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PRIME MINISTER

Nuclear Power Policy and the Nuclear Industry
(E(79) 54)

BACKGROUND

This paper basically seeks a new political commitment to nuclear power. It looks for a change in direction rather than firm investment decisions - though the latter would follow later, and the political commitment would itself be expressed as a size of future programme.

2. Nuclear power has considerable economic advantages. The paper argues that it would be a good investment to install a very large volume of nuclear stations very quickly to displace old and inefficient fossil-fuelled plant even if the demand for electricity did not grow at all. The lower operating costs of nuclear stations is thought to validate this conclusion even for very pessimistic assumptions about capital cost or over-run in delivery times. And the more nuclear capacity the less the dependence on the coal industry for security of electricity supply.

3. But nuclear power takes a long time to install, the construction industry is weak and the cost, even if met in full by electricity consumers, is high. So in the real world only a relatively limited programme looks feasible. And even for that, given that the PWR studies on safety are not complete, it will be necessary to keep open options on the types of reactor and rate of ordering.

4. In addition it is worth remembering that a major nuclear programme will not cut significantly into the market for coal in the United Kingdom. By the end of the century oil is likely to be scarce and expensive and the North Sea oil provinces will be substantially depleted. The use of coal in power generation may have been reduced but the need for it in other markets, perhaps including the manufacture of synthetic gas, will be increasing (and the ability of our miners to deliver may still be in doubt). Thus an expanded programme of nuclear power may not be simply desirable - it may, as is the case in most other countries, be essential.

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5. The paper seeks three main things:-

- (a) Endorsement of a sizeable nuclear programme for the CEGB - 1.5 GW a year starting in 1982-83 - as a statement of intent on which the nuclear construction industry could plan, with an initial firm commitment to 5 GW.
- (b) Subject to safety clearance a greater role in the programme for PWRs.
- (c) A restructuring of the nuclear construction industry to make it more effective.

6. In addition the paper points to:-

- (a) Using the Westinghouse PWR system (a licensing agreement with Westinghouse already exists);
- (b) continuing to use GEC expertise in the management of the NC/NPC (though ending their present supervisory management agreement);
- (c) pushing the CEGB into a more arms length relationship with their suppliers and, consequently, altering the role of Barnwood.

HANDLING

7. You might want to tackle the various aspects separately.

The 15 GW Programme

8. There is already public expenditure provision for Mr. Howell's proposals in the PESC period (Appendix 3). Beyond that, provided electricity prices are raised to economic levels (agreed as being the aim over a 3-4 year period at E last week), the industry can finance new stations largely from revenue, and public sector borrowing need not be a constraint. The economic, and security of supply, arguments point in favour of early constructions. So the main determining factor is practicability. Mr. Howell proposes 15 GW over 10 years from 1982, with possibly more if things go well. Within this he suggests a firm political commitment for the first 5 GW between 1982-83 and 1984-85, subject only to safety and planning. It is, of course, important not to underestimate these two factors as potential sources of problems and delay. Experience with the Windscale inquiry, Mossmorran and many trunk

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road schemes shows how far determined objectors can impose delay especially when emotive 'safety' factors are involved. For example a few more accidents like Harrisburg - not in itself the fault of the "nuclear" engineers - could delay the achievement of any programme however modest. In addition there are various past Government commitments for full consultation before a "major" programme is embarked upon. And on the other side there are the studies under way in the 'strategy' context into planning procedures which may lead in time to an easing of the planning constraints. Having said all this it is difficult for the Committee to second-guess Mr. Howell and, in any case, the real programme will be developed by discrete decisions over the years ahead. The important thing is to make a start.

PWRs

9. There are strong arguments for making the PWR the dominant reactor system in the new programme. Care is needed because the safety review of the PWR has not yet been completed (when will it be ready?). But subject to this Mr. Howell's view - that we should try to find a place for the PWR in the initial programme - reflects widely-held opinion. (Note: Sir Arnold Weinstock is likely to press for a major PWR element from the outset.)

The Nuclear Construction Industry

10. It is common ground that the NNC/NPC, in its present form, is not an effective instrument for constructing nuclear power stations. Mr. Howell suggests various ways in which the company can be strengthened. These are partly a matter of organisation, partly a matter of defining the boundaries with CEGB, but above all require NNC/NPC to be provided with a strong and effective management. The role of the GEC in this connection is discussed further below. The boundary with the CEGB is however also a central issue. As matters stand the CEGB has responsibility for overall project management - with the NNC/NPC now consciously confined to the "nuclear island". Mr. Howell urges that the role of the NNC/NPC should be steadily expanded and that of CEGB - mainly exercised through their powerful establishment at Barnwood - correspondingly reduced. Such a development seems desirable

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but depends critically on the NNC/NPC carrying conviction that they can do a good job - because the CEGB will continue to bear the main financial risks. Institutional resistance from CEGB is to be expected but in the last resort they will have to do what they are told.

The Westinghouse Licence

11. Westinghouse are far and away the most experienced PWR builders and designers in the world and it makes great sense, if we are to build PWRs, to use their expertise. A licensing agreement already exists which can be activated by an order or letter of intent. There is a problem arising from Westinghouse's current legal action against RTZ where Her Majesty's Government is assisting RTZ by disputing the jurisdiction of the United States courts. Mr. Howell implies that we should not let this lawsuit stand in the way of co-operation with Westinghouse on PWRs. This is no doubt right though could affect the timing of any announcement of Government policy (the court's judgment is expected in mid-November). You might ask Mr. Howell whether he thinks there is a real conflict of interest here and whether a fairly short delay would ease the problems.

The role of GEC

12. Sir Arnold Weinstock has long been unhappy about the whole nuclear picture - the vacillations over the choice of reactor and over the size of the programme, the domination of the CEGB, and the muddled organisation of the NNC. He should be very pleased at an outcome which gives a firm ordering programme, a major role for the PWR, cuts the CEGB down to size, and simplifies the organisation of the NNC. On this last he has long wanted to move to a single tier board and the shareholdings of GEC and the Government combined will enable him to determine the membership of the new board and who shall be the new Chief Executive. Sir Arnold wishes formally to give up his present management contract but if the Chief Executive is of his choosing and if Mr. Lewis of GEC is a member of the NNC board, the links should be very close (Sir Arnold, Sir Kenneth Bond and Mr. Lewis are the triumvirate who effectively run GEC). In fact, the arrangements could be very similar

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to those we hope to achieve for Rolls-Royce, and Sir Arnold's commitments in the power station supply industry are such that he would have great incentive to see that the new NNC was a success.

The form of Announcement

13. In view of the need to carry public opinion if the programme is to be achieved you may wish to ask Mr. Howell to give particular attention to the presentation of the decisions reached and to give plenty of opportunity for colleagues to comment.

CONCLUSION

14. Subject to discussion you might conclude:-

- (i) A substantial nuclear programme is desirable.
- (ii) In principle it should include PWRs but final decisions should depend on satisfactory safety assessments.
- (iii) A target of 15 GW over 10 years from 1982 and a firmer target of 5 GW over 3 years from 1982 should be accepted as the best likely to be achievable.
- (iv) The "selling" of the package needs great care and Mr. Howell should consult colleagues fully.
- (v) An announcement of the Westinghouse link might be deferred until the position on the court case with RTZ is clearer.
- (vi) NNC should evolve towards a role of total managerial responsibility for the construction of nuclear stations including the first PWR, and the CEGB should be told to co-operate in this aim.
- (vii) GEC's "supervisory management role" with NNC should end - and NNC should become a normal company with a single tier structure.

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