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MR NORGROVE

MINISTERIAL STEERING COMMITTEE ON ECONOMIC STRATEGY, SUB-COMMITTEE ON ECONOMIC AFFAIRS, 4pm, 10 SEPTEMBER

Acid rain (E(A)(86) 44, 45 and 46)

I attach a brief for the Prime Minister on this issue. Mr Fairclough's minute of 29 August is also relevant.

I am sending copies to Sir Robert Armstrong, Brian Unwin and John Fairclough.

D F Williamson

D F WILLIAMSON

5 September 1986

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Acid rain
(E(A)(86) 44, 45 and 46)
A B C

the report circulated as E(A)(86)45 was attached to John Fairclough's minute to you, elsewhere in your boxes.

Brief for the Prime Minister

CONCLUSIONS

1. You will wish the Sub-Committee to decide on the response to the proposals of the Central Electricity Generating Board (CEGB) - Lord Marshall's earlier suggestions are now proposals of the Board - for restricting SO2 emissions from power stations, in the light of the scientific evidence that acid deposition has a significant effect on the chemistry of certain soil/water systems. The scientific picture is complex but there is accumulating evidence of effect on lakes and fish including some in the United Kingdom. In the light of this we should not give overmuch attention to the arbitrary figures and baselines of the "30% Club" and of the European Community's draft large plant directive but should decide what action is reasonable in our own interest. If the Government does support the CEGB, we can make good use of this in negotiations in the Community and elsewhere. You may be able to conclude -

i. Government policy should be based on the CEGB's proposals that future coal-fired power stations should be fitted with flue gas desulphurisation (FGD) and that over the period 1988-97 three existing 2000MW stations should be retrofitted with FGD equipment;

ii. you should announce during your forthcoming visit to Norway that in the light of the scientific evidence the Government proposes to take significant action to reduce SO2 emissions from power stations;

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iii. officials should give consideration to the timing and nature of a fuller announcement of the United Kingdom's policy, with a view to maximising its impact domestically and in negotiations on the Community's draft large combustion plant directive.

BACKGROUND

2. E(A) considered acid rain on 24 July (E(A)(86) 21st Meeting Minutes) in the context of the proposed Community directive on large combustion plants. The Sub-Committee agreed that there were good arguments for using our Presidency of the Community to try to shift the terms of the debate on the directive on the lines proposed by the Secretary of State for the Environment (E(A)(86) 37), by trying to establish, in discussion with other member states sharing some of our concerns about the level of emission reductions implied by the current proposals, whether a package of measures could be devised which might attract wider support and perhaps form the basis of a Presidency compromise.

3. Before taking a final decision on our negotiating line the Sub-Committee wished to examine the broader implications for United Kingdom policy of evidence about the effect of SO2 emissions referred to in a letter by Lord Marshall. The Chief Scientific Advisers at the Departments of Energy and Environment, together with Sir John Mason, Director of the Royal Society programme on the acidification of surface waters, were accordingly invited to advise on this evidence, while the Secretary of State for Energy was to discuss with the Chairman of the CEGB the costs and practical implications of his proposals.

4. E(A)(86) 45 contains the agreed report of the Chief Scientists. The issues addressed are complex. The Sub-Committee will wish to note not only the report's opening summary, but also its conclusions. Mr Fairclough's minute of 29 August to you summarised the conclusions he draws from the report. Briefly:

i. SO2 emissions are a factor in the post-war acidification of freshwaters in Scandinavia and probably in the United Kingdom. There would be beneficial effects from reduction of sulphur emissions in the United Kingdom;

ii. the United Kingdom is the second largest contributor of SO2 emissions in Norway, after Norway herself;

iii. increased freshwater acidity leads to increased aluminium in the water, which kills fish;

iv. the buffer effect of large quantities of sulphur in the soil means that reductions in emissions take time to produce improvements in water quality;

v. there is no single route to recovery: emission reductions have to be combined with changes in land management practices and in soil treatment.

5. The note by the Parliamentary Under Secretary of State for Energy (Mr Goodlad) (E(A)(86) 44) attaches a paper by Department of Energy and Department of the Environment officials analysing the implications of the CEGB's proposals. These proposals are for:

i. future coal-fired power stations to be fitted with FGD;

ii. three 2000 MW stations, starting with Drax, to be retro-fitted with FGD between 1988 and 1997;

iii. the necessary preparatory studies to begin now, but no decision to commence installation to be made in advance of the report on the effect of SO2 emissions from the Royal Society and Scandinavian Academies;

iv. continuation of the programme to be dependent on improved soil management in Scandinavia.

6. Figure 1 in Annex A to E(A)(86) 44 shows the current CEGB SO2 emission forecasts. These figures are higher than those which were available at the last E(A) discussion and are higher than the latest public figures (the central Sizewell projection). These figures are not gospel and, for wider reasons, it would be unwise publicly to depart from the Sizewell figures in the immediate future. Although total national emissions fell very sharply from 1970 (see Annex A to this brief), emissions from power stations fell less significantly and are now projected to rise slightly until the end of the century. This reflects a recent and projected increase in electricity consumption, and revised assumptions about the rate of introduction of nuclear power. The CEGB's proposals would ensure that SO2 emissions continue to decline, although not to anything like the extent required for the 30 per cent Club (a 30 per cent reduction by 1993 against 1980 levels) or the Dutch compromise proposal for the large plants directive (a 40 per cent reduction for the United Kingdom by 1995 against 1980).

7. The memorandum by the Secretary of State for the Environment (E(A)(86) 46) also supports the CEGB proposals but wishes to go somewhat further. It proposes that there should be a commitment, not for announcement, to a 30 per cent reduction by the year 2000 in SO2 emissions from large plants by comparison with 1980 levels. Hitherto the Government has done no more than expressed this as its aim.

MAIN ISSUES

8. The main issues are:

i. how should we respond to the accumulating scientific evidence?

ii. if so, what level of response is appropriate?

iii. presentation of the Government's decision;

iv. implications for the Community's large plants directive.

How should we respond?

9. So far we have been able to resist pressure to join the 30 per cent Club or to accept emission reductions such as those in the Community's draft large plants directive by stressing our good record so far and by arguing that the proposals represent an arbitrary response to evidence which was by no means clear. As the evidence accumulates to link emissions from United Kingdom power stations with acidification of freshwater and particularly when the Royal Society/Scandinavian Academies report is published next year, it will become difficult to maintain our approach in precisely its present form, both because the evidence is becoming clearer and because the CEGB are now projecting emissions to rise. A programme of practical but limited action would put us in a better position to consolidate a convincing argument against arbitrary reductions.

What level of response?

10. The scale of the measures which might be adopted depends on a balance between three factors: what is necessary to make a significant impact on the problem; what is practically feasible; and what can be afforded.

11. In order to make an impact on freshwater acidity of the Scandinavian lakes it is plainly necessary that SO2 emissions should fall rather than rise. Figure 1 in Annex A of E(A)(86) 44 shows that, with the full programme envisaged by the CEGB, power station emission levels in 2000 might be about three-quarters of what they would be if no action were taken. Mr Fairclough points out (paragraph 6 of his minute) that we cannot yet predict what reductions in emissions are necessary to prevent damage or allow recovery. It might, however, be hard to argue in the absence of other evidence that a smaller reduction than this

(such, for example, as would result from fitting FGD to new plant alone) would be likely to make a significant difference to the problem of acidification.

12. The CEGB estimates that the total annual cost of its proposals, including operating costs and capital charges, would be about £40 million for each retrofit, and an unspecified lesser amount in the case of a new coal-fired power station (of which one is currently proposed). This suggests an overall annual cost in the region of £150 million if the CEGB's programme were implemented in full. The Board estimate this as adding 1½ per cent to the price of electricity by 2000. The Sub-Committee will wish to consider whether the financial implications, in particular for the electricity price, are acceptable. There would be work for British companies. The official paper reports (paragraph 9) the CEGB's belief that the industry could cope with the three retrofits proposed by 1997, but that a faster rate of progress might present difficulties. Among the subjects that would need detailed consideration in any preparatory work would be the environmental impact of quarrying the limestone required for the FGD units, and the scope for utilisation of disposal of the wastes produced by the FGD process.

13. In E(A)(86) 46 the Secretary of State for the Environment proposes that, for political and negotiating reasons, the Government should commit itself to a 30 per cent reduction in SO2 emissions from large plants by 2000 on the basis of 1980 emission levels. This timescale is long. It is possible but not certain that the figure would be achieved if the CEGB's proposals are accepted. The commitment would be advantageous in negotiation in the Community but other members of E(A) are likely to see a risk of higher expenditure. It might be possible to meet this point by inviting the Secretary of State for the Environment to report back in due course whether agreement could be reached on the draft large plants directive if the existing "best endeavours" aim of the government were to be converted to a commitment, but to go no further than this immediately.

Presentation of the Government's decision

14. If E(A) does agree on a programme of emission control, there seems no advantage in delaying an announcement until the Royal Society's report is received (as the CEGB propose). We should aim for early and favourable publicity at home, in Norway (your visit) and in the Federal Republic of Germany (Anglo-German summit). It is understood that an early announcement would be unlikely to present difficulties for the CEGB. A text which might be used in Norway, if E(A) so decided, is annexed to E(A)(86) 44. We recommend that, in order not to show our full hand prematurely, the final paragraph should be slightly less specific. An announcement in these terms would make it possible to say, in response to the inevitable pressure for the United Kingdom to join the 30 per cent Club, that at this stage it is not possible to say precisely how far emissions would be reduced; but that there would certainly be further significant reductions in addition to those achieved over the past 15 years in order to provide an appropriate response to scientific evidence rather than achieve an arbitrary target.

Implications for the large plants directive

15. A decision along the lines of the CEGB's programme would make it considerably easier for the United Kingdom to negotiate on the draft directive, especially during our Presidency, and perhaps to put forward compromise proposals on the basis of which agreement can be reached. The programme would be unlikely to achieve the reductions at present on the table in Europe. It would, however, make it easier to follow the negotiating line which commended itself to E(A) in July:

i. open discussions with other "minimalist" member states;

ii. seek support for a package of reductions, consistent in relation to SO2 with the expected consequences of the CEGB programme, and in relation to NOx with our existing pollution control systems.

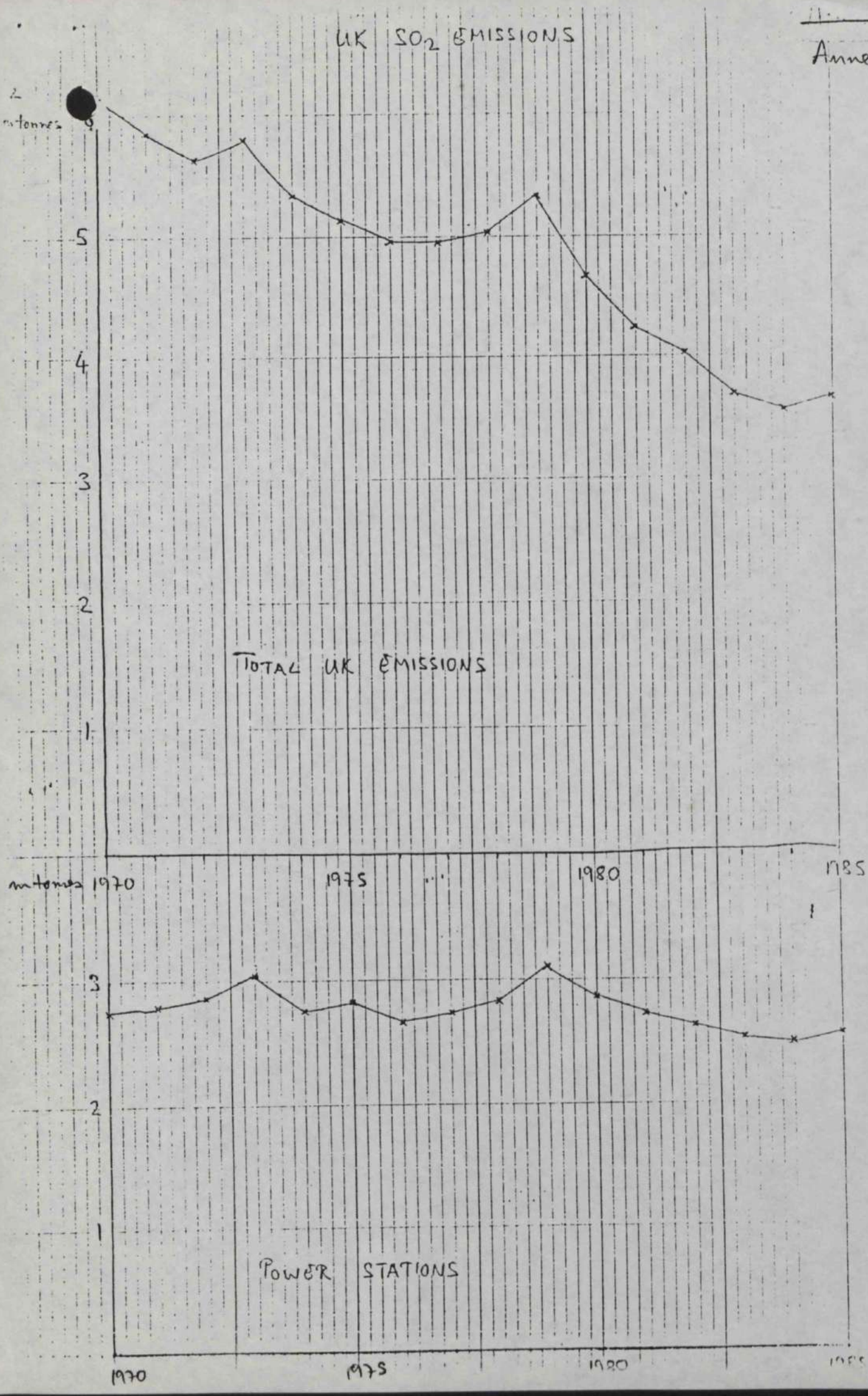
16. Some members of the Sub-Committee may suggest that special steps should be taken to inform other member states of any announcement. It may, however, be preferable not to overplay our position initially and to allow the significance of any decision to emerge in the ordinary course of negotiation. Officials might be invited to examine handling of this and other presentational issues likely to arise over the next few months.

HANDLING

17. You may wish to invite the Secretary of State for Energy to open the discussion. The Secretary of State for the Environment and Mr Waldegrave (who has also been invited) may wish to explain the significance of the CEGB's proposal and for the Government's domestic position on environmental matters and for international reaction. The Chancellor of the Exchequer may wish to refer to the financial implications. The Secretary of State for Trade and Industry may wish to comment on the implications for industrial consumers. The Minister of State, Foreign and Commonwealth Office (Mrs Chalker) may wish to describe the Community implications.

Cabinet Office
5 September 1986

Annex A


UK SO_2 EMISSIONS
2
millions tonnes
5
4
3
2
1
TOTAL UK EMISSIONS
1970
1975
1980
1985
millions tonnes
3
2
1
POWER STATIONS
1970
1975
1980

ANNEX B

TOTAL NATIONAL SO_2 EMISSIONS

Country	Annual emissions (000 tonnes)	Percentage of Community total	Emissions deposited in other member states (000 tonnes/% of total national emissions)	Emissions deposited in other member states and third countries (000 tonnes/% of total national emissions)
UK	5122	24	631 (12)	1424 (28)
Germany	3631	17	590 (16)	2080 (57)
Italy	4422	20	199 (5)	1402 (32)
France	3599	17	672 (19)	1358 (38)
Netherlands	480	2	113 (24)	280 (58)
Denmark	457	2	10 (2)	184 (40)
Greece	703	3	0 (0)	154 (22)
Ireland	175	1	5 (3)	36 (21)
Luxembourg	48	0	22 (49)	48 (100)
Belgium	809	4	240 (30)	400 (49)
Spain	1999	9	269 (13)	402 (20)
Portugal	168	1	22 (13)	28 (17)
TOTAL	21613			

Source : European Commission