean coal technology and, ultimately, zero emissions.
- This ambition can be achieved by a combination of new build and retrofits (11 GW in total over the next ten years), including a number of plants with Carbon Capture and Storage and a number of capture-ready plants. Once all of these plants have CCS fitted and operating, the CO₂ savings will be 25 to 43 mt CO₂/year, dependent on which plants they displace.
- Action is needed by the government to remove the barriers to clean coal power plants, including urgent adjustment to the UK ETS proposals for New Entrants to remove perverse disincentives and a support mechanism for the first CCS projects which will demonstrate the full range of technologies for capture, transport and storage in the UK environment. Within 2-3 years, the legal infrastructure for CO₂ storage needs to be established and planning in place for a CO₂ gathering and distribution network.
- Indigenous coal has an essential role in securing peak electricity supplies (much greater than its average share of generation) but indigenous coal is presently sold at prices determined by long-term contracts which are less than the delivered cost of imported coal and at levels which do not allow new investment in deep mines. Government help is needed to facilitate new contract arrangements which reward indigenous supply and underpin investment and employment.
- Just as recognised for other developments in the energy field which are hindered by planning procedures, a framework for coal should include removing existing discriminatory planning guidance ("the presumption against") which impedes developments of new surface or deep mines.

- *An early high level endorsement for Clean Coal in Britain as part of a diverse generation portfolio is essential to signal the government's intentions and trigger the planning of projects necessary to make significant progress towards meeting the Energy White Paper objectives over the next ten years.*

A FRAMEWORK FOR CLEAN COAL IN BRITAIN

CONTENTS

1.	Introduction.....	4
2.	Overall Strategic Framework for Energy in the UK.....	4
3.	Value of Coal in a Diverse Portfolio	4
4.	Clean Coal Power Generation in the UK	5
5.	Impact of the European Union Emissions Trading Scheme (EUETS) on Clean Coal for CCS.....	7
6.	Other Barriers to Clean Coal Power Generation.....	9
7.	Research, Development and Demonstration of Clean Coal Power Generation.....	10
8.	Future Role for Indigenous Coal.....	11
9.	Planning Issues	13
10.	High Level Endorsement for Clean Coal in Britain.....	14

Appendices

A FRAMEWORK FOR CLEAN COAL IN BRITAIN

1. INTRODUCTION

This paper is prepared by the Clean Coal Task Group, a joint industry, unions, and government advisory board, at the request of the Energy Minister at a meeting on 17 May 2006.

Details of the remit of the group and its membership are given in Appendix 1.

2. OVERALL STRATEGIC FRAMEWORK FOR ENERGY IN THE UK

The government's Energy Review aims to strengthen security of energy supplies while putting the country firmly on a lower carbon path. It also wishes to increase energy affordability for all classes of consumer but especially for the fuel poor. This latter point is important and of concern to the coal industry, as members of the coalfield communities are also now – ironically – among that number. We note that the government would also like, where possible, to use competitive, market-based instruments to achieve its objectives but we do not consider the Government's approach should be one that simply leaves energy to market forces.

The Group agrees with the Energy Minister that there is no silver bullet which will meet all the requirements. Each energy source will have a contribution to make. A diversity of energy sources has served the country well in recent years and the Group supports continuing diversity going forward.

We recognise that the government would wish to establish a strategic framework for the energy sector. It may be necessary to steer energy markets in particular directions in the interests of security, sustainability and affordability. This is how the Group understands both the Renewables Obligation and the Prime Minister's statement on nuclear energy, made to the CBI conference recently. These are both examples of using a strategic framework approach to energy production and the Group would wish to see a similar approach adopted for clean coal, including UK production.

We have reached firm conclusions on elements which would make up a strategic framework for coal production, imports and clean coal power generation, capable of taking the coal sector into the long term, as well as securing significant manufacturing and employment opportunities. These follow below.

3. VALUE OF COAL IN A DIVERSE PORTFOLIO

World coal reserves are not merely abundant, they are super-abundant. Proven reserves are three times those of oil and two and a half times those of gas. Further reserves not yet proven to be economically extractable are ten-fold greater than those of oil and gas combined. Coal is very long-term.

Whilst there may well be periods in future when gas is relatively cheap, the disparity in the volume of reserves means that over the long-term, the coal/gas price differential can only widen on average. Coal is affordable.

Coal is supplied from multiple sources, via a dispersed supply and distribution chain, through several terminals to multiple points of use. There is no single point or single line concentration and the fuel can be easily stored in stock-piles. Moreover, of proven reserves, less than 10% of both oil and gas are in the OECD countries whereas over 40% of hard coal reserves are in such countries. Coal therefore attracts minimum political, economic or terrorist risk. Coal is secure.

The deployment of clean coal technology will thus enable coal to meet all four objectives set out by the Energy Review consultation – securing clean, affordable energy for the long-term.

The UK itself possesses substantial coal reserves, about 1 billion tonnes of which are potentially economically extractable. If international coal prices remain relatively high, then this figure could increase further. Indigenous coal is free of the volatility associated with international coal prices, exchange rates and shipping rates and reduces strains on a congested port and railway infrastructure. Sources of imported coal can also become concentrated under certain market conditions. In 2005, over 30% of the coal used in UK power stations came from Russia. Indigenous coal provides a hedge against such market concentration – see Section 8.

The UK's energy policy must therefore recognise the value of indigenous deep-mined and opencast coal and its contribution to a secure, reliable and diverse energy mix. Based on the latest DTI projections, coal will provide around 17% of total energy needs and around 34% of electricity generation over the next ten years. The value of coal was shown most starkly last winter, at a time of great instability in international gas supply, when around 50% of entire electricity generation for period was provided by coal-generated capacity. This may continue to be the case for the foreseeable future if as expected gas prices remain high.

4. CLEAN COAL POWER GENERATION IN THE UK

Given coal's undoubted advantages (security, price), we believe that the government's ambition should be to maintain at least the current coal-fired generation capacity in the UK (29 GW). The need to replace 13 GW (8 GW coal, 3 GW oil and 2.3 GW Magnox) of capacity *by the end of 2015* provides a serious threat to security of supplies but an opportunity for early investment in clean coal technologies whilst at the same time beginning to move the whole of the coal fleet to clean coal technology and ultimately to zero-emissions.

Current Fleet and prospects for Clean Coal plant

a) 20.5 GW of opted-in plant

These plants fitted with FGD will remain in operation at least until 2015 but potentially to well beyond 2020. By 2016, they will need to be fitted with

supplementary NOx control equipment to reduce NOx to 200mg/Nm³ as required by the LCPD. These plants emit between 850 and 950 g/kWh of CO₂. Although some reductions are possible (e.g. by biomass cofiring if the cofiring restrictions are relaxed), the CO₂ emissions from these plants will remain “locked-in” as long as gas prices remain high.

If replaced with modern high efficiency plant, CO₂ emissions could be reduced to 700 g/kWh and with biomass cofiring to 570 g/kWh. Ultimately, by fitting CCS the emissions would be less than 100 g/kWh. However, the opted-in plants are currently needed, operating profitably and unlikely to allow the downtime (~2 years) necessary for retrofits unless the carbon price becomes very large or Emission Limit Values (ELVs) for CO₂ are introduced. The Group’s ambition would be to have CCS fitted to these plants in the period beyond 2015, once the full chain of technologies and regulations for CCS are in place.

b) 11 GW of opted-out plant

These power plants are restricted to 20,000 hours of operation from 1 January 2008, and in any case must close by the end of 2015. The indications are that some plants will burn up their hours quickly and close early, whilst others will spread their hours thinly.

The Group’s ambition would be to see all these plants replaced by clean coal power plants, all operational by 2015.

The replacement plants should comprise a mixture of:

- (i) A number (around 4 GW) of new-build (or retrofit) plants with CCS incorporated. These first-of-class plants will demonstrate the full chain of CCS technologies for Capture through to Storage for the range of options necessary in the UK and globally.

The CO₂ savings from these plants would be 16 mt CO₂/year, compared to the baseload coal-fired plants which they should displace. The target electricity cost for these plants is £38-45/MWh, including CO₂ capture and compression ready for transport and storage.

- (ii) Around 7 GW of “capture-ready” New Build or Retrofits which would incorporate BAT and biomass cofiring with specific CO₂ savings of around 40% compared to the coal plants they would replace. It is envisaged that these plants would be progressively connected into the CCS network between 2015 and 2025, i.e., once the best CCS options are identified through the first-of-class projects [(i) above]. Once CCS is operational, the CO₂ savings from these plants would be 27 mt CO₂/year if compared to the old coal plant operating at high load factor, or 8.7 mt CO₂/year compared to gas-fired CCGTs (which would move to a load-balancing role). The target electricity cost for the capture-ready plant is £25/MWh (plus the cost of CO₂ allowances) and for the plant with CCS is £42/MWh, including the cost of capture and compression of CO₂ ready for transport and storage.

Timescales and Costs versus alternatives

It is important to recognise that the 11 GW of coal plant proposed here is only about half of the new generation capacity required by the end of 2015. It is assumed the rest will be made up of renewables and gas.

11 GW of coal-fired generation plant by 2015 is an ambitious requirement given the build time (4 years) and time required for consents. Full advantage must be taken of existing power plant sites (coal and oil) and their associated infrastructure (rail, road, water, transmission lines) and public acceptability, and of projects (e.g. Hatfield, SSE Ferrybridge, RWE, EON) which are already being planned. Resources in the generation companies and plant suppliers are also an issue and phasing of the build programme is essential (e.g. 2 GW project starts per year from 2006 to 2011).

It should be noted that the costs of electricity quoted above are very competitive, compared to electricity from gas (£48/MWh for a gas price of 50p/therm) or renewables.

5. IMPACT OF THE EUROPEAN UNION EMISSIONS TRADING SCHEME (EUETS) ON CLEAN COAL FOR CCS

The EUETS is based upon a progressive tightening of carbon allowances which will generate a market price for such allowances with the objective of stimulating investment in lower carbon technologies at minimum cost.

The EUETS is short-term with Phase I extending from 2005 to 2007 and Phase II from 2008 to 2012. This affords no long-term horizon to bring forward investment in new generating capacity to fill the emerging generation gap. Against this background, investors will elect to minimise risk and invest in gas because of its lower capital costs. The German new entrant model has awarded allowances for up to 18 years and this has brought forward significant new investment in gas and, particularly, very much higher efficiency coal. A UK framework needs to incorporate a similar approach to ensure investment in a mix of new plant.

There are various options available to Member States under the Scheme's rules. It is important for Phase II that the UK selects options which, whilst supporting the principles of the Scheme, do not compromise the other objectives of the Energy White Paper. The UK's draft National Plan for Phase II proposes fuel and technology specific benchmarks for existing installations. However, the benchmark for new entrants is based on gas. On this basis, new higher efficiency coal-fired plants will receive around one-third (38%) of the allowances they need, compared with around three-quarters (78%) for gas-fired plants. The result will be investment in gas by default. By contrast, the German model is fuel and technology specific. The proposed UK approach also contradicts the purpose of the Scheme which aims at ***promoting cleaner technologies and not cleaner fuels***.

The impact of the ETS on the proposed Clean Coal investment is quantified below.

a) Plant with capture equipment fitted or capture-ready plants

Excluding any allocated Allowances, power plants need to purchase allowances as follows (for 1000 MW, load factor 85%, and CO₂ allowance price of £17 (≡ €25/t CO₂):

	Specific Emissions g/kWh	Annual Emissions mt CO ₂ /yr	Cost of Allowances Needed
Existing coal	0.91	6.83	£116M
Existing gas	0.41	3.02	£51M
New Entrant clean coal (BAT)	0.75	5.58	£96M
New Entrant clean gas (BAT)	0.36	2.71	£46M

These costs are offset by the value of the free Allowances allocated under Phase 2 of the National Allocation Plan (NAP), leaving net cost of allowances to be purchased. Current proposals¹ are:

	mt CO ₂ /yr	Value of Allowances (@ £17 ≡ €25)	Net Cost of Allowances to be purchased
Existing coal	4.07	£69M	£47M
Existing gas	2.09	£36M	£15M
New Entrants (coal)	2.11	£36M	£60M
New Entrants (gas)	2.11	£36M	£10M

These proposals clearly disadvantage investment in New Entrant clean coal power plant versus existing coal-fired plant or new gas plant.

The Clean Coal Group believe that ETS rules should encourage each fuel to be burned in the cleanest way possible but for security of supply reasons should *not* be designed to encourage fuel switching. We therefore propose that New Entrants be allocated Allowances based on the relevant BAT benchmark for each fuel and a high load factor, and that these Allowances should be guaranteed for 14 years, as in Germany, i.e.

	Benchmark	Load Factor	Allocation mt CO ₂ /yr
New Entrant BAT Coal	750 g/kWh	85%	5.58
New Entrant BAT Gas	370 g/kWh	85%	2.77

¹ DTI New Entrant proposals consultation March 2006

This will create a positive incentive for investment in Clean Coal.

The investor will be left with the uncertainties of the price of gas, coal and CO₂ but nevertheless no further government subsidy should be needed, except for demonstration funding support for new technologies as proposed in the CAT strategy.

Similar action in Germany, combined with long term allocations, has already stimulated investment in clean coal power plants. This measure has the advantage that it can be implemented quickly without waiting for the results of the Treasury Review on CCS. Indeed, if the original proposal is implemented then a perverse disincentive for clean coal will be locked-in to the UK implementation of the ETS.

b) Capture and Storage projects

If the CCS plants are given CO₂ allowances as proposed above and if CO₂ stored is eligible in the ETS then the generator would be able to sell the allowances to offset the costs of CCS. Thus the ETS could offer a substantial incentive to investment in CCS. However, this is highly dependent on the actual CO₂ price (€25 assumed here).

For at least the tranche of first-of-class plants proposed here the support level needs to be firmed up. The Group proposes that generators wishing to invest in CCS projects should bid for government support in competitions similar to those run under NFFO. The bid would be for a guarantee of the difference between the support level needed (in £/t CO₂) and the actual CO₂ price, and would be paid on the basis of tonnes of CO₂ captured.

Additionally, CCS projects should be given full support (tax relief) for the whole chain of investment from the power plant through the capture plant to transport and storage.

6. OTHER BARRIERS TO CLEAN COAL POWER GENERATION

There are several other barriers which need government action.

a) Confidence in the future for coal in the generation mix

High level endorsement (see below) plus a clear statement in the Energy Review report that clean coal is essential in the UK energy mix, backed by government action on the barriers and incentives, is an essential starting point to give confidence in future coal-fired generation.

b) Legal infrastructure for CCS

The legal infrastructure for CO₂ storage needs to be established, including licencing of storage sites, monitoring and transfer of liabilities. This is needed for both onshore storage and offshore storage, and includes the necessary modifications/clarifications of the OSPAR and London Conventions to permit CO₂ storage offshore.

c) CO₂ gathering network

If the government's long-term CO₂ targets are to be met then in the medium-term, post 2020, all the coal-fired and gas-fired plant will need to be fitted with carbon capture and storage. CO₂ can and should be used for enhanced oil recovery in the North Sea or stored in depleted gas reservoirs and saline aquifers.

The economics of CO₂ transport improve dramatically with scale, hence there is a need to develop a plan for a CO₂ gathering network and trunk pipelines to the major storage/use areas – linking both power generation and energy-intensive industries to the network. The government should act to begin the planning of this network and facilitate its creation, taking advantage of redundant oil and gas pipelines and the existing offshore terminals on the East Coast (including Bacton, Theddlethorpe, Dimington/Easington and Teesside).

7. RESEARCH, DEVELOPMENT AND DEMONSTRATION OF CLEAN COAL POWER GENERATION

The Group acknowledges the successful introduction of Carbon Abatement Technologies to the DTI Technology Programme, as envisaged in the CAT Strategy. To date there have been two Calls of Proposals and a healthy set of projects is being developed.

On the other hand, progress on the Demonstration funding (£35M) announced last year is disappointingly slow due, we understand, to issues with respect to EU State Aid rules. At least two projects which will be candidates for this funding are being developed.

The State Aid issues are generic and capable of preventing support for all meaningful demonstrations of CATs, renewables, hydrogen and fuel cells, running counter to UK and EU policies on Climate Change, Security-of-Supplies, innovation and competitiveness. Since the State Aid regulations are under review, particularly with a view to better helping to encourage innovation, a high level input is needed from the UK government.

In future, additional support will be necessary for the first-of-class demonstrations of CCS. We have calculated the total cost of such support for five (3 GW) first-of-class projects based on three levels of subsidy and converted this into a cost-per-unit of electricity with the cost spread over all the electricity supplied in the UK. Clearly, five projects could be supported without significant impact on either the consumer or the Exchequer:

Support Level (£/t CO ₂) ²	Annual Cost	Uplift on electricity cost (p/kWh)
10	£150M	0.04
20	£307M	0.09
30	£461M	0.13

8. FUTURE ROLE FOR INDIGENOUS COAL

Buffer against uncertain world coal and gas prices

The current international coal market is putting increasing pressure on prices. The vast majority of our coal now comes from Russia and South Africa and with growing world demand there is no reason to believe this situation will change. In the past two years, world coal demand has increased by 100 million tonnes. As a result of changing international supply dynamics, Russian exports to the UK have increased significantly, but the rapidly expanding Chinese market is likely to divert some of this Russian coal away from Europe.

In this global context, domestic coal can provide some real benefits to the UK's energy mix. At a time when energy imports for power generation are forecast to rise year on year to around 75% of requirements by 2015 (DTI figures), indigenous coal provides both price certainty over increasing international market volatility and a secure supply from local sources. As existing coal fired plant is fitted with Flue Gas Desulphurisation and new clean coal capacity is built to replace the retiring coal fired fleet, UK mined coal will become increasingly desirable.

A future for UK electricity generation without domestic coal looks difficult. Imported coal volumes would increase, putting pressure on prices, increasing costs above forecast levels with a knock-on to power costs. Furthermore, the UK's import infrastructure and rail capacity would require substantial investment in order to enable larger volumes of imported coal to be transported effectively.

Coal suppliers in Britain are facing investment decisions to access new coal reserves which need certainty over income to allow the investment to be made. With appropriate contracts, UK deep-mined coal will be in a position to provide 8% of the UK's energy supply. This contribution could prove crucial at a time when 75% of our energy is being imported, particularly given the potentially unstable nature of imported gas and coal.

The successful resolution of these issues will help secure the long-term prospects of around 10,000 employees in the UK's deep-mined and surface coal industries, many of which are located in areas of high unemployment.

Contract structure to safeguard future domestic supply

² Support is difference between guaranteed carbon price and actual

Approximately 300mt of deep-mine coal reserves could be accessed from the seven remaining collieries with existing planning permission at affordable and stable prices below those projected for coal imports. This is dependent on immediate and ongoing capital investment, which if not forthcoming, effectively precludes future access. The first of these immediate issues will face UK Coal at Harworth colliery.

Deep-mined coal reserves represent a reliable and secure source of indigenous energy. These reserves can be extracted over the next 15 – 30 years, obviating the need for increased levels of imports at increasingly higher prices. A failure to invest in existing deep-mine infrastructure will result in the continuing decline in production to potentially just 4mt per year from 2008 from existing accessible reserves of 57mt.

A review of coal contracts and the operation of the coal market is now urgently needed if the domestic industry is to access the financing required to invest in deep mining beyond this level of existing limited reserves.

Existing contract arrangements

One of the major problems with existing contract arrangements is illustrated in the graph below. This shows the difference between prices paid for coal imports (the ARA price index) and domestic coal since 1995.

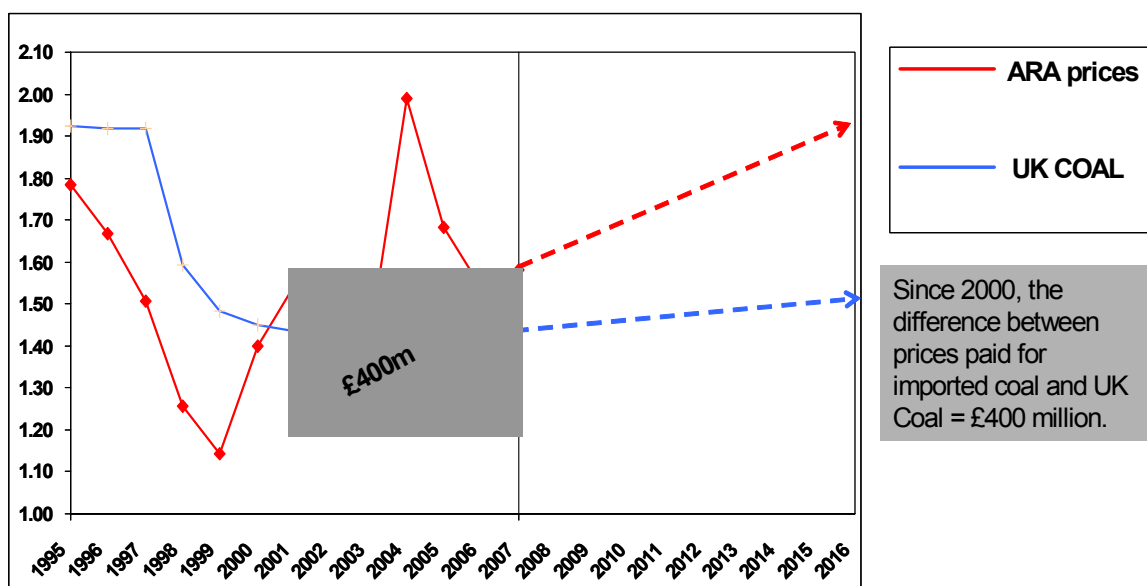


Figure 1 : Domestic v imported coal prices and indicative projection

Initially, imported coal was lower cost than UK coal but since 2002 the situation has reversed. As a result of low import prices domestic producers were forced into long-term fixed-priced contracts with generators at prices that reflected neither market value nor the true value of indigenous coal. Generators' purchasing strategies have consistently failed to recognise the benefits of domestically-mined coal, such as reliability of supply, proximity to suppliers, and the hedge value it can provide against international market volatility. A failure to break this behaviour model has resulted in generators' continuing to determine prices for domestically-mined coal at levels below international market rates. This additional uncertainty and discount represents

a further significant barrier to investment, and undermines the potential for secure domestic coal supply to underpin a more secure and diverse national energy policy.

New contracts to permit investment

An immediate solution is required to allow new contracts to be negotiated which recognise the value of domestic deep-mined coal, create a more equitable price negotiating framework between producers and generators, and allow producers to raise the capital investment required to access new coal reserves. New contracts should be negotiated which recognise the value of domestic coal. Key requirements include appropriate term, colliery/colliery group-specific, appropriate pricing and the reshaping of existing contracts so as not to impinge on new investments.

How Government can help

The Government should issue a *Statement of Need* for the domestic coal industry as part of the outcome of the Energy Review process. In the same way that the Secretary of State for Trade and Industry recently published a *Statement of Need* for new gas storage capacity, so too should the Government recognise the role of indigenous coal in the energy mix.

It is vitally important that a relationship between generators and producers is created which recognises the need for a secure domestic coal supply as part of the UK's energy policy. This must recognise that substantial investment will be needed in the deep-mined coal industry, and that this will not be available from the capital markets unless appropriate contracts are in place.

9. PLANNING ISSUES

Planning guidance covering coal extraction is rigorous in the extreme. There is no recognition of the need for coal. In England, a "presumption against" all new mining developments, deep or surface, unless certain strict tests are met was introduced in 1999. In addition, there is evidence that mineral planning authorities are not even properly applying the strict tests. Since 1999, English surface mine output has fallen from 7m to less than 2m tonnes a year. A presumption against indigenous production is a presumption in favour of imports.

In 2005, a similar presumption against surface coal mining was introduced in Scotland. Furthermore, this was combined with a 500m buffer zone round communities which will sterilise large coal reserves and make many sites unviable. Surface mine output in Scotland presently exceeds 7m tonnes a year and there is a real risk that it will now fall rapidly as has happened in England.

Draft planning guidance for Wales now proposes a 350m buffer zone which risks eliminating most surface mine sites. Surface coal production could fall to a very low intermittent level.

As a consequence, surface mine output has fallen from 15m to 10m tonnes a year over the past decade and is now likely to fall significantly further as a consequence of recent guidance in Scotland and Wales.

Such guidance does not apply to any other form of development and specifically not to any other mineral. It is thoroughly discriminatory.

The Government has recognised the importance of the planning system not impeding important developments in the energy field as witnessed by specific guidance for wind farms and recently proposed guidance for gas storage facilities. A framework for coal should include, at the very least, removing existing discriminatory guidance and ensuring, on energy policy grounds, that this is applied throughout the UK.

The following changes are proposed:

- Recognition of the need for coal as a material consideration.
- Removal of the presumption against.
- Replacement of arbitrary buffer zones by ones based on site-specific criteria.

If these changes were introduced, surface mine output could be increased back to 15m tonnes a year compared to the very low levels to which it will fall if existing guidance remains in place. Such changes will also remove discriminatory impediments to new deep mine proposals. They would then reflect guidance which now applies to all other minerals.

10. HIGH LEVEL ENDORSEMENT FOR CLEAN COAL IN BRITAIN

The Clean Coal Task Group noted the recent endorsements by the Prime Minister speaking at the CBI Conference of nuclear, renewables and energy efficiency as necessary contributors to the EWP objectives, particularly CO₂ reduction. His lack of mention of clean coal has caused considerable concern and was surprising in view of the earlier recognition (e.g. at Gleneagles) of the importance of clean coal globally and the priorities given to the Secretary of State on his recent appointment. High level endorsement of clean coal in the future UK energy mix by the Prime Minister and the Chancellor, as well as the Secretary of State and the Energy Minister, is essential to signal the government's intentions and must be accompanied by clear statements in the Energy Review report.

APPENDIX 1

THE CLEAN COAL TASK GROUP

The Clean Coal Task Group, a joint industry/unions/government advisory body, was formed as an initiative of the Trade Unions' Sustainable Development Advisory Committee, a joint TUC/DEFRA committee, with the following remit:

To identify an appropriate policy framework and supporting economic instruments and regulatory framework that would take forward the research, development and promotion and initiation of clean coal burn and carbon capture and storage technologies.

The Clean Coal Task Group believes a diverse portfolio of power generation sources including renewables, nuclear, gas and clean coal, combined with demand reduction, is necessary to meet the Energy White Paper objectives.

The group is focussed on:

- Developing a framework for the successful deployment of clean coal;
- Security of supplies and energy costs (and their consequences for fuel poverty and costs to industry) as well as emissions; and
- Employment opportunities in power generation, mining and equipment supply

Membership

- Dr Mike Farley (Chair), Director of Technology Policy Liaison, Mitsui Babcock
- Nigel Yaxley, President, EURACOAL.
- Phil Garner, Commercial Director, UK Coal.
- David Brewer, Director General, Confederation of UK Coal Producers
- Dr John Topper, Managing Director, IEA Clean Coal Centre.
- Michael Gibbons, Associate Director, Powerfuel Plc (the Hatfield IGCC project); and Executive Committee Member, British Energy Association.
- Dr Jim Penman, Head of Response Strategies, DEFRA.
- Brian Morris, Head of Carbon Abatement Technology Unit, DTI.
- Steve Kemp, National Secretary, NUM.
- Pat Carragher, General Secretary, BACM-TEAM.
- Bob Blackman, National Secretary, TGWU
- Philip Pearson, TUC Economic & Social Affairs Department.
- Dave Feickert, Coal industry consultant to TUC.
- Keith Burnard (Secretariat), Manager, DTI CAT programme.