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Prime Minister (2) 28

PRIME MINISTER

* Please see John
Vercher's note (attached).
What are your conclusions
on the questions in para 25? (Play A)

This answers a number
of questions you raised
several months ago; and seeks
decisions. ~~on~~
X overlay is disappointing.

MCS 23/6

INCREASING POWER STATION AND INDUSTRIAL ENDURANCE MCS

The Official Group on coal (MISC 57) have been pursuing a number of matters following our meeting on 15 March. I attach their report which also covers progress on accelerated coal deliveries.

Power Station Endurance this Year

The coal delivery programme, agreed between the CEGB, NCB and BRB, has been working well. The present limit of physical stocking capacity would probably be reached in August in the absence of trouble on the railways.

It may be possible for the CEGB to squeeze in even more coal on existing sites so as to exceed their present estimate of maximum physical stocks of 24 million tonnes. I believe we should encourage them to do this, financing the extra cost under the deferred payment arrangements that already apply in respect of accelerated deliveries between NCB and CEGB.

The officials' paper (paragraph 6) points out that an additional 4 mt of coal might be stocked at new sites within existing CEGB power station boundaries at a cost of perhaps £30m. This would add another two weeks or so to the 20 weeks' endurance already planned, but would be a very visible step given the need for discussion with local authorities. (A long rail strike would also make it more difficult to fill this extra capacity.)



Our ability to accelerate coal deliveries successfully means that stocks of ancillary materials may become the limiting factor in power station endurance. Action has been taken by the CEGB and SSEB to achieve 9 weeks supplies across the board. For certain materials (such as bulk acids, alkalis and gases) specialised and visible storage or manufacturing facilities would be needed to achieve higher levels of endurance in the absence of supplies from normal sources. The CEGB advise that the time available is insufficient to construct such facilities for use next winter. My Department are however pursuing with the Board what more can be done for this year, taking full account of the industry's experience during previous strikes in replenishing stocks and the prospects as they appear at present.

There is also the possibility of using the military to replenish any gaps in stocks of ancillaries at power stations. The December MISC 57 report suggested that this "should be well within the capacity of the Services, even allowing for the uncertainties".

It is now for decision whether we ask the CEGB to set in hand action to ensure as far as possible that by November 1983 stocks of ancillary materials can be at a level equivalent to the level of coal stocks. We would have to arrange to compensate the CEGB for the additional costs incurred, should that prove necessary, and there could be problems of visibility.

Power Stations Endurance in the Longer Term

The officials' report deals with a number of possibilities for enhancing endurance in the longer term. Adding oil or gas burn to existing coal-fired stations would be very expensive and the supply logistics are of doubtful practicability. The best means for reducing dependence on coal is, of course, to press ahead with the nuclear programme.

Strengthening the interconnection with France is also expensive but could make economic sense. Additional interconnection with Scotland does not, however, seem economically attractive. We will be introducing next session legislation to encourage private generation though we cannot count upon any early substantial increase as a result.

On the use of non-rail forms of transport (conveyor and slurry pipelines), paragraphs 16 and 17 of the attached report seem to me to be premature. Until the studies already in hand are completed, I do not think we can be certain of the economics or that there is no benefit in terms of security of supply.

Additional Coal Stocks for Industrial Users

It would be possible to achieve some additional stocking of coal this year by some large industrial users, by enabling the NCB to offer a deferred payment scheme. But storage and financial constraints mean that the endurance of virtually all coal-burning industry would still be well below what we are aiming for at the power stations. Direct discussions with BSC would be needed to determine what could be done in the steel industry.

I am copying this letter to the Home Secretary, the Chancellor of the Exchequer, the Secretaries of State for Industry, Defence, Transport, Employment and Scotland, Sir Robert Armstrong and Mr Sparrow, for the usual limited circulation.

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Secretary of State for Energy

22 June 1982

INCREASING POWER STATION AND INDUSTRIAL ENDURANCE

Note by the Official Group on Coal (MISC 57)

1. This report discusses
 - (i) progress with building up power station stocks of coal and ancillary materials; and
 - (ii) measures that might be taken in the longer term to increase power station and industrial endurance in the event of a miners' strike.

Coal Deliveries

2. The coal delivery programme is proceeding according to plan, at a rate corresponding to 17 per cent above regular commercial deliveries. In normal weeks deliveries of coal in excess of 2.0 million tonnes are being reached, which compares with power station coal consumption in June of 1.4 million tonnes/week. This rate will fall during the colliery holiday period and as power station stock yards approach maximum physical capacity. But barring unforeseeable interruptions maximum stocks should be attained between mid-July and mid-August. The Department of Energy are monitoring the programme closely in co-operation with the three Boards.

3. In Scotland arrangements are being finalised between the NCB and SSEB for extra deliveries which will take Scottish stocks to the physical limit of around 2.5 million tonnes by 1 November.

Ancillary Materials

4. The Department of Energy has been examining with the CEGB the possibilities for increasing stocks of ancillary materials. The CEGB's traditional policy has been to maintain 6 weeks' stocks but they have already taken action to extend these to a level equivalent to at least 9 weeks. Moreover, the Board would take steps to increase stocks nearer the time of any dispute, in particular to bring in commodities which require only storage space. Furthermore, during previous strikes the Electricity Boards have been

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reasonably successful in replenishing stocks with the help of their suppliers; and as our report circulated under cover of the Home Secretary's minute of 6 December 1981 to the Prime Minister, concluded, the use of Servicemen would be possible in principle in cases of difficulty.

5. It is now too late to construct for the coming winter additional bulk storage facilities for corrosive liquids and liquified gases or manufacturing plant for hydrogen, at the power stations. But it should be possible by November 1983 to bring stocks of ancillaries up to the level of coal stocks and to provide manufacturing facilities for those materials that cannot be stored in bulk. The cost would be perhaps £30 million or more, which the Electricity Boards will argue should be met by the Exchequer. It would be impossible for this work to be carried out secretly or for its true purpose to be concealed from the trades unions. An early decision would be required if the work is to be completed by November 1983.

MEASURES TO INCREASE POWER STATION ENDURANCE IN THE LONGER TERM

Additional Coal Stocks at Power Stations

6. The latest estimate of the existing capacity of the CEBG to stock coal at power stations is of the order of 24 million tonnes. A 15 per cent increase in CEBG coal stocking capacity, to 28 million tonnes, could be achieved on existing land within power station boundaries, such as that used at present for recreational purposes; and an increase of about 20 per cent might be possible in Scotland at Longannet. Civil engineering works could cost perhaps £0.5 million; additional coal handling costs could amount to £7.5/t (£30 million); and the coal would need to continue to be provided by the NCB on deferred payment terms. The CEBG is obliged, under the normal environmental planning procedures, to discuss with the local authorities the location and profile of coal stocks, which might take 3 months. There is thus no prospect of such a further increase in coal stocks remaining confidential.

7. Any more substantial increase in stocking capacity would require the acquisition of additional land, the obtaining of planning permission and site development. This could take up to 3-4 years. Such steps could not be justified in terms of the economics of the electricity supply industry since

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they already have larger stocks than are needed on commercial grounds. The industry would require compensation and the action would be both very visible and environmentally controversial.

8. Use of strategic stockpiles of coal remote from power stations is not a viable approach because it is likely to prove very difficult to arrange transport to the power stations in the event of a dispute in the mines.

Dual firing

9. Coal-fired power stations could in principle be converted to dual firing using oil or gas as the alternative fuel. Oil would be the preferred alternative in the short term since there will be a shortage of gas supply capacity for some years to come. Moreover, a dispute affecting the electricity industry is likely to put pressure on the gas industry to meet additional demand.

10. At present some 4000 mw of CEGB plant (7 per cent of the total) normally burn coal but could be switched to oil. The corresponding figure for dual coal/gas firing is about 1700 mw. There are no present plans to increase dual firing in respect of existing coal-fired stations since the economics of burning oil or gas are very unfavourable.

11. The costs of conversion of coal power stations to oil or gas dual firing are broadly the same. Converting a large (2000 mw) coal-fired station to 100 per cent oil burn would cost perhaps £80 million with a 3 year lead time; 100 per cent gas dual-firing would cost about the same with a lead time of perhaps $2\frac{1}{2}$ years. But different logistic problems arise in the case of oil and gas.

12. For oil, supplying inland power stations, remote from oil refineries, by pipeline would not be practical since heavy fuel oil does not flow at ambient temperatures. Road and rail deliveries clearly cannot be guaranteed during a miners' strike; it may well be that deliveries would be held to "normal" levels (ie corresponding to low oil burn). River-borne supplies would require additional investment in barges and in some cases, eg. Thameside, the use of oil would merely displace imports of coal.

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13. The logistic problems of gas supply by pipeline from North Sea fields would be less serious than for oil though the costs of making supplies available on standby terms could be high (gas is too expensive to use as a regular fuel). It would be quite impracticable to import liquified natural gas for use in an emergency, because such cargoes are only available on the basis of a long-term regular supply.

14. The total costs of converting to dual firing sufficient power station capacity to provide, say, 70 per cent of the normal winter level of electricity supplies in the event of a miners' strike might therefore be over £1000 million. Because neither oil nor gas are economic fuels the CEGB would undoubtedly require compensation for the capital costs of conversion to dual firing. For the reasons indicated the chances of being able to increase oil burn substantially at inland power stations in an emergency may not be very high. If Ministers wish to pursue this possibility it might therefore be preferable to concentrate on gas dual firing. But detailed studies of the scope for and costs of dual firing would be necessary before Ministers would be in a position to take final decisions on these matters.

15. In Scotland there is already substantial, spare oil-fired power station capacity. The provision of coal/oil dual-fired capacity is not therefore judged to be necessary.

Unconventional transport of coal

16. The Department of Energy have in hand studies on supplying certain large coal-fired power stations by conveyor from nearby mines; in Scotland 40-50 per cent of power station coal is already delivered by conveyor. Preliminary estimates suggest that the economics may be competitive with rail transport and the possibility is being pursued with the CEGB. It is unlikely, however, that conveyors would increase security of supply in the event of a miners' strike though if such conveyors were fed from pithead stocks, as opposed to the pitface, it is possible that they could be operated by Servicemen.

17. Use of coal slurry pipelines appears to be quite uneconomic, in part because of the need to remove quantities of water, while offering no security of supply advantage over conveyors.

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Interconnection with France and Scotland

18. The existing connector with France is small (160 mw) and is generally out of action as a result of damage to the cable. Construction of a new link of 2000 mw capacity is in hand with the first part (of 1000 mw capacity) intended for completion in 1985 and the second part a year later (though the second stage still requires approval from the French Government). The cost is estimated at £285 million, at current prices.

19. The normal function of this interconnector would be to allow trading both ways between the CEGB and their French counterparts. The CEGB think that in the event of a miners' strike they could arrange one-way flow from the Continent for a prolonged period. When the interconnector is fully completed this would be equivalent roughly to 150,000 tonnes of coal per week or about 1½ weeks extra endurance. Recent studies have shown that the optimal economic level of interconnection between England and the Continent could be some 6000 mw. The CEGB would not, however, envisage proposing a second new interconnector before the first is built and operating.

20. The interconnectors between the English and Scottish systems have a capacity of 1000 mw. There could be a case for enhancing this based on the surplus of generating capacity in Scotland. An increase of 50 per cent in capacity may be possible at a cost of about £5-7 million, but this work would take 2-3 years to complete. Doubling the capacity of link - which requires a quite different scale of work - might cost £40 million and take 5-6 years to complete. The present judgement of the two Boards is that this would probably be economically unattractive, given the coincidence of peak demand on either side of the border and the remoteness of the South of England - where there exists a deficit of economic generating capacity.

Private Generation

21. The Department of Energy currently has in hand the preparation of a Bill, for introduction next Session, to allow private electricity generation as a main business. It would, however, be unwise to count upon any early substantial increase in private generation as a result of this legislation.

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ADDITIONAL COAL STOCKS FOR INDUSTRIAL USERS

Incentives for Additional Summer Stock Build

22. NCB coal sales to industry (other than iron and steel), commerce, local authorities, schools, hospitals etc amount to about 170-180,000 tonnes/week. The NCB does not have detailed information about the stocks held by its numerous customers in this sector. In general, however, the first users likely to run out of coal in the event of a coal strike are the smallest users (eg commercial premises, schools, light industry using coal for space heating). They are also generally the consumers with the smallest physical scope for additional stocking. In practice, most of the scope for additional stocking lies in the cement and paper industries. The NCB are already operating schemes of lower prices and/or extended credit during the summer. They are pressing these as hard as they can. They estimate that offering further inducements to their major industrial customers (principally in the cement and paper industries) to increase stocks to close to the maximum physical level would cost about £ $\frac{3}{4}$ million in the current year.

23. Coal stocks held by coal-burning industry are currently estimated to be sufficient for about 10 weeks on average in the event of a miners' strike; and there appears to be very little scope for this to be increased significantly. Present plans are for power station endurance of not less than 20 weeks, which might be increased by about 25 per cent by the various measures discussed above.

BSC Coal Stocks

24. It may also be desirable to consider a deferred payment scheme for BSC. Only two steel works, at Llanwern and Scunthorpe, are entirely dependent on NCB coal, although they could use imported coal during a strike. (Other steel works depend on a mixture of NCB and imported coal). NCB suggest that until recently BSC had held down stocks at these two works for cash flow reasons to 3 $\frac{1}{2}$ -4 weeks and 3 weeks consumption respectively, but that the position may now have improved. The combined weekly consumption of the two works is about 55,000 tonnes. A deferred payment scheme confined to these two works, intended to increase stocks at them by a further three weeks, might cost rather under £1 million in the current financial year. The NCB say they would

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not be willing to finance this. The Departments of Energy and Industry are currently discussing the position. It would now be desirable to take BSC into our confidence, and discuss the coal stocking position with them in more detail.

CONCLUSIONS

25. Ministers are invited:-

- (i) to note the position on coal deliveries and on stocks of ancillaries;
- (ii) to decide whether they wish the Electricity Boards to take steps to ensure that by November 1983 stocks of all ancillary materials can be at the level of coal stocks, at a cost of perhaps £30 million;
- (iii) to decide whether they wish the coal stocking capacity of power stations to be increased, and, if so, by how much? 4 million tonnes, as discussed in paragraph 6, at a cost of perhaps £30 million? Or more, as discussed in paragraph 7, the cost of which has not been estimated?
- (iv) to decide whether they wish to commission detailed studies on the scope for the conversion of existing coal-fired power stations in England and Wales to dual firing;
- (v) to decide whether the NCB should offer further inducements to increase coal stocks to the limited number of industrial users for which this might be relevant, and, if so, if they agree that the costs of $\pounds\frac{3}{4}$ million should be met by the Exchequer?
- (vi) to decide if they agree that Departments should discuss with the BSC the need and scope for increasing their stocks of coking coal.

Cabinet Office
10 June 1982