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AT THE

ENERGY SYSTEMS ANALYSIS INTERNATIONAL CONFERENCE

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## ENERGY IN TRANSPORT.

In the Community we have to ensure our energy supplies and make rational use of all energy available, and one thing is clear: there will be relatively less oil available in the future. Of all sectors of the economy, transport is the most dependent on oil fuels. More than 90% of all transport fuels are consumed directly by the different modes of transport. Even electric railways etc. depend in part on oil-fired power stations. It will take time, money and some important technical breakthroughs to reduce the almost total dependence of the transport sector on oil-based fuels to any significant extent.

Furthermore, each mode of transport is closely tied to its own cut of the barrel; private cars to petrol, other road vehicles and railways to diesel, airways to aviation spirit and so on. A high proportion of the lighter fractions of the crude oils available in the Community are used in one mode of transport or another; much less use is made of the heavier fractions.

Other fuels such as coal which can be brought in to reduce the Community's dependence on oil are not nearly so suitable for direct use in the transport sector. And the environmental conditions under which these fuels are burned can also be more closely controlled in fixed plants.

On the other hand, a substantial quantity of gas-oil is used to heat homes and for other stationary uses. If we can find substitutes over the years and transfer some of this gas-oil to the transport sector, then I believe we shall have improved the balance of energy use in the economy as a whole.

As you can see, I am making a plea for certain oil products, particularly the liquid fuels such as petrol and diesel oil with their high energy content to be reserved for the transport sector.

Now, if the transport sector is going to appeal for special consideration when the Community's diminishing supplies of oil are being shared out, it is only fair that a major effort should also be made to economize on the use of fuels in transport. This introduces the thrift aspect of the Community's energy policy and the need to pursue economic growth at lower levels of energy consumption.

We have started with improvements which would not threaten the mobility of goods and people and the economic activities, such as tourism and trade which depend on preserving this mobility.

In June this year, the Commission published a communication on "new lines of action" which deliberately focusses on the immediate priorities and is not intended to be a comprehensive strategy for energy saving in transport. It recognizes:-

- firstly, that private cars account for over half of the oil fuel used in transport in the Community;
- secondly, that changes in consumer attitudes are just as important, indeed more important than technical improvements in the vehicles themselves;
- lastly, that rapid progress can best be made through a voluntary and co-ordinated effort by the Community, Member Governments and the motor and oil industries.

A standard consumption test for cars, which enables owners and prospective owners to compare the fuel consumption of different models on the market in typical urban driving and at constant speeds of 90 and 120 kph (56 and 75 mph) is already in use in France and the United Kingdom and is being introduced in other Community Member States. We aim to make this information available to all consumers in the Community.

A voluntary target for reducing the fuel consumption of new cars by 10% between 1978 and 1985 has been agreed between the Government and the motor industry in the United Kingdom and similar schemes are being negotiated at the moment in the other major car-producing Member States. We shall be making the maximum use of these schemes in the Community not only to spur competition between manufacturers to improve the efficiency of their models, but also to promote the interest of the driving public in energy efficient cars and economical driving habits. The heavy-footed motorist can cancel out a great deal in the way of technical improvements to the car he drives.

Our next priority must be to look at the structure of energy use in transport over the next few years. In Europe, the pattern of consumption of the various fractions of the barrel corresponds more or less with the natural split of the crudes we have available. But if private cars, running on petrol, start to take a much larger share, as they already have in the United States, the oil companies will have to invest in expensive cracking plant to produce more of the lighter fuels; a process which will itself increase the energy cost of the fuels produced.

One way to redress the balance is to encourage the wider use of diesel versions of private cars and this will also marginally improve the energy efficiency of the fleet. Liquified Petroleum Gas, which is already being successfully used as a motor fuel in some countries is another possibility for reducing our rather inflexible dependence on petrol in the private car sector. Both of these fuels have advantages from the environmental point of view.

The Commission is also looking at the use of taxation policy in the Member States as a spur to energy economy and as a means of improving the balance of energy use in transport.

In the longer term, oil fuels will become scarce in transport, as in other sectors, and substitutes such as alcohol will have to be introduced.

Electric traction on a large scale could greatly improve the flexibility of fuel use in transport. Railways are an obvious example here, but the use of electricity, particularly in the large private car sector, is still hampered by the problem of developing batteries which will allow the same mobility as oil fuels.

But unless we press on with research into replacements for petrol and diesel fuel, we risk being caught, in a relatively short time, with no large-scale substitute at all.

In commercial road traffic and in other transport modes, it is going to be just as important to look for energy savings in the framework of transport policy:

- by making fuller use of available capacity,
  - in planning investment in transport infrastructure,
  - by examination of the effects of taxation policy ,
- and so on,

as to experiment with technical improvements in the equipment itself.

One of my main priorities in the coming year will be to see that our objectives for the rational use of energy are introduced into all aspects of the European Community's transport policy.

Now, I should like to look quickly at the idea of a contingency plan for responding to the sudden development of an energy crisis. Many essential raw materials are both scarce and expensive. The problem with energy, and with oil in particular is that the sources of supply are uncertain and are liable to be curtailed abruptly from time to time for reasons largely beyond our control. Even if the European Community can develop and follow through a successful medium-term strategy for rational energy use, a sudden crisis can still have a damaging effect on the economy.

I think the solution to this problem may be:

- firstly, to install some strategic capacity for increasing the flexibility of energy use. For instance, to invest rather more in dual-fired power stations, to extend electrification of our transport system and to introduce new fuels at a more rapid pace than would be set by normal market forces. Almost every country spends money on expensive armaments to meet a possible threat to its security: investing in an economic "controlled response" seems to be equally justified.
- secondly, a jointly agreed plan to cut energy consumption drastically for a short period in selected fields. This may include voluntary reductions of mobility.

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The examples I have quoted are only illustrations and are not intended to be firm recommendations at this stage.

Finally, there is the possibility of reducing the volume of transport and encouraging different modes of personal mobility on a more permanent basis. There is a clear case, for instance, for much greater use of public transport in towns, both on energy saving and environmental grounds. Driving in town accounts for half of the total fuel consumption in private cars. Greater use of car pooling and other forms of transport for urban journeys would improve both flexibility and economy in energy use, with minimum sacrifice of personal mobility.

More drastic measures such as fuel rationing or car-free days and weekends can be limited to an immediate short-term response to sudden energy crises.

In the longer term, transport costs for both passengers and goods are likely to increase in relation to other costs and this will ultimately influence the siting of factories and warehouses and even urban and regional development.

But this brings us a long way beyond the practical energy saving measures that we all should be planning for while the recent problems in Iran are still fresh in our minds. Nevertheless, these reflections could be important yet.