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European Commission  
Directorate-General for Energy & Transport  
Ms Nina Commeau  
Rue de la Loi/Wetstraat200  
B-1049 Brussels  
29th November 2001

Dear Ms Commeau  
Re EC Green Paper – Towards a European Strategy for the security of energy supply

I have read the EC Green Paper and the following are my personal comments that I hope may be helpful.

2 A consistent and coordinated energy internal market? What should it consist of and where should competition rules fit in?

The UK is in a unique position in being nearly self-sufficient in natural gas but not for long. It has been allowed to double the use of its' gas by extending it to power generation in the last twelve years.

In the same period, the UK coal production has been cut in half even though the coal industry is achieving dramatic cuts in the price of their coal. They are currently aiming for £1.05 per GJ so, for example extended life coal-fired power stations could be kept at existing or enhanced levels. There are still 3656 million tonnes of coal used annually worldwide (1998) with China 1236 Mtes USA 936 Mtes and India 303 Mtes and UK at a modest 30Mtes.

Therefore to help in maintaining security of supply, the EC should allow coal to be used at the current levels or even higher, until the world use declines to substantially lower levels.

A similar argument of security of supply is being put forward for maintaining levels of nuclear power generation.

3 Are tax and State aid policies in the energy sector an obstacle to competitiveness in the EU or not? Should not the whole issue of energy taxation be re-examined taking account of energy and environmental objectives?

The cost of energy to consumers is on average about 4-5% of GDP and the EC Green Paper talks about imports being 1.2% of GDP. We are talking about a relatively small driving force for consumers to do something to change their energy habits. This applies generally to domestic, commercial and industrial users apart from the energy-intensive users such as power generators; process and transport industries have much greater incentives to be more efficient.

The UK has now achieved as liberalised market as possible in energy supply markets in gas and electricity according to recent OFGEM announcements. We still have the highest road fuel tax in Europe that is anti-competitive for our transport system.

The UK is offering a comprehensive range of grants if only people were taking them. But the problem could be that, petrol/diesel apart, there is not the cost incentive to do anything.

The use of condensing boilers is claimed to have an energy saving economic potential for the UK domestic energy use of 6.5 million tonnes of oil equivalent out of total domestic potential of 17.4 Mtoe and an overall total energy UK energy use of 300 Mtoe. (Ref UK Government PIU).

In order to make a step-change in take up, there should be a greater emphasis on legislation for mandatory use of higher energy efficient equipment only e.g., condensing boilers for replacing existing ones and high efficiency electrical appliances.

### 7 Renewable R&D, Investment and Operational Aid

The current UK New & Renewables R&D is reported to be £18M out of £60M and the DTI Energy Group spends £40M on energy research and technological development for new & renewable energy, cleaner coal, oil & gas and nuclear. For all EC Thermie and Alterner/SAVE monies, the UK obtains about £13M pa on average for all energy R&D from EC such as the Fifth Framework. Non-Fossil Fuel Obligation grants in the last 12 years amounted to possibly £100 million. This could also be counted as 'Development' but much of it went to infrastructure, buildings and demonstration of existing and new 'technology' maybe accounted for a third of this, say £30 million per annum. This gives a current UK Non-Fossil R, D, D & D expenditure of £88 million per annum.

This is a very small sum for such an important programme compared with US expenditure of \$1.4 billion dollars per annum for energy-efficiency and renewables r&d programmes.

There is a need to greatly improve energy R,D,D & D expenditure on renewables.

The EC Green Paper comments on the fact that the nuclear industry benefited enormously from Government funding in the early days and so should renewables. It also suggests that revenues from oil & gas should be used for research into renewables.

There is need for accelerated development of PV systems to drastically lower costs and market take-up but commercial companies like BP is no doubt doing this.

### 8 Nuclear Energy as one answer to Climate Change

It could be argued that as Nuclear is carbon-free and has already had large investment programmes, then it would be a waste of those programmes if a sufficient amount of R & D money was not spent to research more fully the 'hazwaste' and storage problems.

9 The Policies for a) the EC to best perform its obligations within the Kyoto protocol and b) the measures to be taken to exploit fully potential energy savings

- a) In the UK the cost of domestic and industrial energy is too cheap (fuel poverty apart); natural gas is being used up too fast so that we will become dependent very quickly on gas imports unstable suppliers; new ways to drastically improve uptake of renewables and energy savings schemes are required; difficulties in overcoming objections to more nuclear power or even maintaining existing levels is a real problem; rapid increase in growth of transport sector (might be self-correcting for air after 11<sup>th</sup> September).
- b) Similar to comment in 3)

12 Energy Savings in Transport – imbalance in Road and Rail in particular.

In the UK it is pretty self-evident that the Public Transport system is poor, whether rail, bus or tramways, although there are some bright spots, for example Sheffield/Croydon has a new tramway system. The Local Authorities have, for a long time, had a duty to come up with Agenda 21 ideas on this. The EC could give special consideration to UK's special needs in this matter.

The aircraft industry is expected to maintain the drive for more fuel efficient aircraft, already 70% reduction in fuel used per passenger seat since the days of the first Boeing 707. There is still a potential for considerable improvements from improved engine technology, improved lift/drag ratios, reductions in aircraft weight and improved operational techniques etc. Cars are coming on the market with increasingly lower fuel consumption - down to 60-100 mpg (Audi 2 and Volkswagen Lupus) for diesel is being claimed.

13 How can we develop more collaborative visions and integrate the long-term dimension into deliberations and actions undertaken by public authorities to evolve a sustainable system of energy supply?

UK Governments has already done this very well in their Energy and Environmental Policies, Publications, Consultations, Legislations, Demonstration Schemes and Obligations but the big question is how effective they have been against the background of Competitive World Market Forces in energy services?

The 1998 book Factor 4 - a follow-up of the Club of Rome's 1972 book 'Limits to Growth', states that existing technologies can bring reductions in energy use such that the world could produce twice the output with half the resource. The arguments are cogent in the extreme and a great challenge to the EC politicians and to Engineers.

Yours sincerely

Michael Knowles

