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Report

drawn up on behalf of the Committee on Public Health and the Environment

on the preliminary report from the Commission of the European Communities on
the problems of pollution and nuisances originating from energy production and
on a proposal for a Council resolution on energy and environment

Rapporteur: Mr L. NOE'

By letter of 5 August 1974, the Committee on Public Health and the Environment requested authorization to draw up a report on the preliminary report from the Commission of the European Communities on the problems of pollution and nuisances originating from energy production and on a proposal for a Council resolution on energy and the environment.

Authorization was given by the President of the European Parliament in his letter of 6 September 1974.

The Committee on Energy, Research and Technology was asked for its opinion.

On 6 June 1974 the Committee on Public Health and the Environment appointed Mr Noë rapporteur.

It considered the draft report at its meetings of 1 and 21 October 1974 and unanimously adopted the motion for a resolution and the explanatory statement.

The following were present: Mr DELLA BRIOTTA, Chairman, Mr ANTONIOZZI, Mr BERTHOIN (deputizing for Mr E. MULLER), Lord BESSBOROUGH, Mrs FENNER, Mr LAUTENSCHLAGER (deputizing for Mr ALBERTSEN), Mr W. MULLER, Mr NOË, Mr Helveg PETERSEN, Mr SPRINGORUM and Mr WALKHOFF.

The opinion of the Committee on Energy, Research and Technology is attached.

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A

The Committee on Public Health and the Environment hereby submits to the European Parliament the following motion for a resolution, together with explanatory statement:

MOTION FOR A RESOLUTION

On the preliminary report from the Commission of the European Communities on the problems of pollution and nuisances originating from energy production and on a proposal for a Council resolution on energy and the environment.

The European Parliament,

- having regard to the report of the Commission of the European Communities (SEC(74) 1150 fin.);
 - having regard to the proposal from the Commission of the European Communities for a Council resolution (SEC(74) 1150 fin./2);
 - having regard to the report of the Committee on Public Health and the Environment and the opinion of the Committee on Energy, Research and Technology (Doc. 320/74);
1. Welcomes this report from the Commission which should form a basis for the framing of urgently-needed legislation;
 2. Regrets that the scope of the report is limited to three types of pollution and asks the Commission to turn its attention as soon as possible to the other pollution problems arising from energy production;
 3. Supports the Commission's view that energy supply problems should not cause any reduction in the efforts being made to protect the environment;

4. Draws the Commission's attention to recent studies made on the use of waste heat from heat power stations for district heating and other practical purposes;
5. Demands that the Commission re-examine its attitude towards both wet and dry cooling towers, which have considerable disadvantages from an environmental point of view;
6. Supports the Commission's proposed measures on sulphur dioxide, but considers that the desulphurization of fuels should be a first priority;
7. Notes that pollution caused by the emission of sulphur dioxide could be considerably reduced if less energy were consumed as a result of more efficient insulation of homes, and calls on the Commission to initiate a Community-wide campaign to inform householders of this fact;
8. Repeats its request that the Commission submit a proposal for a directive fixing appropriate standards for the construction, maintenance and inspection of domestic heating plant burners and calls on the Commission to put forward proposals for common rules on home insulation as soon as possible;
9. Calls on the Commission to undertake as soon as possible the proposed study and research on the effect of nitrogen oxides on health and the environment;
10. Calls on the Commission to ensure that common methods for the permanent measuring of pollution are introduced into the Member States as soon as possible;
11. Requests the Commission to make the following amendments to the draft resolution, pursuant to Article 149, second paragraph, of the EEC Treaty;
12. Requests its committee to check carefully whether the Commission modifies its proposal in accordance with the European Parliament's amendments, and if necessary, to report on the matter;
13. Instructs its President to forward this resolution and the report of its committee to the Council and Commission of the European Communities.

Proposal from the Commission of the European
Communities to the Council relating to a
resolution on energy and the environment.

Paragraphs 1 - 5 unchanged

(6) Note in this connection that every measure enabling energy to be saved is also a measure preserving the environment and that, equally, the principles of sound environmental management, e.g. techniques for recycling and reutilizing waste materials, may be important for the conservation of energy and of resources in the widest sense;

Note in this connection that most measures enabling energy to be saved are also measures preserving the environment and that, equally, the principles of sound environmental management, e.g. techniques for recycling and reutilizing waste materials, may be important for the conservation of energy and of resources in the widest sense;

Paragraph 7 unchanged

Paragraph 8, subsections 1 - 4
and A. (1) and (2) unchanged

(8A (3))

imposing, in all cases ~~where~~ the protection of environment requires, the use of cooling towers on a large scale and as soon as practicable,

investigating more thoroughly the environmental effects of the use on a large scale of both wet and dry cooling towers

(8A (4))

improving, as rapidly as possible, the design and technology of dry cooling towers, so as to diminish the disadvantages which these still present where certain aspects

delete

¹ For complete text see SEC(74) 1150 fin./2

of the environment are concerned.

(8 A (5)

utilizing by all appropriate means waste heat produced by power plants, especially nuclear plants,

utilizing by all appropriate means waste heat produced by power plants, especially nuclear plants, and in so doing paying special attention to the possibility of employing waste heat beneficially by linking power stations to district heating for domestic and industrial heating purposes,

Subsections B (1) to (4) and
Subsections C (1) to (3)
unchanged

(8 D)

taking steps to ensure standards for construction as well as a regular maintenance and inspection of domestic heating plant burners in order to reduce emissions of sulphur dioxide, nitrogen dioxide, particular matter, etc. into the atmosphere;

Paragraphs 9 and 10 unchanged.

EXPLANATORY STATEMENTI. Introduction

1. The Commission's report (SEC (74) 1150 fin.) was drafted following the adoption by the Council of decisions within the framework of the European Communities' action programme for the environment and in accordance with the decision of the Energy Council meeting of 22 March 1973. The report is intended as a basis for practical Community action in this sector and for planning measures to prevent nuisances arising from growing energy production.

2. The report centres on typical forms of air, land and water pollution arising from energy production, and due respectively to SO₂ (sulphur dioxide), solid particles, NO_x (nitrogen oxides) and thermal discharges. Other forms of pollution arising from the production, transmission and utilization of energy, such as pollution due to electromagnetic radiation damage and the disposal of solid wastes, are not considered in the report, although in this sector, too, there is undoubtedly a need for measures to prevent environmental damage. The Committee on Public Health and the Environment of the European Parliament wishes to emphasize here the need for the Commission to undertake, as soon as possible, in accordance with the priorities established for action in the area of environmental protection, a study of further pollution problems arising from energy production, in order to prepare appropriate counter-measures.

II. General Comments

3. In the draft resolution (SEC (74) 1150 fin./2) submitted by the Commission to the Council for possible adoption at a forthcoming meeting of the Council of Environment Ministers, it is pointed out that the maintenance of a sufficient level of energy production and the need to protect the environment should not be considered as two contradictory aims. On the contrary, a concerted balance should be established between efforts to increase energy production and those to improve environmental protection in the context of overall economic development. The Committee on Public Health and the Environment is at one with the

Commission in recognizing that the best protection against environmental pollution would consist in a decrease in the rate of growth of energy production (cf. p. 42 of the report), but is of the opinion that, on a realistic assessment, a considerable increase in energy consumption must be expected in the next few years. The committee also believes that the aim should be to achieve significant energy savings through a more rational utilization and distribution of energy production and more extensive recycling of the by-products of energy production, in particular, thermal discharges.

4. The committee is gratified by the EEC Commission's clear recognition of the fact that both short- and long-term energy supply problems are likely to result in a diminution of efforts to protect and improve the environment. It follows, therefore, that ecological considerations should, in the future to a greater extent than they have done so far, play a major part in technological and economic thinking on energy production and utilization, just as the new energy policy plans take into account the need to maintain environmental equilibrium. The Committee on Public Health and the Environment believes that planning on these lines is essential not only from public-health considerations, but also to cope with the continuing increase in long-term energy consumption and production, given the growing shortage of natural resources, such as, for example, water.

5. The Committee on Public Health and the Environment notes with satisfaction that the Commission makes definite proposals for some sectors considered in the report and in the draft resolution. A notable example is the proposal for measures to combat SO₂ pollution (cf. proposal for a directive (COM (74) 158), which is particularly concerned with sulphur products from liquid fuel combustion). The Committee on Public Health and the Environment and the European Parliament have already expressed their considered opinion on this proposal (cf. Doc. 103/74) and have recommended that a proposal be submitted on the inspection of oil burners in private heating systems. The committee notes that, in its report, the EEC Commission takes account of the problem, in providing for the allocation to such heating systems of 'clean' (i.e. low sulphur content) fuels including notably natural gas, and, in connection with the disposal and utilization of power-plant waste heat, recommends the use of long-range heating.

Since a switch-over to this form of heating must, at present, be considered impracticable because of the huge number of existing domestic heating plants, the committee is of the opinion that, at any rate, common inspection standards for domestic heating plant burners should be prepared and adopted, since such inspection, together with regular maintenance would significantly contribute to a reduction of SO₂ and solid particle emission by such plants; these two discharges account for a considerable part of the general problem of SO₂ pollution (see the example of Switzerland quoted in para. 16 of the report by the Committee on Public Health and the Environment which shows the extent to which SO₂ pollution is due to domestic heating plant).

6. The Committee on Public Health and the Environment is otherwise in general agreement - except for a few reservations - with the views and conclusions contained in the report and the draft resolution and resolutely supports the request for the Council to approve the submission by the EEC Commission at the earliest possible date of further proposals for the abatement of pollution by SO₂, solid particles and NO_x and of environmental damage due to thermal effects. The committee, nevertheless, wishes to make the following additional comments on particular points in the concluding parts of the report and of the Council's draft resolution.

DETAILED COMMENTS

Thermal discharges

7. The committee fully agrees that it is essential to collect existing data and to obtain deeper knowledge of the consequences of thermal and environmental damage, particularly in regard to the effects of the present systems of energy production which constitute the principal source of thermal discharges into waters.

The committee is also in favour of setting up regular information exchanges between Member States on the siting of new power stations. This information should, however, be exchanged not only on the location but also on the type, etc., of such power stations, since the type of plant used critically affects the siting issue (see below comments on the types of power stations). The committee also wishes to comment on the statements in the draft resolution concerning the possible imposition of the use of cooling towers on a large scale ' as soon

as practicable.' According to the committee's information, some calculations made recently suggest that it would be preferable to invite the Member States to use power station waste heat for long-range heating of homes. It is a fact that, in existing plant, over half the fuel used does not produce electricity but waste heat which is dispersed in the atmosphere or in water.

8. Calculations made in Sweden in connection with the extension of the thermo-nuclear plant at Barsebäck in southern Sweden seem to prove that this extension would make it possible to provide long-range heating for the major surrounding towns, Malmø, Helsingborg and Lund, competitively and at an advantage in economic terms and in regard to the utilization of resources. Contrary to the statement in the Commission's report (see p. 35), future potential for domestic district heating is not confined to small local (decentralized) installations.¹

9. Swedish calculations and research show that heat can be transported effectively and economically for distances of up to 50 km. Also, ELSAM, a cooperative among Danish power stations has made calculations that indicate that a thermo-nuclear plant built on the Gylling Naes peninsula will be able to supply long-range heating to an extensive and highly populated area (the towns of Aarhus, Skanderborg, Horsens and Odder) on terms which are competitive compared with the traditional domestic heating systems. Present estimates put the required investment at some 200 m. Danish kroner. In view of the sharp rise in oil prices, electricity production combined with long-range heating now offers electrical power stations considerably increased advantages.

The Committee on Public Health and the Environment is aware that some Community countries are already using the heat from large conventional electrical power stations for long-range heating of neighbouring urban centres, in some cases even where the location of the plant, as for example on a sea-coast, presents the possibility of waste-heat discharge through open-cycle cooling.

The use of waste heat for long-range heating involves a certain loss of electricity output, but according to calculations carried out, for instance, by ELSAM in Denmark, electrical power stations, given the price rises for oil, can operate more economically overall by using thermal discharges for long-range heating than by producing

¹ A recent Swedish official report which has come to the attention of the committee after the drafting of this report, supports these views, while indicating that district heating of major cities combined with electricity production from nuclear plants will be still more economical and less polluting than oil-heated power stations combined with district heating. See SOU (Statens Offentlige Utredninger) no. 56/74 Industridepartementet.

electricity only, despite the high cost of piping installations and the loss in electricity output mentioned above.

The Committee on Public Health and the Environment recognizes that long-range heating in combination with electricity production at the power stations cannot be used to the same extent and on the same terms in all the Member States, and that the opportunities for combining electricity output with long-range heating may differ from one Member State to another.

It frequently happens that the consumption of electricity and the consumption of heat for heating do not run parallel, i.e. that the peak periods of electricity demand do not correspond to those for heat. For instance, in northern Member Countries, the consumption of electricity in summer is reduced less than the consumption of heat for heating. In southern Member Countries, the disparity may be even greater. For this reason, in certain types of electrical power stations, it is possible to interrupt long-range heating periodically and thus obtain a temporary increase in electricity production capacity, but this will be accompanied by a higher loss of resources as far as optimal exploitation of the given quantities of fuel are concerned.

It has also been pointed out to the committee that the use of the heat output of electrical power stations for long-range heating leads to a certain 'inertia' in this type of heating grid. This might serve to level out, over the day as a whole, variations between the peak periods, since it makes it possible to interrupt the transmission of heat from the electrical power station and thus raise temporarily the output of electricity without critically reducing the supply of heat in the long-range heating distribution grid.

A possibility meriting investigation is that of storing heat in buildings where it is aggregated during the night or the hours when electricity production has an excess capacity and when electrical current usage is encouraged by its low price. Some companies offer this possibility, notably AEG. It is a possibility to be encouraged in order to increase further the efficient use of electrical energy pro-

duction which would also be beneficial to the environment.

The Committee on Public Health and the Environment wishes, in this connection, to draw attention to the additional possibility of linking up refuse incineration installations with long-range heating systems. In considering the improved use of electrical power-station waste heat for long-range heating, the possibility of coordinating long-range heat supplies from incineration plants and electrical power-stations should be taken into account. There may be other possible combinations allowing an optimal use of the waste heat from incineration plants which would lead to a more rational use of the resources, and hence to a more effective protection of the environment.

In the committee's opinion, there is no reason why the possibility of a closer link between electricity production and long-range heating should not be considered, even though climatic and demand disparities in Member countries may affect differently the possibilities of employing this method.

In all Member States the climatic conditions, for fairly long periods, allow the heat discharged from power stations to be used for the heating of homes, factories and so on. In cases where thermal discharges cannot be adequately used for heating purposes during warm periods, the waste heat has to be diverted into natural water systems or, in other cases, into cooling towers. It is clear that power stations which, because of the lack of natural water systems, have to make such towers available for warm periods while in other periods they channel thermal discharges into the long-range heating system, have to make heavier investments than those power stations which are able to use natural cooling systems (sea, fjords, rivers and so on). From an environmental point of view the Committee on Public Health and the Environment believes that the necessity for greater investment should not prevent the greatest possible use of thermal discharges for long-range heating, since such a solution is environmentally preferable to the use of cooling towers.

The committee notes that no substantial research seems to have been done on the comparisons between electricity consumption and consumption or demand for heating for domestic purposes. It would therefore be appropriate for such research to be carried out.

It stresses that, in relation to the pollution produced, long-range heating plants for buildings and private homes are more advantageous than individual heating by numerous small coal or oil burners, for one thing because problems of inspecting so many small plants are infinitely greater than they are for large common plants. The same is true for maintenance and repair problems. It is also true that by putting the weight of long-range heating more and more on the power stations, the number of traditional district heating systems or the use of individual plants can be limited, thus avoiding the further pollution by SO₂ which such plants would otherwise cause.

10. The use of long-range heating would to a large extent make further investment in the development of dry cooling towers unnecessary, since although on the one hand they are more practical than wet cooling towers from an environmental point of view (see for example the formation of mist) they would on the other hand be much more expensive; from the technical point of view they are still at the preparatory stage, although one or two dry cooling towers (prototypes) are already in use in Germany.

As regards the environmental consequences it should be added that the use of dry cooling towers on a large scale could have unforeseen and perhaps dangerous effects on the climate because of the large quantity of air emitted from such towers. Although the effects of widespread use of dry cooling towers are not yet known, those of wet cooling towers are well known. These produce significant environmental disturbances, in that they use up a large amount of water - even though they use substantially less than open cycle cooling systems - thus involving substantial risks to the water cycle in European waterways and to the biological conditions of their flora and fauna (percentage evaporation up to 10%). Wet cooling towers already create problems in some sites in the Community because of the formation of mist, for example in valleys and, in winter, the formation of ice on some stretches of roads, with substantial traffic risks. This happens for example in the region of Cologne, where cooling towers cause dangerous conditions on the motorways.

No studies have been carried out to point out clearly the effects on the micro-climate of these wet cooling towers. As has been already said, no research exists on dry cooling towers either; these towers are, however, not yet in general use. The Committee on Public Health and the Environment feels it necessary to point out

that in addition to the above-mentioned environmental disadvantages cooling towers involve aesthetic damage to the countryside, since for a 1000 megawatt power station without open cycle cooling systems and not linked to long-range heating, two or three towers of a diameter of approximately 130 metres are needed. Depending on the type of plant they may also cause noise disturbance, since the use in cooling towers of very powerful fans (which moreover represent a consumption of electricity) can cause a lot of noise. To give a better idea of the scale of the cooling towers it may perhaps be pointed out that some manufacturers of these towers are actually examining the possibility of siting the electric power stations themselves inside the cooling towers!

11. As has been said already, the Committee is in full agreement with the Commission's view that the future production of electricity will have to be carried out in a manner which will use thermal discharges productively and as fully as possible. In large power stations, whether nuclear or traditional, discharged heat, according to the information we have received, can be used for long-range heating in a rational manner and more economically than before.

12. The Committee on Public Health and the Environment wishes to draw attention in this connection to the possibility mentioned also in page 41 of the report, that is the possibility of building smaller power stations capable of using the residual heat from energy production for long-range heating. Smaller power stations, for example with a capacity of 20 megawatts, can use diesel electric plants which require fuel oil which is slightly more expensive, but has a lower sulphur content. Such plants, which can operate with diesel engines of a naval type, can be used in more isolated centres.

13. Your committee believes that the Commission and Member States, in view of the foreseeable increases in energy production, should give much closer examination to the possibility of using fairly large power stations and smaller power stations linked to the production of long-range heating. The possibility of greater use of smaller plants could represent an essential factor in the choice of the site of future power stations, since small plants may be particularly suited to areas of low population density, from the point of view of heat and energy production and use, whereas for large urban areas, the use of large power stations providing long-range heating will be preferable.

14. In any case the committee wishes to warn against too rigid planning of future development and siting of electric power stations, since the speed of technical developments in this field makes it reasonable to suppose that criteria for the choice of sites will undergo many changes in the years to come.

Sulphur Dioxide

15. The Committee on Public Health and the Environment agrees that fuel oils with low sulphur content must be primarily used in those areas where pollution from SO₂ is serious or could become serious.

16. The committee awaits moreover with interest the presentation of Commission proposals on sulphur levels in fuel oils, to supplement the proposal on gas oils. As already noted in the report on the Commission's proposals on gas oil, the Committee on Public Health and the Environment attaches great importance to an early presentation of proposals on fuel oils since this will permit refineries to plan their production of gas oils and fuel oils more rationally in view of the desulphurization required at the refinery stage.

17. The committee notes that the report (see page 37) encourages the rapid development and introduction on an industrial scale of flue gas desulphurization (FGD) especially for large stationary installations. Since in the near future there will probably be a series of directives making the use of gas oils and fuel oils with a low sulphur content obligatory, the committee believes that in view of the relatively poor results of the use and operation of flue gas desulphurization plants, particularly in Japan and the USA, it will certainly not be appropriate to mobilize resources to construct plants whose residual products are difficult or impossible to market or create new problems of deposits¹, possible water pollution and so on. The parallel operation of electric power stations and FGD plants, which in practice become kinds of chemical factories, presents further significant difficulties. In view of the fact that the Council may shortly approve the obligation to use both gas oils and fuel oils with a low sulphur content, the refineries will be obliged to construct large desulphurization plants.

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For example the sulphur collected from the desulphurization, over a period of a year, of flue gas from a 300 megawatt power station would form a layer 1 metre thick over an area of 1 hectare.

The committee therefore believes that desulphurization of fuel oils should be carried out at the refinery stage, and that the installation of a large number of plants, at present expensive and problematic, for flue gas desulphurization is not necessary.

18. In choosing between desulphurization at the refinery stage or at the level of energy production, the risk of a useless squandering of resources and less efficiency in the fight against dangerous emissions of sulphur dioxide should be borne in mind.

19. The committee nevertheless agrees that if and when the directive on the use of fuel oils with a low sulphur content is published, it will be appropriate to make exceptions for plants which make effective use (or wish to do so in the future) of flue gas desulphurization.¹

20. The committee also wishes to draw attention to the possibility of making future power stations capable of using alternative fuels (petroleum, coal and natural gas), as is done for example in Peterhead in Scotland, where a large power station has been adapted to use natural gas instead of petroleum (in view of the existence of marine fossil fuels off the coast of Scotland). The use of plants adapted to use alternative, purer fuels, such as natural gas, has environmental advantages.

21. The Committee on Public Health and the Environment moreover fully agrees that it is necessary, as pointed out in the resolution, to achieve more rational distribution of clean fuel (for example, natural gas or low sulphur oils), selling them to areas and users which have the greatest need of them from the point of view of the best possible protection of the environment (see comments above on individual heating plants for domestic heating).

1.

It should be pointed out that for coal-fired power stations there is no necessity for flue gas desulphurization to be generally obligatory (it is almost impossible to desulphurize coal), since within given limits it is possible to purchase coal, for example, Canadian or Polish coal, with a low sulphur content (0.3% - 1%), whereas such an obligation would presumably be appropriate for power stations which use types of coal with a higher sulphur content.

However, the scale of distribution costs for natural gas to small users may in some cases be such as to necessitate the distribution of natural gas only to plants such as power stations which normally use fuel oil (see the example of Peterhead mentioned on page 12).

22. The Committee on Public Health and the Environment wishes also to point out that the problem of sulphur dioxide pollution could be considerably reduced if effective Community-wide measures were taken to ensure better insulation of homes in order to reduce energy consumption, especially for gas-oils. The committee also points out that in connection with the use of solar heat for domestic heating a series of experiments are being carried out, especially in the USA; these are now being intensified in view of the energy crisis in the petroleum sector. These experiments are being conducted by NASA, the American Space Agency, among others. It is clear that, unlike the use of coal and petroleum, the use of solar energy involves no environmental problems.

The committee wishes in this context to draw attention to the fact that it might be possible to use natural North Sea gas rationally for electricity generation; with transmission by cable from existing types of gas turbine power stations installed on floating platforms and transferable from one gas field to another, generation could be effected at cost prices which, according to calculations, are much lower per kilowatt/hour, than for electricity generated by conventional land-based power stations and nuclear power stations. These possibilities must be examined more thoroughly, since power stations of this kind would not have cooling problems and would not cause significant emissions of sulphur dioxide or particulate matter, since they use cleaner fuel in the form of natural gas. According to information received, the transportation of natural gas from the sea through pipes would be less economical. It should also be noted that in the United States, natural gas is already used in this way and that the Community would be able to benefit from the calculations carried out on this kind of energy generation.

23. The Committee on Public Health and the Environment notes that the report announces Commission proposals on the obligatory use of high stacks in given cases to be defined more specifically on the basis of research. The Committee on Public Health and Environment shares this point of view, but does not agree with the Commission's proposal for the

parallel use of flue gas desulphurization. It can thus recommend the use of high stacks, even without FGD, but parallel to use of partly desulphurized fuel oil.

The committee wishes moreover to point out that the use of high stacks illustrates the necessity to continue the fight for the protection of the environment in Europe at Community level, since high stacks in one country can contribute, in some meteorological conditions, to an increase in the level of pollution in another country. From an overall point of view it would therefore be appropriate to introduce common regulations on this matter.

Nitrogen oxides

24. The committee agrees on the necessity, from the point of view of environmental safety, of carrying out greater research into the consequences of oxides on man and the environment, and studies of technical processes for reducing emissions of nitrogen oxides. Until greater knowledge is available in this field it would appear appropriate to propose the introduction of certain precautionary measures, for example as regards limits on emissions by motor vehicles. These measures should correspond at least to the standards at present applied in the USA; if such standards were applied it would nevertheless be desirable to aim at reducing the annual rates of emission of NO_x in Europe, i.e. 16 kg NO_x /t.o.e. (metric ton of oil equivalent).

25. As regards stationary sources, the report states that with present technology a 50% reduction in emissions of NO_x is feasible in oil or gas-fired plants. The Committee on Public Health and the Environment therefore believes that no time should be lost in presenting proposals on applying such limits to the plants in question and urges that efforts be encouraged to achieve efficient techniques for reducing NO_x emissions from coal-fired plants, since such techniques are not at present available.

26. The Committee on Public Health and the Environment would also like measures to be taken both for nitrogen oxides and on a wider level to develop joint methods for measuring the various forms of pollution since, as the Commission itself points out, in many cases it is not possible to make meaningful comparisons between the results of measurements carried out in the various Member countries. Such common methods of measurement are a clear pre-condition for effective action on pro-

tection of the environment, taking full account of the different conditions of pollution in different Member countries.

CONCLUSIONS

27. On this basis the Committee on Public Health and the Environment can agree in large measure with the principles outlined both in the Commission's report and in the draft resolution. The committee moreover considers it a matter of prime importance that the proposed action be put as soon as possible into the form of full scale measures to reduce the environmental effects of pollution in the form of emissions of sulphur dioxide, particulate matter, nitrogen oxides and thermal discharges.

The committee nevertheless wishes to put forward some comments on certain points on which it is not completely in agreement with the Commission as regards the technical basis and the practical objectives of the new measures to be put into effect; these include points which the committee wishes to add to the proposed documents.

Other forms of pollution caused by the production and use of energy

28. The Committee on Public Health and the Environment wishes to draw the Commission's attention to the fact that consideration should not be given, in this context, only to the abovementioned forms of pollution caused by the production and use of energy, even though these are very important. The question of electromagnetic radiation and the disposal of solid wastes must also be considered.

Individual heating in buildings and homes

29. The Committee on Public Health and the Environment wishes to draw attention here too, as it already did in the report on desulphurization of gas oils, to the necessity of taking action against pollution by sulphur dioxide together with the emission of particulate matter (a form of pollution which certainly represents the greatest danger to public health) caused by individual heating of buildings and homes.

Long-range heating

30. The Committee on Public Health and the Environment believes that the report and in particular the Commission's proposal for a resolution, attaches too much importance to the construction and use of cooling towers, while it gives less weight to the possibility of using thermal discharges. Since the use of cooling towers and the use of thermal discharges for domestic heating especially in the northern part of the Community are to a large extent alternative possibilities and since, according to the latest calculations partly based on the sizeable increase in fuel costs, long-range heating even from large power stations and over greater distances than has hitherto been found is an economically advantageous and feasible proposition in the coming years, the committee proposes that efforts to use thermal discharges for long-range heating, should be increased to a greater extent than was planned. This will permit the avoidance of a sizeable squandering of resources (approximately 50% of the quantities of fuel used in power stations) and will to some extent obviate major investment necessary to install cooling towers.

Smaller scale power stations

31. The information received by the Committee on Public Health and the Environment makes it reasonable to assume that by having recourse to decentralized electric power plants of lower capacity, urban centres situated in distant regions can be supplied with electric energy and long distance heating with beneficial results on the economic level (including limited losses of energy transmission and lower plant costs) and in the environmental field (the diesel operated electric plants use gas oil with a lower sulphur content; see also the proposals for a directive on gas oils). The Committee on Public Health and the Environment believes that the draft resolution should also take into consideration the use of such smaller plants.

Planning and siting of power stations

32. The Committee on Public Health and the Environment agrees that it is appropriate to draw up careful plans for the development of electric power stations in the Community; it feels, however, that it should warn against over-rigid planning, since technical developments are such as to permit a certain flexibility in the context of a coordinated

plan (see above on the use of plants of varying sizes, whether or not linked with long-range heating, situated in varying geographical areas with different population densities).

Desulphurization

33. The Committee on Public Health and the Environment, taking account of technical, economic and environmental conditions, wishes desulphurization to take place to as great an extent as possible at the refinery stage. Refineries will in any case probably have to carry out desulphurization of gas oil or fuel oil (see the proposals for directives already presented or announced); this involves a certain increase in the consumption of crude oil, but FGD carried out in large power stations and possibly in other major industrial plants, as opposed to desulphurization at the refinery stage, cannot result in sufficient savings of crude oil to compensate for the various technical and economic disadvantages involved in the use of FGD.

Burners using alternative fuel

34. The Committee on Public Health and the Environment moreover recommends that future power stations be, to as great an extent as possible, constructed to permit the use of alternative fuels (especially natural gas).

Insulation of buildings and homes

35. The Committee on Public Health and the Environment asks the Commission to examine measures aimed at encouraging better thermal insulation of buildings and private homes so as to obtain energy savings and therefore also a reduction in the necessity for measures to protect the environment. As regards future energy supplies and the protection of the environment attention should also be given to the use of solar energy for heating of buildings and private homes.

Standards for emissions of NO_x

36. The Committee on Public Health and the Environment believes that it is feasible for certain standards on NO_x emissions from motor vehicles to come into force quickly and therefore urges the Commission to take steps on this matter. As regards NO_x emissions from stationary sources, the Committee asks that steps be taken as soon as possible to ensure the use of improved combustion techniques which can significantly limited nitrogen oxide emissions. Such reductions can normally be obtained with the techniques which can already be used today.

Standardization of measurement methods

37. The committee moreover strongly recommends the standardization as soon as possible at Community level of methods for measuring pollution, since the great differences in methods at present used makes it rather difficult to implement common rules throughout the Community.

Opinion of the Committee on Energy, Research and Technology

Draftsman : Mr LAGORCE

On 17 June 1974 the Committee on Energy, Research and Technology appointed Mr Lagorce draftsman for an opinion on a proposal from the Commission of the European Communities to the Council relating to a resolution on energy and the environment.

It considered the draft opinion at its meeting of 2 July 1974 and adopted it by 16 votes to 4 on 15 July 1974.

The following were present: Mr Springorum, chairman; Mr Bousch and Mr Léonardi, vice-chairmen; Mr Lagorce, draftsman for the opinion; Mr Bangemann (deputizing for Mr Krall), Mr Berthoin (deputizing for Mr Hougardy), Lord Bessborough, Mr Cointat, Mr Covelli, Mr Delmotte (deputizing for Mr Van der Hek), Mr Flämig, Mr Glesener, Mr Van der Gun, Mr Jakobsen, Mr Kater, Mr Kavanagh (deputizing for Mr Lautenschlager), Mr Ligios (deputizing for Mr Andreotti), Mr Memmel, Mr W. Müller, Mr J. Nielsen (deputizing for Mr Pintat), Mr Noe', Mr Normanton, Mr Nørgaard, Mr Petersen, Mr Radoux (cf. Rule 40(5) of the Rules of Procedure), Mr Schwabe (deputizing for Mr Giraud), Mr Vandewiele, Mr Vetrone (deputizing for Mr Burgbacher), Mrs Walz.

I. Introduction

1. The draft resolution submitted today to our committee for its opinion follows up many documents and proposals on environmental policy presented by the Commission of the European Communities.

Without going too far back in time we may recall that in March 1972 the Commission submitted to the European Parliament and the Council a 'Communication on a European Communities programme for protecting the environment' (Jahn report, Doc. 74/72). At the time, in an opinion drafted by Mr Jarrot, our committee broadly approved the Commission proposals in so far as they came within its terms of reference.

2. The Paris Summit Conference of October 1972 gave a fresh impetus to the idea of an environmental policy at a Community level. On 22 May 1973 the Council, on a proposal from the Commission, adopted a declaration on a programme of action of the European Communities on the environment (OJ C 112 of 20.12.1973). The report of the Committee on Public Health and the Environment (Jahn report, Doc. 106/73) while approving the Commission proposals, pointed out that 'it is not enough simply to adopt a Community environmental programme. Of more decisive importance is the implementation of this programme by establishing priorities and by prompt and effective environmental legislation' (page 12, sec. 7).

3. With a view to implementing this programme, the Commission transmitted to the Council in April 1974 a 'Preliminary Report on the problems of pollution and nuisances originating from energy production' (SEC(74) 1150 final). Following this study document the Commission is today submitting to the Council a draft resolution in which the latter undertakes to act in the shortest time possible on measures concerning energy pollution. Our committee was asked to draw up an opinion on this text for the Committee on Public Health and the Environment as the committee responsible.

II. Scope of the draft resolution

4. The draft resolution takes the form of a long preamble setting out principles to govern the relationship between energy policy and environmental protection. There follows a list of measures to be taken on thermal discharges, sulphur dioxides and nitrogen oxides. The draft resolution provides for the Council, alive as it is to the urgent need for these measures, to undertake to examine the proposals 'as a matter of priority and in the shortest possible time'.

5. With regard to thermal discharges, the Council should, according to the motion for a resolution, stress the need for :

- (1) collecting data and improving knowledge of the effects of thermal discharges on the environment;
 - (2) planning the siting of new power plants on a European basis, through the deliberate exchange of information among EC Member States;
 - (3) imposing, in all cases where the protection of the environment requires, the use of cooling towers on a large scale and as soon as practicable;
 - (4) improving, as rapidly as possible, the design and technology of dry cooling towers, so as to diminish the disadvantages which these still present where certain aspects of the environment are concerned;
 - (5) utilizing by all appropriate means waste heat produced by power plants, especially nuclear plants.
6. On sulphur dioxide, the motion for a resolution highlights the need for:
- (1) reducing the sulphur content of gas-oils;
 - (2) promoting the use of low-sulphur residual fuel-oils within certain zones where pollution by SO_2 is already severe or could become so;
 - (3) achieving a more rational allocation of naturally clean fuels (e.g. natural gas and low-sulphur crude oils) to those areas and users which have most need for such fuels;
 - (4) promoting desulphurization and other technical developments to reduce emissions of SO_2 in the atmosphere.
7. Finally, with regard to nitrogen oxides, the Council should recognize the need for :
- (1) intensifying research into the effects of nitrogen oxides on man and environment;
 - (2) developing appropriate methods of measurement;
 - (3) taking certain preventive measures in respect of pollution sources emitting NO_x , while waiting for an improvement of knowledge in this field.
8. We should once again point out, so as to bring out clearly the limitations of the motion for a resolution, that it merely involves an undertaking by the Council to act as a matter of priority on relevant proposals which have been or will be submitted to it.

III. Analysis of the draft resolution

(a) Preamble

9. We have already pointed out that the preamble to the draft resolution consists of a number of affirmations of principle. Our committee can subscribe without reservation to some of these, for example where it is asserted that 'the consumption of energy can in the absence of suitable measures pose serious environmental problems, including problems connected with the extraction of energy resources, their transport, conversion and use and waste disposal' (fourth paragraph).

Again, our committee cannot but agree when the Commission states that 'techniques for recycling and reutilizing waste materials may be important for the conservation of energy and of resources in the widest sense' (last part of sixth paragraph). Your draftsman had in any case, on 22 April 1974, put an oral question with debate to the Commission stressing this aspect of the problem.

10. On the other hand, certain assertions made in the preamble seem not to be in line with, or at least to retreat from, the positions repeatedly defended stated by our committee and by Parliament.

Thus, in a resolution which accompanied the Kater report on desulphurization of fuels (Doc. 22/74) and was adopted on 14 June 1974, the European Parliament 'notes that in seeking a solution to environmental problems arising from the production and utilization of energy, priority must be given to securing energy supplies, since on the one hand, this is one of the prerequisites to the achievement of the objectives of the EEC Treaty, but, on the other, the solution of environmental problems can lead to greater consumption of energy' (paragraph 1).

11. In reading certain paragraphs of the preamble to the motion for a resolution, doubt could arise as to whether this position is shared by the Commission. The seventh paragraph of the preamble stresses that 'problems of supply, whether temporary or long term, should not be considered a sufficient reason to relax efforts to protect and improve the quality of the environment'.

The wording is ambiguous enough to give rise to contradictory interpretations and to the conclusion that this paragraph is contrary to Parliament's position previously mentioned.

12. Our committee notes, however, that when the draft resolution was being discussed, the representatives of the Commission stated that the seventh paragraph was intended only to make it clear that not even long-term supply

problems should be used as a pretext for inaction in the field of environmental protection. According to the Commission, the key to the problem is the sentence in the fifth paragraph to the effect that in the interests of general economic development a 'harmonious balance' should be established between the two objectives of energy production and environmental protection.

Our committee for its part can only restate once again the principle already approved by the European Parliament of giving priority to the procurement of energy supplies over problems connected with environmental protection, but insists nevertheless that the latter must not be neglected.

13. Still on the subject of the preamble, our committee points out that to contend that 'every measure enabling energy to be saved is also a measure preserving the environment' (sixth paragraph) amounts to an assertion contrary to reality. Many examples could in fact be cited of savings in energy which do not help to preserve the environment. For this reason the Commission should be less categorical and state that as a general rule a measure enabling energy to be saved is also a measure preserving the environment.

14. In addition, following a proposal by the draftsman for the opinion the Commission has agreed to amend the wording of certain paragraphs of the preamble. Thus paragraph 4 of the preamble should be worded as follows : 'Recognize that the consumption of energy can in the absence of suitable measures pose serious environmental problems, including problems connected with the exploitation of energy resources, the transportation, conversion and use of energy and waste disposal'. In paragraph 5 the final phrase becomes : '.... an harmonious balance should be established between these two objectives'.

(b) List of measures

15. As to the list of measures or projects on which the Council should undertake to act in the shortest possible time, our committee cannot but express its approval in principle: on the one hand, because we are still dealing only with a list of measures to be taken, and on the other because these measures are not sufficiently detailed and precise to enable our committee to judge them in greater depth.

Our approval in principle applies especially to the measures relating to thermal discharges. In particular, the Commission's intention to plan the siting of new power plants on a European basis coincides with a concern repeatedly expressed by our committee.

16. Although our committee is in agreement with the measures contemplated for sulphur dioxide, these could nevertheless have been given a somewhat more precise formulation. Thus, under point (3), the Commission proposes to the Council the achievement of 'a more rational allocation of naturally clean fuels (e.g. natural gas and low-sulphur crude oils) to those areas and users which have most need for such fuels'. Knowing that low-sulphur crude oil is virtually non-existent in the Community, the Commission could have confined itself to stressing the need for Community action on desulphurization of fuels (see point (4)), a problem dealt with in a recent report by Mr Kater (Doc. 22/74).

17. On the measures contemplated for 'nitrogen oxides' our committee would like to see the proposed study and research undertaken as soon as possible to provide the Community with scientific data to enable it to take the necessary steps.

18. Our committee was pleased to note that certain of the projects listed in this draft resolution, for which clearly-defined proposals had already been made, would finally be considered by the Council at a meeting on environmental policy on 10 October 1974. Among these are the proposals for a directive on restrictions on the lead content of petrol and the sulphur content of gas-oil.

IV. Conclusions

19. The Committee on Energy, Research and Technology expresses, subject to the reservations noted above its approval of the draft resolution on energy and the environment. It nevertheless regrets that the proposal submitted to it is once again no more than a declaration of intentions which, though excellent in themselves, need to be given practical form if Community environment policy is to get beyond the planning stage.

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