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'ENVIRONMENTAL' INVOLVEMENT IN BRITISH CIVIL NUCLEAR POLICY

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For more than a quarter of a century civil nuclear policy in Britain has been riven by controversy. Most of it, however, has taken place behind closed doors, between interested parties. As other commentators have discussed (1,2) most of the seed of the malaise now afflicting Britain's civil nuclear programme was sown long before anyone became known by the ungainly sobriquet 'environmentalist'. The significant advent of 'environmental' activity in the nuclear arena in Britain dates only from circa 1973; it thus represents only a further complication of an already convoluted picture. Most of this picture can be better described by others more closely involved. What I shall endeavour to present here is a preliminary outline of some aspects of 'environmental' participation in British civil nuclear policy. It is of necessity a personal view, and cannot lay any claim to 'objectivity'. But it may prompt clarification, augmentation, and rebuttal, and thus contribute toward the comprehensive and dispassionate analysis of British civil nuclear policy which is long overdue.

What is an 'environmentalist', and what is it about nuclear power which arouses 'environmental' attention and concern? Neither question yields a simple answer. But it may be illuminating to consider some specific issues which have engaged 'environmental' activity in Britain. Before doing so, it is important to note that until late 1973 there was no coherent national public 'campaign' challenging any British nuclear plan (largely because, until late 1973, there was no coherent nuclear plan to challenge). Elsewhere of course nuclear projects had long since aroused substantial opposition. But in Britain adverse comment had been sporadic and unspecific: one-off media coverage of foreign issues, occasional letters to the editor, and passing references in various manifestos and reports, like the 'Blueprint for Survival' (January 1972) (3) and 'Nuisance or Nemesis?' **(**May 1972**),** a background report for the UN Conference on the Human Environment (Stockholm, June 1972**),** prepared for the British Government by a working party chaired by Sir Eric Ashby F.R.S. (4). Nuclear problems mentioned in the various publications included conventional amenity and planning, the disputed hazards of low-level radiation, the management and disposal of radioactive waste, the possible misuse of fissile material, the questionable economic status and performance of nuclear technology, and the safety of nuclear facilities. (The first article I wrote for *New Scientist*, in September 1972, described the controversy in the U.S. about emergency core cooling systems for light water reactors.) (5)

In Britain by 1973 two national 'environmental' organizations, the Conservation Society (ConSoc), founded in 1966, and Friends of the Earth Ltd (FOE), founded in 1970, had established campaigns for more rational use of resources, including energy. FOE in particular had begun to devote a substantial proportion of their own limited resources to research on nuclear issues. Both Amory Lovins (British-based representative of the US sister organization, FOE Inc) and I had attended the Bethesda hearings on [emergency core cooling systems] ECCS in 1972, and had paid close attention to the [light-water reactor] LWR scene. Accordingly, when Peter Rodgers revealed in the Guardian, 15 October 1973 (6), that the long-running battle over reactor choice in Britain was to be resolved in favour of LWRs, I was invited to comment on the BBC Radio 4 news programme 'The World Tonight', about the safety and performance of LWRs. (The National Nuclear Corporation was likewise invited but declined.) The explicit and continuous 'environmental' involvement in British civil nuclear affairs could probably be dated from that evening.

Three weeks later FOE published *World Energy Strategies* by Lovins, which included a detailed survey.of civil nuclear problems (7). Advance copies were distributed to a Royal Society conference on 'Energy in the 1980s'; the book stirred lively attention. The press conference for its publication, attended by many of Britain's leading science

writers and broadcasters, became a two-hour seminar on LWRs. On 25 November 1973 the *Sunday Times* carried a half-page article by Lovins (8), describing the unresolved safety problems of LWRs; the issue the following week carried a rebuttal by Westinghouse. The LWR issue quickly snowballed into the first national public controversy over civil nuclear policy in Britain.

The Parliamentary Select Committee on Science and Technology held hearings on the choice of reactor, which revealed the bitter schisms which had long divided Britain's nuclear establishment. Lovins and I drafted a 45-page memorandum analysing the comparative economics and safety of LWRs, which was published as the first Appendix to the Committee's Report on 30 January 1974 (9)**.** The Report recommended that no LWRs be built in Britain on the basis of the existing public evidence. Throughout the following weeks, with a change of Government, a House debate on 2 May 1974**,** and continuing high-profile media coverage of the issue, FOE continued briefing MPs and providing background for journalists. On 10 July 1974 the Government announced that it had rejected the LWR plan, and that permission would be given only for a small programme of [steam-generating heavy water reactors] SGHWRs.

At the Nuclex exhibition in Basel, Switzerland, in autumn 1975, M. Owen of Westinghouse Nuclear Europe introduced me to his colleagues as 'one of the two people who gave me more trouble than anyone else in Britain'. But the record suggests that the role of 'environmental' activity in the LWR controversy was essentially marginal, the provision of public information to complement that supplied by the interested parties. FOE and ConSoc members did a certain amount of lobbying and letter-writing; but the effective political pressure from organized environmental groups was much less significant than that from the nuclear factions themselves. It is nevertheless undoubtedly true that the media coverage of the LWR issue served to raise general public consciousness of civil nuclear problems and in so doing laid the foundation for later developments.

While the LWR controversy was at its height, the South of Scotland Electricity Board applied for outline planning permission to build a nuclear station at Torness, southeast of Edinburgh. A number of groups and individuals, among them ConSoc and FOE Edinburgh, objected. A local planning inquiry was held in late June 1974 - three weeks before the Government announced its reactor-choice decision. The SSEB application was therefore for a reactor of unspecified type or size, at an unspecified time. Accordingly, objectors could not deal with the application in any but the most general terms. For FOE, I gave two hours of testimony and cross-examination; but the inquiry Report in due course made scant reference to evidence on energy planning or nuclear issues from any witness and recommended approval of the application, which was duly granted. The Torness inquiry in 1974 was the last conventional planning inquiry for a nuclear facility in Britain. Its futility was remarked by many participants, and influenced attitudes to subsequent nuclear decision-making procedures more than may have been hitherto recorded. Nor was the Torness issue itself thereby resolved.

In December 1974 FOE published *Nuclear Power: Technical Bases for Ethical Concern* by Amory Lovins, and *Dynamic Energy Analysis and Nuclear Power* by John Price (10), both of which elicited substantial media cover and debate - virtually all of it, to be sure, on a fairly abstruse level. Then, in January 1975, two Windscale process workers died within 24 hours of each other, of rare neoplasms. The suggestion that radiation exposure had contributed to their deaths caused a furore and prompted BNFL to arrange the first press visit to Windscale since 1962. As an active freelance journalist I was included; at the press conference at Windscale, I asked if BNFL was supplying separated plutonium to Italy and Japan - neither at that time party to the Non-Proliferation Treaty. (It was.) BNFL declined to comment, saying that the question should be put to the British Government. Before the NPT review conference in May 1975 FOE did so and accused the Government of a breach of the Treaty. From that point onward the proliferation problem became increasingly prominent in British civil nuclear controversy.

In May 1975, FOE held a tenth birthday party for the AGR programme, attended by many people from the electronuclear industry and the media, and featuring a 33-pound birthday cake in the shape of Dungeness B. At the

party FOE published a four-page tabloid called *Nuclear Times*, one of whose front-page stories described BNFL's expansion plans and said that they would make Windscale 'one of the world's main radio-active dustbins' (11). This story, and the dustbin motif, reappeared - augmented with numerous technical errors - as a front-page story in the *Daily Mirror*, 21 October 1975 (12). The story caused an unparalleled national uproar. But Nigel Hawkes pointed out in the *Observer* (26 October) that the uproar was misdirected: that the real problem was not the 'dustbin' aspect but that the plan entailed separating plutonium and shipping it around the world by the tonne (13). In the months that followed, as the Windscale controversy mounted, critical comment from other quarters mainly took exception to the idea of Britain importing 'nuclear waste' from foreign countries; but FOE continued to stress the other end of the problem, that of re-exporting separated plutonium.

Throughout 1976, the Windscale issue gathered momentum, with public meetings, radio and television, newspaper and magazine articles and letters to the editor. Environmental participants included FOE, a Lancaster-based group called Half-Life, ConSoc, and an increasing number of new groups. In April 1976, FOE chartered a British Rail train to Windscale for a rally outside the security fence, with participation from MPs and BNFL management and unions. In July 1976, the *Observer* published a major feature including a monitory editorial and my full-page article 'Towards the Atom Bomb Economy', describing the problems of the fast reactor (14). (My Penguin book *Nuclear Power (*15) had appeared in March 1976; it received considerable attention, with some 30 reviews in the UK press. However, although it probably helped to strengthen the factual understanding of the issues, it was written as an introduction to the subject, not to present an 'environmental' case.)

On 22 September 1976 the Royal Commission on Environmental Pollution, chaired by Sir Brian Flowers, published 'Nuclear Power and the Environment' (16). Its impact was stunning, confirming for the first time in semi-official terms that some at least of the main points raised by 'environmentalists' warranted genuine concern. (ConSoc, FOE, the Council for the Protection of Rural England, and a number of prominent 'environmental' figures had given written and oral evidence to the RCEP during its lengthy investigation.) From the publication of the 'Flowers Report' onward the political credibility of criticism of civil nuclear power was immeasurably enhanced. What had hitherto been largely dismissed or ignored except by the nuclear establishment, interested journalists and active 'environmentalists' suddenly became the common coin of everyday conversation. From that point on, the scope and variety of 'environmental' involvement in civil nuclear matters in Britain became far too wide-ranging for any single individual to comprehend.

In late October 1976 FOE, the CPRE, and the National Council for Civil Liberties co-published *Nuclear Prospects: A Comment on the Individual, the State and Nuclear Power*, echoing and extending one major theme of the Flowers Report, and provoking a vigorous debate in the media and in political circles (17). On 23 November, yet another dimension was added when the Lawyers' Ecology Group delivered a letter to Peter Shore warning him of legal consequences should he fail to call in the Windscale application. Shore asked for a delay of a month; then on 22 December 1976 he announced that there would be an inquiry.

By this time the Windscale issue had become front-page news. New opposition groups sprang up, and long-established organizations not hitherto involved with nuclear matters joined the fay, notably the Town and Country Planning Association. The prospect of an inquiry, with the inevitable legal costs, necessitated fund-raising efforts on a scale which no broad-based 'environmental' organization had previously attempted. Fund-raising was further complicated by the proliferation of objectors' groups, and the eventual impossibility of agreeing on a united front to present the opposition case at the inquiry. By the time the Windscale Inquiry commenced, on 14 June 1977, the roster of participating objectors ran to two pages. An 'open letter' to the visiting President Carter, published in the *Guardian* in early May by 'People for a Non-Nuclear World', filled more than a page with supporting signatures.

The course of the Windscale Inquiry and its aftermath would require at least a book to itself to describe and analyse. The attitude of objectors varied right across the spectrum. Some regarded the Inquiry as an opportunity to challenge every aspect of nuclear policy. Others focused their cases on what they felt to be the key aspects of the Windscale THORP plan itself. The Isle of Man emphasized the problem of low-level radioactivity. The British Section of the International Commission of Jurists addressed the civil liberties implications of large-scale commercial utilization of plutonium. FOE, for whom I was lead witness, stressed waste management, the economics of resource recovery and the weapons-proliferation implications of traffic in separated plutonium. During and after the Inquiry some objectors expressed dissatisfaction with its format and proceedings. Others, among them FOE, were complimentary, considering the 100 days of the Inquiry itself as fair and reasonable.

The Report of the Inquiry, written by the Inspector, Mr Justice Roger Parker, was something else again (18). When it became clear that Peter Shore was not intending to publish the Inspector's Report before announcing a Government decision, FOE and a number of concerned MPs initiated an Early Day Motion calling for prior publication of the Report; and FOE and the TCPA published their own Reports on the Inquiry (19),(20). The EDM in due course attracted the signatures of some 200 MPs. Shore therefore resorted to a convoluted procedure whereby the Report was published, 6 March 1978; the Government formally rejected the THORP application; the House debated the Report, on 22 March; the Government laid a Special Development Order authorizing THORP; a number of MPs, led by the Liberals, called for the Order to be negatived; and a second debate, on 15 May, concluded with a vote giving the go-ahead to the project. The initial reaction of most objectors to the Parker Report was one of disbelief, followed swiftly by furious anger. Several objectors' groups published rebuttals of the official report, among them FOE (21), pointing out the many inconsistencies, omissions and misrepresentations which they felt invalidated the Report as a guide to the Inquiry and the cases advanced. There is not space here to discuss the matter; but it must be said that the Parker Report confirmed for many objectors their darkest premonitions, to the effect that the entire Inquiry procedure was a charade; and for those objectors like FOE who had acted in good faith the Report was like a slap in the face (22). On 29 April some 30 000 people gathered in Trafalgar Square to attend a Windscale demonstration organised by FOE with help from many other groups. Despite the intensity of feeling on the part of the participants the demo was peaceful throughout, and the demonstrators dispersed without incident.

The vote on 22 March 1978 was 186 in favour of THORP, 56 against - three times as many votes as had ever before been cast against a civil nuclear measure in the House of Commons. The final vote, on 15 May, with a two-line Government whip in favour of THORP, was 224 in favour, 80 against. It is also instructive to compare the Hansard record of the House debate on 2 May 1974, about reactor choice, with that of the final Windscale debate, as to the level and detail of argument advanced, especially by critical MPs. As some of them observed after the vote, the Windscale issue was far from settled. Subsequent developments both at Windscale and internationally suggest that BNFL's reprocessing plans have a long and rocky road ahead, under a growing number of watchful and sceptical eyes.

In an attempt to improve the dialogue between nuclear proponents and opponents, the [Atomic Energy Authority] AEA, the Electricity Council, the Nuclear Power Company, FOE, NCCL, ConSoc and the CPRE co-sponsored a two-day conference at the Royal Institution in October 1977, on 'Nuclear Power and the Energy Future'. Those present in general agreed that the conference had been a worthwhile opportunity to seek common ground and identify genuine problems (23). Since then, however, there can be no doubt that the egregious disparity between the Windscale Inquiry proceedings and the Parker Report on them does not augur well for satisfactory resolution of the nuclear issues which have come to prominence during and after the Windscale Inquiry.

These issues involve almost every phase of the British civil nuclear programme. In the Orkney Islands, when it became known in 1976 that the South of Scotland Electricity Board had plans to drill for uranium north of the town of Stromness, the local population was incensed. After a campaign of mounting intensity, including a march through

the high street of Kirkwall, the Orkney council in February 1977 voted unanimously to refuse permission for the drilling: and the SSEB did not appeal. However, when the council moved to embody the ban on uranium development in the structure plan for the Orkneys, the SSEB and the AEA intervened. As this is written, the outcome of the confrontation is not yet known. However, it would be a sanguine driller who would attempt to move a rig into place in the face of present Orcadian sentiments.

The uranium enrichment activities of BNFL, through URENCO, attracted little public notice until it began to seem possible that public and Parliamentary opposition in the Netherlands would force URENCO to switch from Almelo to Capenhurst the contract to supply enriched uranium to Brazil, a non-party to the NPT with unconcealed aspirations towards nuclear weapons capability. The opposition to URENCO in Britain has thus far been comparatively low-key; but it may not remain so, especially if URENCO does begin to supply non-NPT countries. BNFL's contract to supply Brazil with a hexafluoride conversion plant has already drawn unfavourable comment from MPs and others.

In southwest Scotland, in the neighbourhood of Mullwharchar, the AEA's plans to carry out test drilling for preliminary geological research into disposal of high-level nuclear waste have met with fierce local opposition. The Kyle and Carrick District Council has refused permission for the drilling, the AEA has appealed, and there will probably be a planning inquiry. The AEA insists that it is inconsistent for objectors to complain that no plan exists for final disposal of radioactive waste, while simultaneously refusing permission for research drilling. However, even groups like FOE, who originally concurred that such drilling ought to take place, have had second thoughts after the Parker Report. The AEA has never published any detailed description of what it would consider satisfactory results from test drilling; and suspicion is now rife, lest the AEA drill first and establish criteria afterwards, declaring itself satisfied with whatever it finds.

Meanwhile the Torness issue has resurfaced in a new and more worrying form. After four years of confusion, a switch from SGHWRs to AGRs, and a drastically changed energy-supply context, the Government refused any further inquiry into the Torness plan and gave the SSEB the go-ahead to start construction. Scottish objectors regrouped into a 'Scottish Campaign to Resist the Atomic Menace' - SCRAM - and organized the first manifestations of 'direct action': that is, physical on-site confrontation with the authorities. After smaller-scale site occupations earlier, SCRAM brought over 4000 people to Torness in May 1979, leading to the inevitable police action in response. Police and demonstrators afterwards exchanged careful compliments about their mutual restraint; but the possibility of less peaceful encounters in the future must be acknowledged.

It is a prospect I view with sadness and dismay. 'Environmental' involvement in British civil nuclear policy has thus far certainly annoyed and irritated much of the nuclear establishment; but 'the environmentalists' have at least helped to bring disputes and problems into the open, instead of leaving them to be fought out by the nuclear factions, with the public paying the bills. One result has been a welcome if belated recognition of reality on the part of nuclear proponents. No more will they advance projections requiring twenty-fold expansion of British nuclear capacity in 25 years, like the AEA's 'reference programme' presented to the Flowers Commission in 1974, calling for 104 GW in operation by the year 2000. It is distressing, against such a background, to hear newcomers to the ranks of nuclear criticism declaring that only physical intervention will 'slow the nuclear juggernaut'. However, while regretting such highly-coloured and inaccurate language, it is necessary to stress that the threats now frequently uttered by senior British electronuclear executives, to the effect that without continued expansion of nuclear programmes we shall all freeze in the dark, are at least as deplorable. If the debate in Britain polarizes along such lines, there will be many, myself among them, who will consider British civil nuclear issues beyond rational resolution. It is scarcely a cheering prognosis for a twenty-fifth anniversary.

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22. The concluding paragraph of the FOE critique (reference 21) puts it thus: '5. 1. For all its shortcomings, the Windscale Inquiry was undoubtedly a landmark in British nuclear policymaking. It set standards for the public treatment of nuclear issues that are higher than those reached anywhere else in the world. It is thus all the more tragic that the hasty and erratic judgments of the Report on the Inquiry did no justice to the proceedings. The result has been a polarisation rather than a moderation of the debate. The omissions, misrepresentations and distortions contained in the Report, and extensively documented here and elsewhere, have inevitably cast doubt on the value of reasoned argument. It is difficult to see how public confidence in the worth of participation in such lengthy and costly procedures can easily be restored. The Parker Report has done little to reduce public concern over the wisdom of reprocessing and much to strengthen the hand of those opponents who prefer action to argument.'
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