



Resolution 720 (1980)¹

Safety and economic aspects of the fast breeder nuclear reactor (Fourth Public Parliamentary Hearing, Brussels, 18-19 December 1979)

Parliamentary Assembly

The Assembly,

1. Having regard to its [Recommendation 846 \(1978\)](#) on energy and the environment and to its [Resolution 711 \(1979\)](#) in reply to the activity reports for 1977 and 1978 of the OECD Nuclear Energy Agency ;
2. Reaffirming its concern that standards of living, the maintenance of social services and the stability of political systems in member countries will depend on ensuring adequate and secure supplies of energy ;
3. Considering that in a number of member countries nuclear energy has become or is being developed as an important source of electricity supply, and that fast breeder reactor systems are generally regarded in these countries as the next logical step in the commercial exploitation of nuclear technology ;
4. Welcoming therefore the holding of the Council of Europe's Fourth Public Parliamentary Hearing (Brussels, 18-19 December 1979) on the safety and economic aspects of the fast breeder reactor, organised pursuant to [Resolution 711 \(1979\)](#) ;
5. Recalling that the aim of such hearings is to provide up-to-date information as an aid to parliamentary decision-making through the organised questioning by parliamentarians of representatives and experts from government, industry and the scientific and technological community ;
6. Convinced moreover that further efforts at national and international levels to respond effectively to the information needs of parliamentarians should be a central part of strategies to improve public understanding of the difficult technological choices which confront member governments, and that in no field of technology are such strategies more important than for energy technologies in general and for civil nuclear technology in particular ;
7. Noting the state of development of fast breeder reactor technology in France, the Federal Republic of Germany, Japan, the United Kingdom, the Soviet Union and the United States, and the active industrial and governmental participation of Belgium, the Netherlands and Italy in the French and German programmes ;
8. Aware that expenditure on fast breeder research and technological development programmes in the United States in 1979 was about 25% higher than corresponding expenditure in the whole of Western Europe ;
9. Noting the substantial body of opinion at the Fourth Parliamentary Hearing that fast breeder reactors are potentially as safe as the 190 nuclear thermal reactors (300 more being under construction) now in operation throughout the world ; 10. Noting that fast breeder reactor systems :
 - a. are often misunderstood because of their name whereas in fact their technology is not essentially new ;

1. Assembly debate on 31 January 1980 (26th Sitting) (see [Doc. 4473](#), report of the Committee on Science and Technology). Text adopted by the Assembly on 31 January 1980 (26th Sitting).



- b. can extract from a given quantity of natural uranium at least fifty to sixty times as much energy as the thermal nuclear reactors now in operation, thus providing a path towards long-run energy independence from uranium and other energy imports ;
 - c. would facilitate the management and regulation of plutonium stocks ;
 - d. would be managed on the basis of twenty-five years' experience in the nuclear industry in the safe handling, transportation and storage of plutonium extracted by the reprocessing of spent fuel ;
 - e. give rise to highly active wastes which do not differ significantly in kind or amount from those arising from the operation of current thermal nuclear reactors, and which are accordingly suited to the same storage and disposal techniques ;
 - f. present a number of interesting safety characteristics in the use of liquid sodium as a coolant by comparison with the use of high-pressure steam or water in current thermal nuclear reactors ;
 - g. are expected, notwithstanding their higher capital, maintenance, repair and fuel fabrication costs, to be able to produce electricity at prices comparable to the present generation of thermal nuclear reactors ;
10. Having regard to the principle enunciated in its [Resolution 711 \(1979\)](#) to the effect that pending assessments of the longer-term role of nuclear energy in the light of the possibility of breaking the present strong linkage between levels of economic activity and energy consumption, decisions on having recourse to fast breeder technologies in Europe should only be taken following wide democratic debate,
11. Calls on the governments of member countries currently or prospectively engaged in the development of fast breeder technology :
- a. to provide for adequate public information, consultation and discussion with appropriate bodies prior to the construction and in regard to the siting of nuclear facilities which may contribute to the introduction and deployment of fast breeder reactors ;
 - b. to guarantee the maintenance and creation of safe and acceptable working conditions for those engaged in the operation and management of all types of reactor systems and associated facilities ;
 - c. to intensify research and development and the international exchange of information and experience on :
 - 1. the design of reactor systems in the light of experience gained from analysis and evaluation of the Harrisburg accident in regard to the eventuality of a sequence of human errors ;
 - 2. engineering and safety precautions in regard to the use of liquid sodium as a coolant ;
 - 3. management of the nuclear fuel cycle, with special regard to the safe and environmentally acceptable storage and disposal of long-lived radioactive wastes ;
12. Considers that, in the total context of the state-of-the-art of energy technologies and the overall energy supply situation of European countries, and subject to appropriate action as indicated in the preceding paragraph by governments and nuclear authorities, it is in the general interest of Europe to keep open the option of having recourse over the coming decades to fast breeder reactor systems, and that current programmes in Europe for the development of fast breeder technology to the point of commercial-size demonstration plants should be continued.