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CABINET

MINISTERIAL COMMITTEE ON ECONOMIC STRATEGY

INVERGORDON SMELTER: DEFENCE OF REFUSAL OF POWER CONTRACT

Memorandum by the Secretary of State for Scotland and
the Secretary of State for Energy

1. At its meeting on 23 March (E(82)10th Meeting) the Committee invited us (Conclusion 1) to prepare a note summarising the objections which the Government could deploy in public to providing a power supply for the Invergordon Smelter from the North of Scotland Hydro-Electric Board's (NSHEB's) hydro-electric stations. The following paragraphs set out these objections; there are of course other factors which have weighed with the Committee.

2. Hydro possibilities; the "Dedicated Hydro" option

This option has not been previously considered by the Committee. Under it the hydro stations would be physically separated from the rest of the Scottish generating system to provide the smelter supply. At our request the Board has carried out a preliminary study of the feasibility of this option, and the way in which it would work is summarised in Annex A. The scheme appears to be technically feasible, in that there would be no serious operational problems in providing the necessary supply on a continuous basis. It raises some environmental problems, but these are not such as to provide a convincing argument against it. The most potent objection is the cost; the removal of the stations from the system, and the necessary substitution of coal and oil-fired generating plant at times of peak demand, are estimated to add £46m to the cost of meeting other electricity requirements in Scotland next year, implying an increase in tariffs for all consumers of the order of 4.5%. The annual cost would be likely to rise in real terms in subsequent years in line with fossil fuel prices.

3. The other main objection to the scheme is the quantity of capacity needed; in all some 34 stations would have to be dedicated to the smelter supply, amounting to 92% of the installed conventional hydro capacity. Many of the stations are much closer to other industrial centres such as Glasgow or Dundee than they are to Invergordon. In addition there would probably be legal and EC difficulties; if the Board retained ownership of the stations its statutes would have to be amended to remove the "undue preference" constraint, whereas if it attempted to dispose of the stations it would probably require Parliamentary approval. Disposal of the stations at anything less than their full current value (put by the Board at £960m), would be liable to be interpreted as a state aid notifiable under the Rome Treaty and likely to be challenged by the Commission. It would not however be helpful to our relations with our Community partners to invoke these possible objections as part of our public justification for turning down this option.

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4. The "Hydro Link" Option

Advocates of a hydro solution to the Invergordon problem would however argue that it was inherently unrealistic to meet the whole smelter requirements from a dedicated hydro option. They would maintain that if hydro capacity was to be used either (a) it should be operated so as to use it not exclusively but in an economically sensible regime, with make-up units being supplied from the Scottish generating system during dry spells and otherwise as necessary, or (b) the scheme should not be based on the physical dedication of hydro power stations at all, but on a price which took account of the contribution which hydro makes to the Scottish system. In any case such a scheme would satisfy the Highlands argument that this benefit should be reserved for industry in the Highlands rather than being exported to the rest of Scotland as at present.

5. The arguments in the previous paragraph lay behind the "hydro link" option set out in detail in the Secretary of State for Scotland's Memorandum E(82)31. This scheme was based on the second of the two approaches described in the previous paragraph, and was estimated to add £25m to the cost of meeting other electricity requirements in Scotland. The objections to this scheme, which E(82)31 suggested should extend to other large industrial consumers in the Highlands as well as the smelter, would revolve around its cost, which would only be partially offset by increased expenditure on coal and rail, and the need for legislation to disapply the "undue preference" provisions for certain consumers in certain parts of the Board's area. Other industrial consumers in Scotland could not be expected to pay extra for the smelter, and therefore commercial and domestic consumers could not be asked to accept the consequential 10-11% increase in their electricity bills which would be necessary to make up the loss on the smelter supply (including industrial consumers would bring the increase down to 3%). To meet the cost from the Exchequer would however involve an annual subsidy larger than that which the Government refused to BACo.

6. There are other objections which it would be less easy to deploy in public. Although a write-off of some of the Scottish Boards' assets might provide a subsidy route which would be acceptable to the EC (there would need to be consultation with the Commission and the FCO only rate the chances of Commission approval at about even) it would require legislation. A scheme structured in this way would focus attention on our action to reduce energy costs rather than on the regional problem around Invergordon. Demands for lower energy prices to industry, which we have successfully parried until now, would be revived, and there would be great pressure for the ending of "undue preference" to be extended to England and Wales. The costs of concessions to large electricity users could be very great, and the scheme is not strongly enough linked to the regional problem to help us in resisting pressure from such extension.

7. General Arguments

In defending a decision not to offer a new power contract we will be faced with a number of arguments including the fact that the other smelters are continuing in production albeit with large subsidies, that the Highlands natural hydro resources are not being used for the maximum benefit of the Highlands and that a permanent closure will have a major detrimental effect on coal and railway finances. In replying to those arguments we shall have to draw attention to the substantial cost per job involved in any of the options proposed, the poor outlook for the aluminium industry (metal prices are currently

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well below in real terms their level in 1968 when the three UK smelters were announced) and the risks for public expenditure in the future of entering into any long-term subsidy arrangement. We could also recall that the 1968 arrangements with BACo were intended to involve no Government subsidy, and ended up costing over £10m for each year of operation. If the smelter is closed we should also be ready to argue that our energy prices must be set at economic levels reflecting costs and alternative opportunities and that there is no economic case for subsidising aluminium smelters rather than other large electricity users who in many cases are larger employers or are also in areas of high unemployment.

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Scottish Office
Department of Energy
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"DEDICATED HYDRO" OPTION

1. This approach differs from that set out in the Secretary of State for Scotland's Memorandum E(82)31, in that the hydro stations would be physically separated from the rest of the system to provide the smelter supply. The hydro option as outlined in E(82)31 envisaged that the stations would continue to be operated as an integral part of the Scottish system. Under this approach, therefore, the dedication of the hydro stations to the smelter is actual, rather than notional. The following details are based on a preliminary study by NSHEB.

2. Amount of Plant to be Dedicated

The smelter load has been assumed to be 200 MW, and its unit requirements 1800 million units per annum. The Board's conventional hydro-electric plant has a rated capacity of 1052 MW and provides an average of 2917 million units each year. The smelter's unit requirements are therefore equivalent to 62% of the average hydro output, but because of the limitations on the storage available in the hydro reservoirs a greater proportion of the hydro capacity would have to be dedicated to the smelter. The Board has assumed that it must maintain its existing standards of flood protection, and allow no more water to be spilled from dams than at present. On this basis 971 MW of plant would have to be dedicated, including virtually all the stations with a capacity of over 10 MW (a total of 34 hydro power stations). These stations would produce more units during wet weather than the smelter requires, and in the average year, in addition to the 1800 million supplied to the smelter, 790 million surplus units would be produced which the Board has assumed would continue to be available to the Scottish system. The Board estimates the net present value of the dedicated plant at £960m.

3. Operational Considerations

Stations would have to be operated in sequence to meet a continuous 200 MW demand, because there is insufficient rainfall or reservoir capacity to provide a continuous supply from individual stations. This would not however cause undue technical problems. The supply would be secure against interruption - the Board's study assumes there would be one interruption to supply every 10 years. The bulk of the stations are remote-controlled and there would be no significant manpower implications. There would be some adverse effects on the environment. Levels of reservoirs would vary much more widely than at present, leading to unsightly shorelines, and there would be major changes to the flow pattern of rivers below dams, many of which have important salmon fisheries. No breach of the conditions under which consent was originally given for the hydro schemes would be involved, however. In due course some additional peaking capacity would probably have to be constructed to replace the hydro stations on the Scottish system, but with the present large excess of generating capacity in Scotland this would not be necessary for several years at least.

4. Costs

The absence of the dedicated hydro stations would lead to increased operation of older coal- and oil-fired plant on the Scottish system at times of peak demand. Since one of the advantages of hydro stations is the speed with which they can be brought into operation their removal would require much more intermittent

operation of fossil-fired stations, leading to higher maintenance costs. The Board estimates the total extra costs at £46m in 1982-83. This estimate is conservative; more detailed studies might well indicate a somewhat higher level of cost, and the estimate ignores the need to bring forward in due course investment in alternative peaking capacity. The cost would rise in future years somewhat faster than the rate of inflation, because the Board expects real increases in fossil fuel prices in the years ahead. These estimates assume that the smelter operator pays sufficient for the smelter supply to defray the costs of the dedicated stations. An internationally competitive charge of 1.2 pence per unit would probably barely cover the running costs, CCA depreciation and transmission costs attributable to the output from the dedicated stations, and there would be no profit from the smelter sales to offset against the loss on the rest of the system.

5. Legal/EEC Considerations

We have assumed in the foregoing that the Board would retain ownership of the stations. In that case the dedication of the stations to the smelter would be regarded as "undue preference", and an amendment to the Board's statutes would be necessary to remove the risk of challenge. If the stations were sold or leased to the smelter operator at a nominal charge the Board might be in a stronger position to defend itself against the charge of "undue preference", but it might equally be acting in breach of its statutory duties in disposing of the stations (for example section 4 of the Electricity (Scotland) Act 1979 states that the Board shall "promote the use of the economical methods of generating electricity" and "secure so far as practicable the cheapening of supplies of electricity"). Many of the schemes were constructed at a time when the Board required specific Parliamentary approval for each scheme, and Parliamentary approval might be necessary to enable the Board to dispose of the stations, even on a leasing basis. In addition sale or lease at a price remotely approaching market value would entail too high a cost to the new operator. Neither arrangements would be free from the risk of challenge from the Commission; if the Board retained ownership of the stations it could be accused of distorting competition by entering into a preferential arrangement to supply the smelter, while disposal of the stations at a nominal charge could be construed as a state aid.

6. Presentational Difficulties

The arrangements outlined above would be open to criticism on a number of counts. Firstly they make £960m of assets available to the smelter operator without any capital charge, other than an annual contribution to depreciation. Secondly they involve wasteful use of the hydro stations, which are most economically deployed when operated, as at present, to substitute for expensive coal- or oil-fired plant at times of peak demand. Under the proposed regime some 85m units of potential output would be wasted, because of stations having to run at part load. Thirdly as a result of the removal of the hydro stations there would be a significant increase in the amount of oil burnt in Scottish power stations, which is negligible at present. Fourthly the dedicated stations would include many schemes over 60 miles from the smelter, and some within 40 miles of Glasgow or Perth. To reserve these stations for the smelter rather than for other industrial consumers nearer at hand would be very difficult to defend. Lastly the additional costs falling on other Scottish consumers would be at least £46m, equivalent to around 4.5% on tariffs, in 1982-83 and would rise in real terms thereafter.