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MINISTERIAL COMMITTEE ON ECONOMIC STRATEGY

STRUCTURE OF THE POWER PLANT MANUFACTURING INDUSTRY
REVIEW BY THE DEPARTMENTS OF INDUSTRY AND ENERGY

Memorandum by the Secretaries of State for Industry and Energy

We were asked on 8 May to review the prospects and scope for early rationalisation of the power plant manufacturing industry. The attached note, agreed between our two Departments examines this, and we summarise the main issues in this paper.

2 The industry consists of 2 turbine generator manufacturers (GEC and NEI Parsons) and two boiler makers (Babcock and Wilcox and NEI Clarke Chapman) employing about 18,500 people heavily concentrated in Development Areas. The CPRS reported on its future in December 1976 and confirmed it was under serious threat. It recommended measures to provide a better and more stable workload and to promote rationalisation to one turbine generator manufacturer and one boiler maker (paragraphs 1 and 2).

3 Since the CPRS reported, orders have been placed for Drax B (2 GW) and are in prospect for 2 AGRs at Heysham and Torness (2.6 GW). There is to be design and development work on a PWR, and certain export orders have been gained with Government assistance. Assuming that the AGR orders (particularly for turbine generators) are not unduly delayed whether because of environmental concern or for other reasons, the industry should not find it necessary during the next year or so to close any works or engage in major reductions of their labour force. Great uncertainty attaches to the level and timing of future home orders and competition overseas already high is becoming increasingly severe. The industry's viability remains under serious threat (paragraphs 3 - 7).

4 There is general agreement in the industry that its future should be based on a single technology in boilers and turbine generators, which means a single company in each field. But there is no agreement on a new structure and no sign that it will be forthcoming (paragraphs 8 and 9).

5 Though the electricity supply industry favours this restructuring, it has been making efforts to have new orders shared. It has had some success with the boiler makers in relation to Drax and to the orders in prospect for the Heysham and Torness AGRs. Though some work for the Drax turbines is to be subcontracted from Parsons to GEC, the two turbine generator companies have refused to collaborate on the Heysham and Torness orders. The Generating Boards have invited tenders from both for all four sets at these two stations. They have been asked to put their ordering intentions to Government before they are announced (paragraph 10).

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6 Colleagues will wish to consider whether they wish to intervene in promoting rationalisation of the industry. There are a number of possible courses:

- (a) To leave the issue entirely with the companies under such influence as the Generating Boards' ordering decisions might impose. It would be consistent with this view not to intervene in the way the Boards decide to place orders.
- (b) To seek to persuade the Boards to place their orders in such a way as to force restructuring (though attempts to do this by means of the Drax order failed largely because of union opposition with political support) - or alternatively so as to spread the work between the companies.

7 In coming to a decision on these issues, we must have regard to the following considerations:

- (a) Though there is general agreement on the need for rationalisation, there is no sign of agreement in the industry about the form it should take.
- (b) Though we could ease the industry's path towards rationalisation by providing support etc, this could only be effective if there were a consensus within the industry about the form of the restructuring: we have no powers to impose a solution upon the industry.
- (c) Ideally matters should be left to the power plant industry and its customer, the electricity supply industry. But the latter equally would face difficulties in seeking to impose restructuring by use of its ordering programme; and if an individual firm should feel that its interests are not being equitably treated by the home customer, the firm and its workforce will press strongly for Government intervention. Where there may be serious risks of factory closures or major redundancies in Development Areas, these pressures become intense.
- (d) If the Generating Boards are pressed by Government to take action which they do not regard as wholly in their interests they will ask for compensation.

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INTRODUCTION

The Central Policy Review Staff reported on the future of the power plant manufacturing industry in December 1976. It confirmed that the industry was under serious threat. But it found a strong case for maintaining this high skill, high value added industry to supply the home market and compete successfully overseas. It warned that early action would have to be taken if the industry's prospects were not to be impaired. Central among the measures recommended were steps to improve home and export order books and to promote the rationalisation of the industry, using a stable domestic ordering programme as an inducement.

THE PRESENT STRUCTURE

2 The industry consists of two turbine-generator manufacturers, GEC Turbine Generators Ltd and NEI Parsons Ltd and two boiler makers, Babcock and Wilcox (Operations) Ltd and NEI Clarke Chapman Ltd. These businesses are parts of major companies, two being subsidiaries of Northern Engineering Industries (NEI). The industry currently employs about 18,500 people (about 20% less than when the CPRS reported) with the heaviest concentration on the North East Coast and in Strathclyde.

WORK LOAD

3 Since the CPRS reported, the CEBG has brought forward Stage II of Drax with Government support. Two orders for AGR stations, Heysham and Torness, have been announced - to be placed on present plans, in 1980. These orders total 4,600 Megawatts (4.6 GWs). In addition, there will be design and development work for the PWR in accordance with the decision to develop the option of adopting this system. The CEBG are planning for a PWR order in 1982.

4 Abroad, with substantial Government assistance, GEC and Babcock and Wilcox have obtained an order for a power station in Hong Kong, GEC have been successful in tendering for turbine generators for Kori 5 and 6 in South Korea and NEI have obtained a small order for turbine generators for Titagarh (India). The firms are energetically pursuing further orders and have tendered for 2 stations in China totalling about 2000 MWs.

5 The indications are that the orders obtained - together with other measures the electricity supply industry is taking, e.g on major repairs - hold out the prospect that for the next year or so plant suppliers will not find it necessary to close any of their works or engage in further major reductions in their work forces. In short, in terms of workload (and subject to the way home orders are placed) the industry will face a difficult though not disastrous situation.

6 In the longer term, the placing of further home orders depends primarily on the forecast rate of growth in electricity demand. The Generating Boards have said that the rate of ordering from 1980

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- (a) To leave the issue entirely with the companies under such influence as the Generating Boards' ordering decisions might impose. It would be consistent with this view not to intervene in the way the Boards decide to place orders.
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6 In the longer term, the placing of further home orders depends primarily on the forecast rate of growth in electricity demand. The Generating Boards have said that the rate of ordering from 1980

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onwards taking into account Heysham II and Torness, should average about 2 GWs a year, with the bulk of the orders coming in 1982 and after. This view is based on the forecast adopted by the industry in England and Wales of a 2.3% per year average increase in demand in the years up to 1985/86. It could therefore be less if load forecasts fall; in recent years, forecasts of growth in electricity demand have come down substantially. For comparison with the forecast growth rate, growth actually averaged 1.6% per year during the years from 1975/76 to 1977/78. Great uncertainty therefore attaches to the Board's future ordering intentions.

7 The home and export orders obtained do not measure up to the CPRS targets. At home the CPRS considered that the industry needed as a minimum a stable ordering programme of about 2 GWs a year. There is no commitment to such a programme. Abroad, the CPRS estimated that the industry would require an average 3 GWs of turbine generators and 1 GW of boiler orders from overseas sources each year. Even with special Government support, the total overseas orders obtained in the three years 1976-78 are less than the requirement for one year estimated by the CPRS. And all the indications are that competition overseas is becoming increasingly severe and prices are being quoted by the Japanese in particular which are substantially below ours. The long hiatus in home ordering, the work in hand and in prospect, and the terms on which the industry has obtained its export successes will not enable it to invest as much as it should in research and development and in capital plant. The industry's viability still remains under serious threat.

THE RECOMMENDED STRUCTURE

8 The CPRS considered that for the level of orders postulated in paragraph 7 (5 GWs turbine generators and 3 GWs boilers) the UK could not sustain more than one turbine generator manufacturer and one boiler maker (a view strongly endorsed by the CEGB). An important consideration here is that for turbine generators, none of the major world competitors, who are not licensees, has a capacity of less than 8 GWs. At the time the CPRS reported there was general agreement in the industry that it must base its future on a single technology in boilers and turbine generators. At present there are traditional differences of technology between the companies and the objective of a single technology would be to concentrate resources on a single family of unique designs. Any likely order load would be insufficient to sustain more than one, but also because otherwise the industry would continue to fall behind in technical and competitive terms. It was also widely recognised that a single technology could not effectively be pursued other than through one turbine generator and one boiler making company.

9 However the companies concerned could not agree on the form the merged enterprises should take. NEI took the view that none of the existing companies should have a majority holding in the enterprises. GEC and Babcock and Wilcox were just as firmly committed to having majority shareholdings one in the turbine generator and the other in the boiler making company. The NEB expressed a willingness to consider participation in either or both of the merged enterprises.

PRESENT OUTLOOK

10 There is still no sign of agreement about restructuring. Indeed, NEI tend to argue, somewhat illogically, that they have undertaken the restructuring necessary by bringing together within the Group the Parsons (turbine generator) and Clarke Chapman (boiler making)

/subsidiaries

subsidiaries. (These were separate companies, Reyrolle Parsons and Clarke Chapman, at the time of the CPRS report). The electricity industry strongly favoured merged enterprises, and made efforts through its purchasing arrangements to have the new orders shared. Some work on Drax turbines is to be sub-contracted from Parsons to GEC, and some boiler work from Babcocks to NEI Clarke Chapman. The Generating Boards (CEGB and SSEB) declared their intention of placing the boiler and turbine generator orders for the new AGRs with a single boiler-making company and asked GEC and Parsons to collaborate on a single turbine generator technology. The Boards expect to agree with the boilermakers on a sharing arrangement for the boilers. There is no chance of a similar arrangement for turbine generators. The present position on ordering turbine generators for the two AGRs is that the Generating Boards have invited tenders for all four sets at the two stations together. They have been asked to put their proposals to the Government before they are announced in view of the implications for the unsuccessful company if all 4 sets go to its competitors.

OPTIONS

11 The main issue for the Government to consider is whether it accepts the need for rationalisation and if so how far it wishes to promote it. The orders for Heysham and Torness are very large and may be the only orders for two or three years and so may have a big influence on the long term structure of the industry. The choice depends on the decision of the Generating Boards, subject to any influence the Government decides to exert on them. For the boilers the Boards, as explained in para 10, expect to achieve an agreement to share the work. This should both avoid major closures and may promote eventual rationalisation. The immediate problem will be on turbine generators. The CEGB have indicated, in confidence, that their assessment of the bids would probably lead them to place all the orders with Parsons. They have however said that they would also want in their own interests to take into account the long term effect of such a decision on the structure and resources of the plant-makers. They have not yet reached a final decision but expect to do so in about a month. Meanwhile, the CEGB have informally asked how the Government would react to a request for compensation for the extra cost of splitting the order.

12 If all the orders go to one manufacturer, this would put great pressure on the other. It might help to bring about a merger, but it carries the risk of closures of works or important redundancies in assisted areas or both. There would certainly be an outcry from the losing manufacturer and his workforce. Alternatively, if the orders are shared between the manufacturers, this would help to ensure that there were no major closures in the next few years, but would tend to make rationalisation of the firms less likely during this period. Neither of the alternatives therefore will necessarily produce a merger.

13 For the Government therefore the immediate issue is whether:
(a) To leave it entirely to the Generating Boards to decide. This would recognise the Boards' commercial responsibilities and involve minimum Government interference in their affairs and those of the plant industry. But it is not yet clear whether the Boards will decide to place all the orders

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for turbine generators with one manufacturer, probably Parsons, or to split them, with the mixture of consequences in each case described in paragraph 12.

- (b) It has a preference for one or other of the courses in paragraph 12 which it would wish to press on the Boards. The objective would be to ensure that the ordering decision was taken in accordance with any view the Government wished to reach about the long term structure of the industry. On the other hand, it would involve the Government in direct responsibility for the decision. If the Boards were pressed to take a decision which they had concluded was not in their own interest, they would demand compensation.

It might be right to postpone a decision as between these two courses until the Generating Boards have told the Government in confidence of their view on the allocation of the orders and the considerations leading them to that view.