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Report

drawn up on behalf of the Committee on Energy, Research and Technology

on the conclusions reached at the hearing of experts on the safeguarding of the European Community's energy supplies, and on cooperation with the third countries concerned

Rapporteur: Mr. S. LEONARDI

PE 36.924/fin.



On a proposal from the President of the European Parliament the Committee on Energy, Research and Technology decided on 20 June 1973 to hold a hearing of experts on the safeguarding of the European Community's energy supplies and on cooperation with the third countries concerned.

By letter of 26 November 1973 the committee requested authorization to draw up a report on the results of the hearing.

Authorization was given by the President of the European Parliament in his letter of 6 December 1973.

The committee appointed Mr Leonardi rapporteur on 18 February 1974.

It considered the draft report at its meetings of 24 May, 6 June and 17 June and on 1 July 1974 adopted the motion for a resolution and the explanatory statement unanimously.

The following were present: Mr Springorum, chairman; Mr Leonardi, vice-chairman and rapporteur; Lord Bessborough, Mr Burgbacher, Mr Covelli, Mr Delmotte (deputizing for Mr Müller), Mr Flämig, Mr Glesener, Mr van der Hek, Mr Hougardy, Mr Jakobsen, Mr Krall, Mr Lagorce, Mr Memmel, Mr Noe', Mr Nørgaard, Mr Pintat, Mr Vandewiele and Mrs Walz.

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The Committee on Energy, Research and Technology hereby submits to the European Parliament the following motion for a resolution, together with explanatory statement:

MOTION FOR A RESOLUTION

on the conclusions reached at the hearing of experts on the safeguarding of the European Communities' energy supplies and on cooperation with the third countries concerned.

The European Parliament,

- having regard to the report of the Committee on Energy, Research and Technology (Doc. 185/74)
- having regard to former resolutions on energy policy and in particular:
  - on immediate measures needed to alleviate the energy supply crisis in the European Community<sup>1</sup>,
  - on appropriate medium and long-term measures for the further alleviation of the energy supply crisis in the European Community<sup>2</sup>,
- 1. Notes the results of the hearing of experts outlined in the accompanying explanatory statement;
- 2. Instructs its Committee on Energy, Research and Technology to take account of these results when considering any energy policy measures referred to it;
- 3. Requests the Council and Commission of the European Communities to take into account the results of the hearing of experts when implementing common energy policy measures;
- 4. Instructs its President to forward this resolution and the report of its committee to the Council and Commission of the European Communities.

<sup>1</sup> OJ No. C 2, 9 January 1974, p.46

<sup>2</sup> OJ No. C 40, 8 April 1974, p.55

## EXPLANATORY STATEMENT

I. INTRODUCTION

1. Following an invitation by the President of the European Parliament, the Committee on Energy, Research and Technology decided at the end of 1973 to arrange a hearing of experts on energy matters. The hearing was to be devoted to questions concerning the safeguarding of the European Community's energy supplies and cooperation with the third countries concerned. The information supplied by the experts was to be the starting point for this report, drawn up on our committee's own initiative.

2. The hearing of experts was held on 29 and 30 April 1974. A detailed questionnaire (PE 36.603) was sent to those concerned.

The following experts were present:

- Professor Arnaldo ANGELINI  
President of ENEL
- Professor Dr Gerhard BISCHOFF,  
Scientific director of the  
Beratungs- und Forschungsgesellschaft  
für Energiefragen mbH
- Mr Louis DE HEEM  
Chairman of the Committee for  
the European Communities of UNIPEDE
- Mr Pierre DESPRAIRIES  
President of the Institut Français  
du Pétrole
- Mr Paul H. FRANKEL  
Energy expert
- Sir John HILL  
Chairman of the United Kingdom Atomic  
Energy Authority
- Mr Baahman KARBAFSIOUN  
Representative of the Secretary-General of  
the Organization of Petroleum Exporting Countries  
(OPEC)

The Committee on Energy, Research and Technology would particularly like to thank the experts for taking part in the hearing and for their assistance.

II. POSITION OF THE EXPERTS

Question: In the ten years from 1960 to 1970 the Community's annual energy demand rose by 6.2%. Is this rate of growth likely to continue in the foreseeable future? If not, why not?

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3. No substantial decline of the growth in the Community's energy demand can be anticipated on the basis of present data, at least in the medium term. It may be possible to reduce energy consumption by raising prices, but this method involves the risk of economic recession.

The studies now being carried out by various countries and organizations are intended to find ways of reducing potential demand by 15-30% before 1985. These figures should be compared with UNIPEDE's forecast that the annual reduction in the demand for energy in the Community will be at most 20% in comparison with previous developments.

4. As regards oil consumption, a more substantial reduction than for other energy sources is foreseen. The increase in oil consumption should be around 2 to 3% annually. In terms of volume, this means that world oil consumption would reach 3,000 million tons in 1976 and 4,000 million tons in 1985.

The financial effort which oil policy will necessitate if an adequate level of supplies is to be maintained should be emphasized. The Chase Manhattan Bank estimates that world oil investment should be in the region of 1350 thousand million dollars for 1970-1980. Other experts consider that the figure will be higher.

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Question: What energy sources could meet this or a reduced rate of growth? Is it possible to say approximately how this rate of growth will be spread over the various energy sources? If so, what would the spread be?

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5. At present it is impossible to define the contribution of the different energy sources towards meeting the rate of growth of energy consumption. This impossibility is all the more striking in the case of new technology, where breeder reactors or nuclear fusion, for example, are concerned, methods which will not be used until the distant future, and which cannot therefore be included in estimates as yet.

6. UNIPEDE considers that, given the present state of technical development, electricity may account for half the increased demand for energy in 1980-1981, Electronuclear energy could meet more than 3/4 of the increase in energy demand as a result of a twofold substitution - from hydrocarbons to electricity at the utilization stage and from fossil fuels to uranium for electricity generation. For that to happen, however, environmental problems relating to nuclear energy must be dealt with more rationally in the Community as a whole and, in particular, more speedily, taking account of the real problems, weighing up more accurately the advantages and disadvantages involved and ignoring imaginary fears which experience has shown unfounded.

In the immediate future - that is to say, during the next five years - the increase in energy consumption will continue to be met mostly by oil, and to a lesser extent by natural gas. Oil production costs will rise steeply.

7. According to a forecast made by the OECD, Western Europe's energy consumption in 1985 will be 1900 million tons of oil equivalent, 55% being met by domestic sources. Primary electricity (hydro-electric and nuclear) would make up 23% of these domestic sources. These forecasts, which obviously anticipate large investment, especially in electricity, mean that in 1985 oil imports would amount to 800 million tons as against 700 million tons today.

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Question: Is it likely that the estimated contribution of nuclear power to energy requirements will actually be available? If not, how could the shortfall be made up?

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8. Well before the energy crisis, the primary nuclear source was considered the most important alternative to organic fuels. Recent events have given weight to this assumption by leading to a considerable speeding up of nuclear programmes. Particular attention should therefore be paid to the factors governing the development of nuclear energy.

9. As regards availability, and access to nuclear fuel sources, the medium- and long-term problems are different to and easier to solve than those of conventional fuels. There is a need to intensify the search for and production of natural uranium but the development of breeder reactors will, in due course, ensure that fuel supplies are adequate. In addition, the Eurodif and Urenco projects seem an adequate guarantee for Europe's future supplies of enriched uranium.

10. The reliability and availability of nuclear plants are of particular interest to their operators and builders. In 1972 and 1973, for example, the world's nuclear power stations produced only 61% of the energy which would under normal circumstances have been produced if their power had been available without interruption. Nevertheless, there is reason to hope that nuclear plants will function as well as conventional ones after certain 'teething troubles' have been eliminated.

11. Nuclear plants were already competitive with conventional plants before October 1973. There were, however, some reservations about the lesser availability of nuclear power stations. At present, after the exceptional rise in the price of fuel oil, there are no doubts as to the competitiveness of electrical energy of nuclear origin with conventional energy.



12. The safety of nuclear installations is at least equivalent to that of the safest industrial installations. This is a result of the exceptionally strict safety regulations in force in all countries. Nevertheless, public feeling against nuclear plants is aggravated by intensive anti-nuclear propaganda. Such a situation could seriously limit the contribution which nuclear energy could make towards solving our energy problems. It is therefore very important that a supranational authority such as the European Community should express objective opinions as regards the safety question. Such an authority should also take action to arrange for the storage of radioactive waste.

13. A serious problem is the availability of financial resources for the investment necessary for the development of nuclear energy. To illustrate the scale of the problem, it should be pointed out that the overall cost of a nuclear plant with a power of 1000 MW is about \$ 500 million, whereas the cost of a conventional plant of the same power is about \$ 250 million.

If the installed nuclear power in the Community is to increase from 50 million KW in 1980 to 250-340 million KW in 1990, the investment involved would be between \$ 100,000 million and \$ 150,000 million at 1974 values. Between now and 1980, investment in the Community on new nuclear installations would be about \$ 20,000 million at 1974 values.

14. The development of nuclear production has a positive influence on the balance of payments, especially for countries which are poor in primary sources of energy.

To illustrate the extent of such influence, it need only be pointed out that one nuclear plant of 1000 MW can produce 7,000 million kWh annually, and that during the estimated 25 years of the plant's life the total production will be 175,000 million kWh. Since the difference in cost between fossil fuel and nuclear fuel amounts to more than 1 cent per kWh, each nuclear power station of 1000 MW could, at current prices, contribute approximately \$2 thousand million to the balance of payments during its service life.

15. The development of nuclear energy depends very much on the market situation. Unless there is a considerable increase in electricity consumption in the home and in industry, the lack of outlets may well retard the development of electricity production.

Question: How will the prices of the different sources of energy develop? Will price trends as between individual energy sources be more uniform than in the past?

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16. The question of how prices will develop should be considered as a function of time.

In the immediate future, the reference price will be the price of oil, determined unilaterally by those who control its production. In the current year the increase in the price of oil in real terms (at par) could be about 8%. This situation clearly illustrates Europe's mistake in not retaining an energy base which would have made it possible for Europe to control the development of oil prices. For the Community, the immediate future will be difficult with erratic prices. These difficulties are taken partially into account in the forecasts of revenue obtained for oil by the OPEC countries, which amount to \$85,000 million for 1974.

17. To turn to the period after 1985, if the consuming countries maintain their efforts to invest in energy, there is reason to anticipate a fall in energy prices compared with the prices which the oil-producing countries would like to see. The prices before tax of alternative sources of energy are generally lower in Europe than the price of Middle East oil, which varies between \$8.50 and \$9.50 per barrel. In constant dollars, the production costs of North Sea oil, for example, currently amount to between \$1 and \$1.50 per barrel before tax. Nuclear energy costs the equivalent of \$3 or \$4 per barrel. As for deep sea oil (1000 metres), present indications are that this oil should be produced at a price of \$3 to \$5 per barrel. These prices, before tax, would be \$5 to \$8 for oil extracted from tar sand and shale and \$6 to \$10 per barrel of oil equivalent for American coal.

It can therefore be argued that if in 1985 the Community has reached its objective of 55% domestic energy, the average price for energy would be situated somewhere between the European price before tax and the imported price which consists largely of taxes. In the long run, therefore, the price of energy would not necessarily rise to the highest level.

18. This view is disputed by those who consider that even if energy imports into the Community eventually only amount to 30% or 20% of the energy consumed, the Community would have to pay for these imports, which are necessary for its economy, whatever the price. And ultimately, the prices of the different energy sources would be aligned with this price.

Question: Will it be necessary and possible to gasify or liquefy the solid fuels available and under what economic conditions and within what period could this be done?

In the European Community only coal is available on a large scale as a domestic source of energy. Will the present production capacity be maintained, increased or further reduced, as provided for in some national plans?

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19. Clearly the liquefaction of coal to obtain oil will not be a realistic solution for at least 20 years. This is apparent from the figures. US imports of oil amount to 250 million tons a year. Three tons of coal are needed to obtain 1 ton of oil, allowing for the process heat replaceable by nuclear energy. 750 million tons of coal would therefore be needed to obtain the 250 million tons of oil imported at present. The annual coal production of the United States, a leading country in this field, is about 530 million tons.

As regards Europe, the problem of liquefying coal is complicated by the costs of European coal and the inadequate quantities available. It is not reasonable to consider increasing imports of American coal at a time when the general trend is to reduce such imports.

20. The question of gasification in coal mines is different. But here, too, it should be borne in mind that the future prospects of this process are not great, in view of the limited coal resources in Europe, and because it seems that the geological conditions necessary for underground gasification are not to be found in Europe.

Finally, nuclear energy is needed for this process, which is also a factor in delaying its use.

We may therefore conclude that oil will continue to be used, for 30 years at least, wherever it is impossible to replace it by another source of energy.

21. It should be emphasized that Community coal production was held back considerably in the past by the low price of oil. If our policy is now to reduce the Community's dependence on imported oil, then domestic sources of energy, and especially coal, should be developed within reasonable economic limits. Recent increases in oil prices have certainly pushed back these limits and made Community coal more competitive.

Question: Heavy fuel oil can largely be replaced by solid fuels. Are there indications that economically viable methods could be developed to build installations designed to convert residual oil into light products with a lower sulphur content? How long is this likely to take?

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22. The transformation of heavy fuel oil into light products at present involves no technical problems. As well as the conventional processes, there are more recent processes, known as direct conversion, which could be perfected within two or three years.

With the direct conversion processes, it is possible to limit the residue of heavy fuel oil to 10% or 20% of the quantity processed. Desulphurization varies from 50% to 90%, depending on the process used. Although the technical problem has been solved, the problem of investment still exists. It is considered that these necessary installations would increase the cost of the refineries by 50% to 100% if all heavy fuel oils were treated in this way.

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Question: What new production developments can be expected in known oil fields?

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23. From the point of view of physical availability, known and available world reserves amount to 90,000 million tons. (If the annual growth rate in oil consumption of 7% had been maintained, oil deposits would have been exhausted by about 1990.) The level of world deposits can now be estimated at 250,000 - 300,000 million tons, half of this in the OPEC countries. Between now and 1985 the oil industry will require world investment in the order of about 1350 thousand million dollars, or even more.

The deposits now being discovered are increasingly small. For example, the deposits in Alaska will produce 100 million tons annually in 1978, this figure being the equivalent of the annual growth rate in consumption in the United States.

24. The results obtained in the North Sea are perhaps more encouraging, as they seem to confirm geologists' theories that the most recent marine sedimentary basins offered better prospects than land sedimentary basins liable to contain oil. Although at present, exploration is only being carried out at depths of up to 300 metres, there is still a possibility that large quantities of oil will be found at depths of 1000 to 3000 metres. There would, of course, have to be progress in technology before advantage could be taken of this.

25. In North America 850,000 oil wells produce the same quantity of oil as 2,600 in the Middle East. The average daily production of one well in the United States is 2 tons, as against 600 tons in the Middle East. The implementation of a self-sufficiency programme in the US implies a considerable demand for exploration equipment and specialized manpower. One consequence of this energy policy is a reduction in exploration capacity which has had repercussions on activities in the North Sea.

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Question: Will the United States' and Canada's crude oil supplies from tar sands and shale be made available on the European market as well? What are the prices likely to be?

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26. The production capacity of oil from tar sands and shale is very limited in the context of world demand. It is estimated that it could not meet more than 5% of demand at an average price of \$10 per barrel.

North American reserves of tar sands which are economically exploitable (less than 50 meters deep) correspond to about 3,500 million tons of oil, or 3 - 4 years of North America's oil consumption. Any more than this would require extraction at a greater depth.

27. As for the Canadian project, which is the most ambitious, investments of \$20,000 million could lead to 125 million tons of oil being produced annually from tar sands, as from 1985.

28. The exploitation of shale reserves involves considerable technical and ecological problems (the large quantity of water necessary; excavation, since 8-10 tons of rock must be extracted to obtain one ton of oil).

According to the most optimistic forecasts, the United States could produce 75 million tons of oil from shale in 1985.

The exploitation of tar sands and shale in North America should therefore not be considered as a hope for Europe, except indirectly in that the quantities of oil produced by this method would alleviate the problem of world supplies.

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Question: What are the first new energy sources that could be economically exploited and when could they be available?

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29. The first new energy source which could be economically and rapidly exploited is without any doubt nuclear energy. It could be used to meet needs other than the production of electricity, e.g. to heat urban centres.

Another step forward in the nuclear sector is that of high-temperature reactors which are even capable of making an economically viable contribution to hydrogen production. It is impossible to estimate when thermonuclear fusion will be brought into use. The most optimistic forecasts are that a prototype will be put into service in about 1990.

30. Solar energy is certainly only a partial solution, with limited and specific uses such as the heating of private homes. In the longer term, it would be possible to use solar energy to desalinate sea water, thus helping to solve the problem of water supplies.

Geothermic energy, the production of which is restricted to a small number of zones throughout the world, could only play a supporting role to other sources of energy. The same applies to wind energy.

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Question: How can energy be saved without reducing economic prosperity and social progress?

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31. The existence of cheap and abundant energy sources has not encouraged our society to use them prudently and economically. Energy can be saved without reducing economic prosperity and social progress by increasing efficiency of utilization, reducing losses and by giving preference to the most highly-developed forms of energy and those most suited to rational use.

32. Recent studies<sup>1</sup> have shown that in the Community, losses are as high as 2/3 of available energy; this energy wastage is made up as follows:

35% in the production and conversion system,  
3% in distribution,  
26% in the home,  
17% in transport,  
19% in industry.

In particular, energy should be saved:

- by defining new building standards to improve insulation;
- by manufacturing domestic and industrial appliances which require less energy;
- by recycling materials and waste;
- by developing public transport;
- by abandoning systems such as that of urban heating, which cannot be regulated efficiently and which are responsible for unduly large losses in distribution.

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<sup>1</sup> Report by the European Committee for Research and Development, 7 March 1974

### III. Analysis of the information given by the experts

33. The hearing which was arranged during the period when the Community countries' energy position was at its most critical, particularly as a result of the oil supply crisis, should have given some indication of the nature and seriousness of the situation and the possibilities of remedying it.

Its results should be evaluated from this point of view.

It emerged that there was a strict relationship between the increase of energy consumption and economic growth which could be thought of as the elasticity of the total demand for energy with respect to gross domestic product. In recent years, the low prices of imported oil have obviously encouraged the use of this energy source, influencing both the growth and distribution of consumption. It was felt that the annual rate of growth of energy consumption, particularly oil, consumption, could be reduced while maintaining income and growth. The experts, however, were agreed that this reduction could not be very large.

34. If this reduction were concentrated on oil consumption, imports would still not fall in absolute terms but their increase would be contained and previous forecasts would have to be revised. The EEC will therefore remain heavily dependent on third countries for oil supplies and oil will continue to be its main energy source for many years.

It was pointed out that a reduction in the degree of Community dependence would have little real effect since the residual amount would still be essential for the survival of the EEC countries and would therefore have to be obtained at all costs.

35. Ensuring security of supply is therefore extremely difficult and economic and financial problems arise as a result of the deterioration in the terms of trade which mostly stem from the rapid increase in the prices of oil and other primary products.

The present situation and the conclusions reached at the hearing do not give the impression that the elasticity of energy consumption with respect to income (effect on demand) can be changed in the immediate future.

36. Attempts to achieve security of supply, stable prices, etc. must therefore mostly, though not exclusively, be directed at radically altering the structure of energy supplies. Discussion generally focussed on this point and it was recognized that it was almost impossible to radically alter the present situation in the short or medium term (10 to 15 years).

Many possibilities were examined from this angle. One of the solutions discussed was prospecting for and the exploitation of new oil deposits. There was a difference of opinion as to how useful this was particularly as to the potential results of increased exploration of the sea-beds whose contribution has grown rapidly over a few years and already amounts to 19% of total oil production. However, the experts at the hearing seemed to agree on the following points:

37. Oil consumption cannot continue to increase at the same rate as in the past because, whatever happens, there is little likelihood of the discovery of a new 'land of oil and honey' such as the Middle East, the intense exploitation of which has made the recent large increases in consumption possible. The trend which prevailed up to 1970 will be reversed and the production costs of crude oil will continue to grow, necessitating heavy investment. The scale of this investment can obviously only be estimated approximately but it will certainly be large and may, in the short and medium term at least, run into difficulties over the availability of equipment and trained staff for prospecting.

38. It was pointed out that the need of the USA for a large quantity of men and equipment to carry out their internal prospecting programme was drawing such resources from other parts of the world, the North Sea, for example. However, Europe certainly cannot rely on oil supplies from the USA and the only favourable effects will be indirect as the fall-back in American imports reduces the pressure on the world market. It must be remembered that, together with the favourable effect, there will be unfavourable ones as the United States' increased use of materials on its national territory to obtain security of supply will draw them away from prospecting in other parts of the world, even where it is more promising.

The possibilities of extracting oil from shale, sand, etc. do not change the overall picture. The experts at the hearing thought that these processes were of minor importance.



39. It was generally felt that nuclear energy offered the greatest chance of altering the structure of supplies, particularly in connection with a shift to electricity as a form of energy. Other possibilities of using nuclear energy as a primary source for heat production and accompanying developments in consumption habits in the coal and steel and chemical industries, hydrogen production etc. were not, however, ignored.

The suggestion that there might be ecological or other risks involved in the use of nuclear energy was emphatically dismissed and belief in their existence attributed to misinformation. The need for heavy investment and the difficulties of achieving major nuclear programmes, given the present limited industrial capacity for plant production, were, however, stressed.

40. Those present felt that the structure of supply could not be significantly altered in the short and medium term by increasing coal extraction and developing new methods of using it but that, taking account of overall growth, coal would continue to provide roughly the same proportion of total supply, with variations from one country to another.

41. All the other possible sources (solar, wind and geothermal energy, etc.) were generally considered to be relatively insignificant in terms of the overall balance of supply and in the short and medium term though they might be used as a supporting, or even the only source, for some specific uses.

#### IV. The experts' position and consequences for an energy policy

42. Setting aside all the other problems relating to energy policy (multinational companies, etc.) to be dealt with on other occasions on the basis of more general documents (e.g. the Commission's new document 'Towards a new strategy on energy policy') for which the hearing does some of the factual groundwork, and considering only the exchange of views and the information which emerged from the hearing, the following points should be made with a view to taking them up in committee.

43. The most important point relates to the interpretation of the opinions expressed in relation to the low elasticity of energy consumption with respect to economic growth. The question is whether it is a technical, and therefore absolute, phenomenon or a simple projection based on the changed relative price of energy (particularly oil) compared to other goods and services.

At the hearing, there was no unanimous agreement on the possibilities of influencing the demand for energy. Mr Bischoff held the most extreme view that, as from next year, the rate of increase of oil consumption would fall from 7% to 2-3% so that world consumption would increase from 3,000 million metric tons in 1976 to 4,000 million metric tons in 1985. Mr Despraïries, held a similar view and predicted that oil consumption in France in 1985 would be 10-35% higher than at present whereas previous estimates had forecast a 75% increase.

44. All the other experts asked were much more cautious about the possibility of reducing total energy consumption and oil consumption in particular. They referred only to the possibility of reducing the growth rate slightly below its previous level. No mention was made of the possibility of reducing oil consumption by arbitrary measures, i.e. making a political choice backed not only by a change in relative prices but by restrictive policies such as rationing for certain types of consumption, the reduction of temperature in domestic heating and such like.

45. However, this possibility should perhaps be considered under certain circumstances, to be defined, so long as it does not interfere with economic growth. There may be means of exerting a greater influence on demand other than those referred to in the hearing which primarily concentrated on the structure of supply and possible changes in it.

In the light of the general opinion that in the long run the technical possibilities may be different, it seems necessary to concentrate on the short and medium term.

46. The next 10 to 15 years must therefore be considered the critical period and the position of the Community as a whole and of its individual members must be evaluated, taking account of the views expressed during the hearing. In particular, an assessment must be made of the balance of payments deficit and means of financing it and the possibilities of using alternative sources, given the constraints of finance and industrial capacity.

The essentially pessimistic evaluation which the hearing seemed to make of the possibility of taking action in the short and medium term should perhaps be questioned.

During the hearing it was emphasized that, in the short and medium term, there were physical constraints owing to the limited amount of industrial equipment and trained personnel available for hydrocarbon prospecting and that there was therefore a conflict of interest between the USA's programme to achieve autonomy in the energy field and prospecting in other parts of the world. The question is how this problem should be viewed and what influence it may have on relations with the USA. The possible means of intervening by Community action must be considered, taking account of the different position of the various Member States.

47. Nuclear energy was considered to be the most promising factor for altering the structure of supply. However, the rate of development of nuclear plant which would be required and the resulting costs give grounds for challenging this assessment. Not everyone may share the experts' certainty about the efficiency of nuclear plants and the absence of ecological and other risks. If, however, this assessment is accepted, it must be decided what steps to take in order to assuage existing doubts in public opinion and remove local objections.

48. At the hearing, the opinion was expressed that the low price of oil prevailing during past years had discouraged research and development in the coal industry but, on the other hand, this factor was not thought to have been important in relation to nuclear research and industry.

The opposite view in relation to the second part of this statement has also been frequently expressed and this point should be taken into account.

49. The experts at the hearing were significantly divided about the possibility of finding new hydrocarbon deposits, particularly under the sea bed.

It may be wondered whether this difference of opinion might not significantly affect the attempt to establish a Community energy policy. If this effect is considered to be important, it might be worth conducting further hearings, possibly requesting the opinion of the Commission's experts.

50. Though the EEC as a whole has an energy problem, it emerged during the hearing that there were significant differences between the Member States in terms of disposable energy sources and other aspects.

It might be worth carrying out a more detailed study of the situation in order to prevent these differences from having a divisive effect on the Community as a whole.

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