



10 DOWNING STREET

THE PRIME MINISTER

16 January 1980

Dear Teresa,

Thank you for your letter of 20 December enclosing one from Mr. D.R. Park on behalf of the Worthing Group of the Conservation Society about nuclear power. Mr. Park raised a number of interesting and important points; in consequence, my reply is long, but I hope that he will find it helpful.

The Need for Nuclear Power

We are sure that the ordering of more nuclear power stations is necessary if we are to have a realistic policy for meeting our future energy needs. Quite simply, as David Howell has made clear, we must face the fact that our own oil and gas resources will be declining in the 1990s. Even with full exploitation of our coal, and of energy conservation, and with great efforts on renewable energy sources, we cannot realistically expect to be able to meet our long term energy needs without a sizeable contribution from nuclear power. Nuclear power, and a strong nuclear industry, are therefore essential to the UK's energy policy.

Use of the Pressurised Water Reactor (PWR)

I think it is clearly right in principle for Britain to become involved in this technology while continuing with the two latest AGR stations. The PWR system is well established and proven abroad, with over 400 operating years behind it. It costs less than the British AGR; and the research and development that has been devoted to it worldwide is many times greater than that on the AGR. The techniques of manufacturing, constructing and operating it are well developed and understood. If problems should arise, there will be a major effort in many countries to resolve them, whereas with the AGR we are alone.

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But, of course, safety is of overriding importance; and I would emphasise that there is no question of this or any other type of reactor being built or operated here unless it meets the full requirements of the Nuclear Inspectorate and our independent licensing authority. David Howell has also said that documentation on the safety issues will be available to the public for the public inquiry that will take place in connection with the Generating Board's application for consent to build a PWR station.

As to the implications of Harrisburg for the PWR, the NII in their recently published assessment of the Kemeny Report said it has not led them to change their view that a PWR is capable of being designed, constructed and operated to satisfy their conditions for a licence in Britain. But of course they will take this Report into account in their licensing work.

Information for the Public

We want the public to be properly informed about the problems of nuclear power and nuclear safety. I do not think it is right to say that people only hear what the nuclear industry wants, or thinks is favourable. The industry certainly publishes information about its activities, and I think it is less than fair to them to suggest that this is not objective. But other people publish as well. The obvious example of an outside publication is the quarterly statement of incidents at nuclear installations. Another is the reports of inquiries. The Royal Commission on Environmental Pollution examined the effect of nuclear power on the environment in 1976, taking a wide range of evidence. Their report has been published. There was also a very wide ranging inquiry (lasting 100 days) into the proposed Thermal Oxide Reprocessing Plant at Windscale; the environmental implications of nuclear energy were again examined. This report was published also. For the future we are committed to a public inquiry into the PWR and, as I said above safety documentation will be available for this.

/Terrorist Risks

Terrorist risks and material not accounted for

I can assure Mr. Park that we do not belittle terrorist risks. On the contrary, we take very careful precautions - including the provision of armed guards to protect plutonium and other sensitive fissile materials in storage and in transit - and will continue to do so. The handling of such material is strictly controlled within establishments where it is held or used.

Accounts of nuclear materials are kept at all nuclear sites in the UK. At intervals, comparisons are made between the physical and the "book" inventories of these materials. The arithmetical difference between the two inventories is known as the "material unaccounted for" (MUF) and may vary from one accounting period to another, being positive, showing an apparent gain; or negative, showing an apparent loss. These fluctuations arise because of unavoidable uncertainties in the precise measurement of large amounts of material of varied compositions. Mr. Park is thus right in this sense in saying that site accounting for nuclear materials is not exact. But the occurrence of positive MUF figures does not in fact mean that material has in some way been created or brought secretly on to the site; similarly, a negative MUF figure need not signify an actual loss of material. We are satisfied in fact that no significant quantity of material has been lost.

Handling of terrorist incidents

I do not think it would be helpful to speculate on what the Government would do if terrorists or other criminals actually obtained sensitive nuclear materials. We have contingency plans for dealing with terrorist incidents of all kinds, including those involving nuclear materials. But I do not think it would be in the national interest for me to go into the detail of these. On Mr. Park's suggested scenario, I might comment that I am advised that it would be necessary to set fire to enormous quantities of plutonium to create a significant hazard at even a range of a few hundred yards from the source. It seems an improbable situation. Terrorists could use other materials if they wanted to pose a significant threat to the population. I think it is worth emphasising generally that the

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problem is basically terrorism, not plutonium. If there are terrorists who want to harm the public, the absence of plutonium will not stop them.

Incidents at Windscale

Neither of the two recent leaks of radioactivity at Windscale has caused any harm to public or workers, or to the environment beyond the vicinity of the building concerned. The 1957 release of radioactivity was caused by a fire in an early nuclear reactor engaged in defence - related operations; the type was never used for commercial nuclear stations. It led to a temporary ban on the consumption of milk locally. A Committee set up at the time by the Medical Research Council concluded that "it is in the highest degree unlikely that any harm was done to the health of anybody, whether a worker in the Windscale plant or a member of the general public".

Waste disposal

I do not believe that the disposal of nuclear waste arising from the new programme need be a major problem. At present, highly active reprocessing wastes are stored in special tanks. The intention is to vitrify these wastes with a view to disposing of the glass to strata underground or to the sea, possibly after a period of surface storage. A full scale vitrification plant should be in operation later in this decade. A large scale research programme is in progress here and abroad into the disposal options referred to above. We share the confidence expressed by the Royal Commission on Environmental Pollution that an acceptable solution will be found.

Proliferation of nuclear weapons

We have always recognised the danger that the wider adoption of nuclear power might increase the possibility that other countries would obtain nuclear weapons. Our aim has been and remains to minimise this risk, and we take a full part in the extensive international efforts that are made to this end. These include arrangements to restrain the transfer of sensitive technology by means of technical and institutional barriers. But in the end, a decision by another

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country to build nuclear weapons is a political one and need not depend on civil nuclear power programmes. The key to reducing proliferation risks is to seek stability in international relations, and we are certainly doing this.

Costs of nuclear power

I am not sure that I understand the figures Mr. Park uses to support his argument that nuclear power is uneconomic. But in general, in considering investment in new generating capacity the CEGB assess future capital and operating costs, including fuel costs, as well as the cost of eventual decommissioning. On the best available estimates of these costs they believe that nuclear plant is the most economic for development, quite apart from our need of nuclear power as a contributor to total energy supplies.

Alternative supplies of energy

We certainly agree on the need to develop alternative sources so that in due course they may make a contribution to our energy needs. We have research programmes under way on tidal, wave, geothermal, wind and solar energy. Expenditure has increased, and in the current financial year the Department of Energy expenditure is estimated at £7 million. This is modest in comparison with expenditure on nuclear energy, but the renewable sources are still at the early research stage. Programmes have not yet reached the much more costly stages of prototype, development and demonstration. It seems unlikely that renewable sources will be able to contribute significantly to supply, or be economically preferable to other fuels, during the rest of the century; but they could begin to play a more substantial role thereafter.

I hope these comments will be of value to Mr. Park and the Worthing Group. The Government do not regard nuclear power as an end in itself. We are very conscious that we must have a balanced energy policy drawing on every one of the resources available to us, and that safety must be paramount. But we cannot have such a policy without a substantial nuclear contribution.

*Yours
Terence Higgins*

The Rt. Hon. Terence Higgins, MP.