

European Communities

EUROPEAN PARLIAMENT

Working Documents

1981 - 1982

20 March 1981

DOCUMENT 1-49/81

Report

drawn up on behalf of the Committee on Energy and Research

on a ~~nuclear~~ nuclear energy moratorium

Rapporteur: Sir Peter VANNECK

1.2.7

On 12 November 1979 the motion for a resolution on a nuclear energy moratorium (Doc. 1-483/79) tabled by Mr COPPIETERS, Mrs BONINO and Mr CAPANNA pursuant to Rule 25 of the Rules of Procedure was referred to the Committee on Energy and Research as the committee responsible and to the Committee on the Environment, Public Health and Consumer Protection for its opinion.

On 21 February 1980 the Committee on Energy and Research appointed Sir Peter VANNECK rapporteur.

The committee considered the draft report at its meetings of 18 March 1980, 25 November 1980 and 27 February 1981. At the latter meeting it adopted the motion for a resolution and the explanatory statement by 13 votes to 7 with 2 abstentions.

Present : Mr Ippolito, acting chairman and vice-chairman, Mr Gallager, vice-chairman, Sir Peter Vanneck, rapporteur (deputizing for Mr Price), Mr Adam, Mr Beazley, Mrs Charzat, Mr Fuchs, Mr Georgiadis, Mr Griffiths, Mr Linde, Mr Linkohr, Mr Müller-Hermann, Mr Petersen, Mr Pisani, Mr Purvis, Mr Rogers, Mr Seligman, Mr Soussouroyannis, Mr Turcat, Mr Vandemeulebroucke (deputizing for Mrs Bonino), Mrs Viehoff (deputizing for Mrs Lizin).

A minority opinion for the Committee on Energy and Research together with an opinion in the form of a letter from the Committee on the Environment, Public Health and Consumer Protection is attached to this report.

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Opinion in the form of a letter from the Committee on the Environment, Public Health and Consumer Protection.

ANNEX I : Motion for a resolution tabled by Mr COPPIETERS, Mrs BONINO and Mr CAPANNA pursuant to Rule 25 of the Rules of Procedure on a nuclear energy moratorium (Doc. 1-483/79).

ANNEX II: Minority opinion pursuant to Rule 42(2) of the Rules of Procedure.

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

MOTION FOR A RESOLUTION

on a nuclear energy moratorium

The European Parliament,

- having regard to the motion for a resolution on a nuclear energy moratorium (Doc. 1-483/79),
 - having regard to previous resolutions on energy policy matters, in particular the resolution on the Community's energy objectives for 1990,
 - having regard to the report by the Committee on Energy and Research and the opinion on the Committee on the Environment, Public Health and Consumer Protection (Doc.1-49/81),
 - believing that energy, available in the right quantity and at fair prices, is essential for the social and economic wellbeing of mankind,
 - convinced that all sources of energy have to be used in order to meet the world's energy demands, and that nuclear energy has an essential contribution to make,
 - believing that conservation measures form an essential part of any energy policy, the effect of which should be reflected in overall energy requirements,
1. 'Reaffirms the resolution it recently adopted in support of the further development of nuclear energy under the most stringent safety standards in line with the current state and future developments of technology'
 2. 'Hopes also that an adequate nuclear information policy will be set up to enable the general public to assess objectively:
 - the real extent of the risks effectively caused by nuclear power stations and by waste processing and storage systems;
 - the extent to which high safety standards affect the continuity of energy supplies;
 3. Points out that after twenty years' peaceful use of nuclear energy there has not been a single death that can be put down to exposure of the population to radioactivity arising from commercial reactors;

4. Stresses that a moratorium will in itself not solve any problems that might arise in connection with the use of nuclear power;
5. Foresees that the consequence of a moratorium would seriously endanger the adequacy of energy supplies with resulting economic, social and political problems;
6. Emphasises the empirical nature of engineering development in the nuclear industry and thus the need to harness past experience in order to improve the safety and efficiency of the nuclear fuel cycle in the future, progress which would be interrupted and probably lost by a moratorium;
7. In the light of the information available on the advantages and disadvantages of the peaceful use of nuclear energy, vigorously opposes any proposal for a nuclear energy moratorium;
8. Instructs its President to forward this resolution to the Council and the Commission of the European Communities.

EXPLANATORY STATEMENTI. INTRODUCTION

1. When adopting a position on the three paragraphs of the motion for a resolution only paragraph 2, the possibility of a nuclear energy moratorium, need be gone into in detail.
2. It could be claimed that Parliament's attitude to a moratorium is already clear. During a major energy debate¹ held on 13-14 February 1980 on the Community's energy policy objectives for 1990 (report) and on adequate long-term energy supplies at reasonable cost (resolution) Parliament came out against a moratorium but in favour of increasing the role of nuclear energy as an energy supply source. This happened mainly as a result of the rejection of amendment No. 12 to the resolution on energy policy objectives for 1990 which had been tabled by the same authors as the present motion for a resolution and was worded in more or less the same way.
3. It was also for this reason that the Committee on the Environment, Public Health and Consumer Protection did not see fit to draw up a separate opinion on the motion for a resolution on a moratorium².

II. ADVANTAGES OF A NUCLEAR MORATORIUM

4. If a nuclear moratorium were adopted in Europe, the Community could take advantage of this respite to concentrate its efforts in three hitherto problematic areas of the development of this industry.

Finding a satisfactory solution to the problem of storing radioactive waste

5. Up to now two approaches to the problems raised by the radioactive waste generated by the process of atomic fission in a reactor have been considered in parallel:
 - assessing the potential risks with a view to the introduction of a programme for the management and storage of waste. There are two types of Community action in this field: direct action conducted primarily in the Joint Research Centres (Council Decision of 26 June 1975, OJ No.L 178/28) and indirect action aimed at solving certain technological problems;
 - a shift towards reprocessing and hence fast breeder reactors. With this technique it is possible to use the plutonium present in the waste generated

¹ OJ No. C 59, 10.2.1980, p.39

² Opinion in the form of a letter, 24.4.1980, PE 64.117

by 'traditional' power stations as a fuel for breeder reactors.
(Resolution of the European Parliament of 11 May 1976¹ and the Commission Communication 'Points for a Community strategy on the reprocessing of irradiated nuclear fuels' Doc. 242/77).

6. Moreover, breeder reactors could ensure the long-term future of nuclear energy in the Community: by producing more electricity than P.W.Rs from less fuel they open up new prospects for the possible independence of Europe in energy supplies.

7. However, despite progress in this field, the inescapable conclusion to be drawn is that the problem of storing radioactive waste has not yet been completely solved and that breeder reactors are still at the experimental stage.

8. A moratorium would therefore make it possible to:

- solve the problems raised by existing radioactive waste;
- seek a satisfactory solution for future waste which would be compatible with the legitimate safety interests of the general public;
- undertake detailed studies of storage facilities and list possible storage sites for such substances in Europe.

Harmonizing safety standards for nuclear power stations in the European Community

9. It would at last be possible to draw up common safety rules based on experience of the solutions adopted in each Member State since the resumption of the nuclear programme. During the moratorium the Commission could play the role of 'catalyst for initiatives' as advocated by the Council in its resolution of 22 July 1975 (OJ No. C 185/1975). This would reassure the general public of the high level of dependability of this type of industrial activity and at the same time compel the producers of nuclear power not to lose sight of safety considerations in the pursuit of profitability.

Embarking on a wide-range information campaign and consultation of the general public

10. The Commission's initiative in organizing nuclear 'hearings' in Brussels in January 1978 could be continued and intensified. A moratorium could thus offer a unique opportunity for large-scale consultation of the general public by organizing national fora and debates at Community level bearing in mind that the whole subject of nuclear energy in Europe suffers from a lack of information.

¹OJ No. C 125 of 8 June 1976, p.14

11. These advantages have to be set beside real risks: the consequences of a moratorium would be serious. Moreover, the disquiet about nuclear expressed in the motion for a resolution is, in your rapporteur's view, based on certain misconceptions.

III. CONSEQUENCES OF A MORATORIUM

12. 'It is difficult to make predictions, especially about the future'. It is, however, necessary to try and see what the effects of a nuclear moratorium would be; it is not unknown for cures to be worse than diseases!

13. Forecasting electricity demand is certainly difficult, and assumptions are necessary concerning economic growth, energy ratio and the extent to which price rises lead to conservation. The figures below are drawn from various Commission documents, however, and help give an indication of what a moratorium might imply. Rounded to the nearest percentage, the sources of electricity generation in 1978 are shown below, together with the sources predicted for 1990; these predictions are based on late-1979 national forecasts. Looking beyond 1990 becomes too speculative for sensible conclusions to be drawn:

	<u>1978</u>	<u>1990</u>	%; for the EC
Oil	24	14	
Nuclear	10	34	
Coal	43	38	
Other	24	15	

14. The 1990 nuclear percentage above corresponds to about 115 GW of generating capacity, and compares with about 29 GW in service in the Community at the end of 1979; approximately 40 GW was under construction at that time (Commission reply to Written Question No. 574/79).

15. A moratorium could take the form of:

- (a) shutting down all existing nuclear plants, and not bringing into service or ordering any further plants;
- (b) continuing to operate existing plants, but not bringing any further ones into service nor ordering any more; or
- (c) continuing to use existing plants and bringing into service plants under construction, but ordering no new plants.

These three options are liable to give rise in around 1990 to shortfalls in generating capacity of the order of 115 GW, 86 GW and 45 GW, respectively.

16. These amounts correspond roughly to 170 mtoe (million tons oil equivalent), 130 mtoe and 67 mtoe. If there was a moratorium, of whatever sort, then of course not necessarily all this energy would have to be added to the Community's oil imports, although in your rapporteur's view the prospects of replacing the whole amounts by other forms are very limited. For comparison the amounts above are around 30%, 25%, and 12% of projected oil imports for 1990. Projections which already show the Community depending on external supplies for well over half its energy requirements, with more than 40% of total consumption being of imported oil.

17. The consequences of any increased pressure for importing oil hardly need spelling out. The second oil price shock resulting from the shortfall of Iranian supplies cut 6 points from OECD countries' GNP (taken to the end of 1982); the employment consequences of increased prices following increased demand are liable to be severe in the extreme.

18. Of course if there were a moratorium, efforts would be made to 'fill the gap' by sources other than necessarily oil. In this context too much store should not be set by coal - there is a risk that even present targets will not be met and there will be increasing demand for coal as an oil substitute in other uses also. Similarly, while the development of alternative sources could benefit from extra finance they cannot be deployed on a scale wide enough and soon enough to be useful for an early moratorium. The Commission has attempted to assess the uncertainties in various aspects of its forecasts. On the most favourable combination of results, it could be argued that 1990 'production' (including a massive extra gain from conservation over and above allowances already made on the demand side) could conceivably cover a very limited moratorium. Not all this extra production and conservation would offset the loss of electricity production, however, further reducing the prospects for a moratorium.

19. In short, therefore, it is possible to construct a scenario in which some form of moratorium might be feasible, but it is a scenario which requires every optimistic prognosis to be fulfilled. Not only does your rapporteur regard that as highly improbable, but he also suggests that it would be highly irresponsible to rely on such an outcome when the consequences of failure would be so serious.

IV. COMMENTS

Ionising radiation and frequency of accidents

20. It is obvious that the nuclear industry, particularly in the European Community, is subject to more stringent safety measures than any other industrial activity. The accidents that have occurred have been due mainly to leakages, which have been quickly detected and repaired. They have not caused any ecological catastrophes or loss of human life.

The activities of the European Communities pursuant to the EAEC Treaty have been concentrated in two main areas:

- health protection (EAEC Treaty, Chapter III and more particularly the fixing of basic standards in Article 31, updated by the Council Directive of 1 June 1976, OJ No. L 187/1976);
- the solving of technological problems in nuclear safety (Council Resolution of 22 July 1975, OJ No. C 185 of 14 August 1975 p.1).

21. A moratorium, the length of which is not specified in the motion for a resolution, would not lead to any significant progress in this field as the adoption of effective safety standards is closely bound up with technological development and a practical knowledge of the specific problems involved in operating power stations.

22. The first indent of the preamble states that the risks involved in the production of nuclear energy to workers and population are becoming increasingly disturbing. Your rapporteur does not feel that this assertion is correct. On the contrary, it can be said that if knowledge of the effects of radiation is increasing, so is that of the health risks involved in the production and use of other forms of energy. Moreover, health risks apply not only to energy production but to all industrial, and indeed human, activities. The risks involved in the production and use of other forms of energy are to be considered with the same care.

23. The mere combustion of coal, oil and gas causes not only the emission of carbon dioxide, which may lead to climatic changes, but also radio activity (19 mrem from coal-fired plants compared with 0.4 mrem from nuclear power plants with the same electrical output), the dispersal of heavy metals, etc. and respiratory and circulatory diseases. In addition to the deaths that may be expected in the longer term as a result of the use of traditional sources of energy, deaths in connection with the production of energy must also be considered. Radiation risks in the nuclear energy industry, with its stringent safety standards, can only justifiably be compared with the risks obtaining in the use of other energy generating systems.

24. People do of course hesitate to put figures on matters which involve moral judgement. But individuals and society as a whole do in practice make such judgements. Implicit valuations of life, for example, are made when considering legislation on making medicine containers safe against children, or on car safety. It would be better if these assessments were made more explicitly, for perception of risk varies. To take an example, the probability of death (per person per year) for three reasons is given below:

motor vehicles	4.5×10^{-4}
air travel	3.6×10^{-6}
earthquake	2.0×10^{-8}

Yet despite the fact that it is two orders of magnitude safer, most people are more frightened by air travel than by using the roads. Of course average figures do not tell the whole story, but the fact that the risk of death from radiation from nuclear activities is too small to register on the above scales indicates the imbalance in the scrutiny the nuclear industry receives compared with other activities.

25. A similar picture can be drawn from accident statistics in various industries. In the UK, for 1975, nuclear power generation caused no fatalities compared with 86/100,000 employees for shipping and 23.4/100,000 for coalmining. The non-fatal accident record was better than in most other sectors too.

26. The second indent of the preamble claims that accidents in nuclear power stations are becoming increasingly frequent. In its annual report for 1979 the International Atomic Energy Agency was able to claim that nuclear energy could not be held responsible for a single death as a result of radiation. This assertion is based on data from 227 nuclear power plants with a total capacity of 110,000 megawatts in 21 countries. The survey covers all plants in operation in the IAEA area in the last twenty years, including the Three Mile Island plant.

27. The average individual dose within a radius of 50 miles from the plant during the first week after the accident at Three Mile Island, considered to be the most serious so far, is estimated at 1.1 mrem. The maximum external radiation of the whole body of an imaginary person at the most exposed accessible point is estimated at less than 100 mrem. The upper limit for an individual is 500 mrem a year. For the purposes of comparison, natural background radiation is of the order of 100 mrem a year.

28. The interesting thing about so-called accidents is public recollection and media coverage. Nuclear reactor incidents which have killed no one are repeatedly recalled, yet the Bantry Bay tanker explosion, which killed fifty persons, the Norwegian oil rig failure, which killed one hundred persons, dam disasters, which in India alone resulted in over one thousand deaths in 1979, and continuing coal mining accidents are rapidly forgotten. Nor do such accidents affect only workers in the industry: Seveso and Flixborough were very serious for the local population.

29. With regard to the disposal of radioactive waste fuel elements, the principles of a solution to this not inconsiderable problem are clear. Recent moves to cooperation between France and the United Kingdom concerning this subject are to be welcomed. It is worth stressing that the physical volume of highly active waste is quite small, and that the industry has about 30 years in which to perfect the technology of disposal.

Cost of the nuclear industry

30. The third indent of the preamble claims that the cost of the nuclear industry to the taxpayer is rising. It is true that the development of this source of energy has called for substantial investment, due in part to enhanced safety requirements. But cost increases in the nuclear energy industry and in other fields are relative. Production cost increases in the nuclear industry have been much lower than in the oil industry and the resultant electricity derived from nuclear generation is cheaper than oil and coal fuelled electricity generation in absolute terms.

31. Nuclear power itself cannot prevent costs rising, but those costs would be even higher in the absence of the nuclear contribution, both because of its inherent cheapness and because the expanded demand in its absence would force the price of fossil fuels even higher.

Proliferation

32. The following indent of the preamble claims that there is an indissoluble link between the development of the peaceful nuclear industry and the proliferation of nuclear weapons.

33. This assertion must surely be questioned. In the conclusions reached at the INFCE Conference in February 1980 it was agreed that the proliferation of nuclear weapons and the application of the underlying technology was essentially a political and not a technical problem. Your rapporteur has no doubt that if a country has a political resolve to set itself up as a nuclear weapons power, it can do so today without any transfer of nuclear technology or data from the peaceful use of nuclear energy, and thus the suggested moratorium cannot change this situation. This is clear not only from the number of countries with nuclear energy, but in particular from the number of potential atomic powers.

34. A sudden halt to the generation of electricity by nuclear power would do nothing to solve this serious problem. It would appear in fact that an effective solution can be adopted at international level. The European Community was quick to realize the risk of material being used for purposes other than that for which it was originally intended. Chapter VII of the EAEC Treaty introduced genuine Community safeguards which were supplemented on 19 October 1976 by Commission Regulation No. 3227/76. An agreement was concluded between EURATOM, IAEA and the seven Member States of the European Community which do not possess nuclear weapons (Doc. PE 45.608 of 23.8.1976) in order to align this system with the provisions of the non-proliferation Treaty. Two tripartite agreements cover the case of France and the United Kingdom respectively (UK/EURATOM/IAEA agreement and France/EURATOM/IAEA agreement).

35. Moreover, agreement was reached in London on 21 September 1977 on the principles governing the export of nuclear material and plants. Several Member States of the Community are parties to this: the United Kingdom, France, the Federal Republic of Germany, Belgium, Italy and the Netherlands. This network of European and international safeguard agreements would appear to provide the Community with all possible guarantees to prevent the development of peaceful nuclear energy applications leading to the proliferation of nuclear weapons. It should also be noted that as a result of studies carried out as part of its nuclear programme France has been able to develop a process for enriching uranium which is unsuitable for military applications.

36. Public concern for the safe disposal of the plutonium created in conventional nuclear reactors can best be assured by using it peacefully in the generation of electricity by Fast Breeder Reactors.

Security measures for the protection of nuclear power stations

37. Such measures are essential to prevent nuclear materials and installations becoming a target for sabotage, hijacking, theft or terrorist activities. A nuclear moratorium would in no way remove the need for such security measures. The European Community is a party in its own right to the international convention signed in Vienna on the physical protection of nuclear materials and installations.

38. The stringency of the security measures to ensure the safety of nuclear installations is an unfortunate necessity. This need is not peculiar to the nuclear industry, and concentration of facilities in a few sites and the employment of certain types of reprocessing will alleviate the problem. Protest demonstrations can themselves be such as to cause infringement of civil liberties. It is right that we should be vigilant on this topic, but also avoid being unduly alarmist.

CONCLUSIONS

39. It will by now be obvious that your rapporteur does not consider the arguments put forward to be strong enough to justify a nuclear energy moratorium. Even if there was some validity to the arguments advanced, a moratorium would not be the answer.

40. Nuclear energy has been a reality for the last 30 years and is being harnessed world-wide. The Community includes nuclear power as a necessary component in its energy policy and is devoting a considerable part of its resources to ensure continuing improvement in the safety of nuclear installations, as the Community's research programme clearly shows, thus enhancing the already stringent safety standards.

41. Given the Community's present energy supply situation, a moratorium could have disastrous results. We should ask what are the economic, social and political consequences of an energy supply situation in which nuclear energy played no role. Your rapporteur is convinced that these consequences would be far more serious than the continuing use of nuclear energy which is subject to safety requirements and standards not found or even demanded elsewhere.

OPINION OF THE COMMITTEE ON THE ENVIRONMENT, PUBLIC HEALTH AND CONSUMER PROTECTION

Letter from the chairman of the Committee to Mrs H. WALZ, chairman of the Committee on Energy and Research

Brussels, 24 April 1980

Dear Mrs Walz,

At its meeting of 24 April 1980¹ the Committee on the Environment, Public Health and Consumer Protection considered the motion for a resolution pursuant to Rule 25 of the Rules of Procedure on a nuclear energy moratorium (Doc. 1-483/79), and has adopted the following opinion:

Paragraph 1 of the motion for a resolution of 12 November 1979 calls for a three day plenary debate on nuclear energy problems. In this connection the committee notes that the European Parliament has already held a debate of this nature on 13/14 February 1980. This debate closed with a resolution by Parliament on the energy objectives of the Community for 1990, and a further resolution on adequate long-term energy supplies at reasonable cost (OJ No. C 59 of 10.3.1980, p.41 ff).

Paragraph 2 of the motion for a resolution proposes that the European Parliament examine the possibility of a moratorium on all further nuclear development. The committee notes in this connection that the question of a moratorium on nuclear energy was exhaustively discussed in the plenary debate of 14/15.2.1980. At the close of this debate Parliament made known its opinion that 'in the medium term the Member States' anticipated energy requirements in 1990 can be met only if greater recourse is had to coal and nuclear power'. It also voted against a moratorium by an overwhelming majority (see Parliament vote on Amendment No. 12 by Mr Coppieters and Mrs Bonino - OJ No. C 59 of 10. 3.1980 p.40).

Given these circumstances the Committee on the Environment does not see fit to draw up a separate opinion on the motion for resolution, because the substance of the motion has already been dealt with.

Yours sincerely,

Kenneth COLLINS

¹ Present: Mr Collins, chairman; Mr Alber, Mr Johnson and Mrs Weber, vice-chairmen; Mr Adam (deputizing for Mr O'Connell); Mr Ceravolo (deputizing for Mr Segre), Mr Estgen, Mr Forth (deputizing for Miss Hooper), Mr Ghergo, Mr Mertens, Mr Muntingh, Mr Newton Dunn, Mr Remilly, Mrs Schleicher, Mrs Scrivener, Mrs Seibel-Emmerling, Mr Sherlock, Mrs Spaak and Mr Verroken.

Motion for a Resolution (Document 1-483/79)
tabled by Mr COPPIETERS, Mrs BONINO and Mr CAPANNA
pursuant to Rule 25 of the Rules of Procedure
on a nuclear energy moratorium.

The European Parliament,

- whereas information on the risk to workers in the nuclear industry and to the population of areas in the vicinity of nuclear installations is becoming increasingly disturbing, and whereas the latest data on the health risk of low-level ionizing radiation, which was hitherto considered harmless, suggests the need for a major reappraisal of existing ideas in this area,
 - noting that accidents in nuclear power stations are becoming increasingly frequent (or are being made known to the public more often),
 - noting that the cost of the nuclear industry to the tax payer is constantly rising,
 - drawing attention to the indissoluble link between the development of the 'peaceful nuclear industry and the proliferation of nuclear weapons,
 - disturbed by the police or quasi-police measures which seem inevitable to ensure the security of nuclear installations,
 - aware of the fact that the nuclear threat is a source of deep concern to hundreds of thousands of citizens of the Community and of other European countries,
1. Decides to set aside three days at its January 1980 part-session for the fullest possible debate on the problems of the nuclear industry;
 2. Agrees to make a special study on that occasion of the possibility of a moratorium on all further nuclear development pending a solution to the problems which arise in this area;
 3. Instructs its Committees on Energy, Environment and Public Health, Social Affairs, External Economic Relations, and also its Legal Affairs Committee, to report to it as a matter of urgency on the problems referred to above.

MINORITY OPINION ACCORDING TO RULE 42(2) OF THE RULES OF PROCEDURE

1. There are strong and still growing grounds for doubt as to whether the current commitment of the Community authorities and of some Member Governments to electricity produced by nuclear power stations as a component in meeting energy requirements is justified or politically responsible. Evidence is accumulating about the dangers involved in nuclear energy, and also about the advantages and potential of a wide range of alternative energy sources. But democratic debate is falsified by the current over-riding commitment of official policy to the nuclear option.
2. The fact that no proven solution has yet been found to the problem of disposal of the lethal nuclear waste from power stations currently in operation, which continues to pile up, threatening the health and safety of present and future generations, is in itself an adequate and necessary reason for a moratorium on nuclear activity until a solution has been found.
3. In addition, the moratorium would permit fair and balanced democratic debate of the following questions :
 - is low-level radiation from nuclear installations, hitherto claimed to be harmless, a source of cancer among populations in the areas around?
 - what are the risks of accidents in existing power stations, and are safety provisions adequate?
 - in view of the changed economic situation and prospects, is there any foreseeable shortage of energy, and if so can it be met by far-reaching measures of energy conservation?
 - what is the energy potential of the full range of renewable energy sources now being explored or developed (among them: bio-mass, wind energy using modern technology, wave energy, solar panels and photo-voltaic cells), in particular if they had access on equal terms to public and private funds for research and development?
 - what is the comparative job-creating effect of nuclear energy and alternative energy sources?
 - what is the impact of uranium mining on the culture of native peoples, and is it defensible or justified on the grounds of meeting the advanced world's energy needs?

- what are the dangers of proliferation of atomic weapons as a result of continuing with the nuclear option in western Europe?
 - in view of the failure of the nuclear waste re-processing industry and the grave uncertainties about the technology of the fast breeder, do current nuclear energy strategies make technical or economic sense?
 - is it possible to continue to develop nuclear energy without moving far towards an inadmissible degree of surveillance of citizens?
4. Until all these questions have been openly debated, without the pressure exerted at present by the nuclear lobby and by official bodies committed in advance to nuclear energy, it is not in our view responsible to continue to develop nuclear energy. That is why we support the call for a moratorium.

