MS

10 DOWNING STREET

Prime Minister 2

The effect of lower oil prices on the NCB and CEGB this year and next is something you might like to discuss with the Chancellor at a bilateral.

DLW
14/2

I think we should write to Peter Walker. The low oil prices would give us the chance to stock enough coal (at no net increased cost) to see us through [illegible] winter. MT

SECRET

MT (21)

23

Lie

10 DOWNING STREET

From the Private Secretary

18 February 1986

ENERGY PRICES

With the fall in oil prices the Prime Minister has asked that further consideration should be given to the objective for coal stocks: increased oil burn at the lower prices could allow a higher target for stockpiling coal. You told me that the Department of Energy have in preparation a paper on the effect of lower oil prices on the price and quantity of coal supplied by the NCB to the ESI, and that the Prime Minister's request would be covered in this. I expect that the Prime Minister will wish to hold an early discussion.

I am copying this letter to Richard Broadbent (Chief Secretary's Office).

David Norgrove

Geoff Dart Esq
Department of Energy

PRIME MINISTER

14 February 1986

ENERGY PRICES - THE NEW LANDSCAPE

The £3.5 billion pa contract, under which some 75 million tonnes pa of coal is supplied by the NCB to the CEGB, is said to be the world's largest commercial contract. Over 70% of our electricity is generated from NCB coal.

The recent decline of the oil market has transformed the landscape of fuel prices surrounding the NCB/CEGB contract. This time the upheaval has not been offset by the weakening of sterling against the dollar. With the spot market for heavy fuel oil around $85 per tonne and still falling, CEGB could already be making large savings by switching from baseload coal-burn to baseload oil-burn. Meanwhile, the Rotterdam spot price for South African steam coal has slumped to £25 per tonne - less than 60% of the price for the bulk of NCB coal.

On a narrow, short-term view, the implications for Ian MacGregor and his colleagues are cruel. CEGB has the flexibility to substitute some 28 million tonnes pa of coal (worth £1.3 billion) with heavy fuel oil. Ironically, the NCB has recently been making strenuous efforts in the right direction. Since the strike, manpower has been reduced from 171,000 to 140,000. Pit closures are proceeding apace. In December, productivity averaged 3 tonnes per man-shift - well up on the 1982/3 record of 2.4 tpms. Production has almost reached pre-strike levels, but with 20% fewer miners. Some

improvements have been spectacular; the troubled Kent pits recently doubled productivity, supposedly pulling back from the brink of closure.

Ian MacGregor recognises clearly enough the realities of the market. This week, he has stated that the NCB will have to aim for "a new benchmark" of 5 tpms, compared with the recently-attained 3 tpms. Hitherto, his colleagues have regarded the strategic objective of closing all pits not capable of producing coal for less than £38-39 per tonne as challenging enough. This is the basis for the NCB's imminent new Business Plan.

Meanwhile, the electricity industry has a statutory duty to act commercially. If oil prices look like settling at the current low levels, the CEGB face the option of switching to maximum oil-burn at a saving of a few hundred million pounds per year - and a devastating annual cost to the NCB of £1.3 billion. The NCB's recent "modest" coal price concessions, which have attracted publicity this week, may be sufficient as a short-term expedient, but no more.

Soon, the Government, the CEGB and the NCB will have to face some tough strategic decisions. They will need to take a view on whether the new landscape of energy prices is a long-term feature of the economy. I believe that it is relatively short-term. Indeed, the landscape of energy prices in the 1990s could well be the inverse of today's: with coal prices comparatively low and stable; gas prices rising steadily in

real terms, driven by increasing production costs; and oil prices - again under the thumb of a few key Middle East exporters - high and likely to remain so. In summary, the basis for this prognosis is as follows:

1. Coal

World coal reserves are 6-7 times greater than those of oil or gas. Abundant reserves of low-cost, surface-mineable coal are available for international trade. The structure of the world's coal industry precludes the prospect of an OPEC-like cartel. On current trends, particularly if spurred by international coal competition, the NCB can look forward to producing deep-mined coal at an average cost of the order of £35 per tonne.

2. Nuclear Energy

Nuclear fuel is competitive with cheap coal as the fuel for new power stations, and there is a strategic advantage in diversifying the base of the electricity industry. However, the shift towards more nuclear power would have little impact on the 1990s.

3. Natural Gas

The average cost of gas to BGC has been rising steadily in real terms, and is projected to go on rising as the contribution of the large, low-cost southern North Sea fields

declines, and is replaced by smaller and more more expensive developments.

Large cheap gas imports are not realistically in prospect. The huge Siberian gas reserves are as far away from Western Europe as those in the Middle East. The transportation costs for both are formidable; likewise, the cost of developing the next generation of large, northern North Sea gas fields - like the Troll Field in Norway.

4. Oil

Finding oil in substantial quantities is proving ever more difficult, in spite of record levels of exploration activity in recent years and considerable advances in the technology of exploration. No major new oil provinces have been discovered since the North Sea and Alaska - 15 years ago. It becomes increasingly evident that the abundance of oil around the Arabian gulf (60% of world reserves) is a unique phenomenon. In the late 1950s and early 1960s, the oil industry was discovering the equivalent of two North Sea provinces every year, the majority around the Arabian gulf. Now, three quarters of the non-Communist world's known oil reserves are located in OPEC countries - dominantly Saudi Arabia, Iraq, Iran and Kuwait.

Oil still meets over 40% of the world's energy requirements. Each year, the world is consuming the equivalent of the original North Sea oil reserves, but only

about half that quantity is being replenished. Moreover, in spite of the dominance of OPEC reserves, the rate of non-OPEC production is currently twice that of OPEC.

What is not widely appreciated is that oil production capacity is not a constant factor like, say, shipping capacity. It declines naturally as oil wells deplete. Production potential can only be sustained by continued investment and drilling. Yet here the trend is sharply downwards. The number of rigs drilling in the US is now less than 1,700, compared with a peak of 4,500 in 1981. US oil companies, which still comprise a large part of the industry, are expected to reduce their investment by 40% this year; hardly surprising, when they have been spending an average of $12 to find a barrel of new oil.

Non-OPEC production - long sustained by high oil prices - looks like declining just as oil demand begins to respond to the stimulus of low prices. The large cushion of surplus production potential which has overhung the market and eventually driven the price down could well disappear in the next few years. The key Middle East exporters will then be back in the driving seat - and it may be an uncomfortable ride for the world's oil consumers. Next time round there are unlikely to be new oil provinces like the North Sea and Alaska waiting to be developed in competition with over-priced OPEC oil.

Conclusion

Politics apart, it would be wrong to react in haste to the new landscape of energy prices. We are likely to value a healthy, competitive coal industry in the 1990s - not to mention our strong remaining oil and gas reserves. However, nursing the coal industry through the next few years will be more difficult than we had expected.

JOHN WYBREW

Mr. Norgrove. FUEL FOR ELECTRICITY

David,

We spoke. Here are one or two papers you might find helpful.

You will see that in 1983/4, CEGB used:

77 mt. coal

5 mt coal equiv of oil

13½ mt " " nuclear

You will see from Ivor Manley's note that the NCB component of 85/86 coal consumption is estimated to be 74 mt. Now final trade price is proposed as nearly £47 per tonne (cf £44 p.t. at present). I am still finding out how the constrained CEGB's freedom is as regards the Joint Understanding with the NCB.

JMW.

TABLE 5
FUEL CONSUMED BY POWER STATIONS

			1980/81	1981/82	1982/83	1983/84	1984/85
	Quantity						
1	Coal	Mt	79.68	76.97	75.34	77.21	40.49
2	Oil	Mt	4.54	4.49	3.03	2.77	22.78
3	Gas	kt	–	–	1	1	367
4	Net uranium burn-up for generation	t	663.57	667.74	830.72	817.43	853.91
	Coal equivalent						
5	Coal	Mt	79.68	76.97	75.34	77.21	40.49
6	Oil	Mtce	8.17	7.85	5.30	4.76	39.90
7	Gas	Mtce	–	–	–	–	0.81
8	Nuclear fuel	Mtce	9.77	10.07	12.50	13.49	16.03
9	**Total fuel**	Mtce	97.62	94.89	93.14	95.46	97.23
	Production of steam for sale						
10	Fossil fuel burnt for producing steam for sale (included in line 9)	Mtce	0.24	0.21	0.11	0.04	0.03
	Calorific value of fossil fuels						
11	Average calorific value	GJ/t	23.961	24.265	23.992	23.881	29.242

TABLE 6
ELECTRICITY SUPPLIED BY POWER STATIONS: ANALYSIS BY TYPE OF PLANT

	1980/81		1981/82		1982/83		1983/84		1984/85	
	TW h	per cent	TW h	per cent	TW h	per cent	TW h	per cent	TW h	per cent
1 Coal	174.1	82.3	174.2	82.8	170.5	82.5	175.1	82.3	94.9	44.4
2 Oil	14.7	7.0	12.7	6.0	7.1	3.4	6.6	3.1	80.9	37.9
3 Gas	–	–	–	–	–	–	–	–	1.4	0.7
4 Nuclear fuel	22.7	10.7	23.4	11.1	29.1	14.1	31.3	14.7	36.9	17.3
5 Hydro (less net energy used in pumped-storage)	0.1	*	*	*	*	*	(0.3)	(0.1)	(0.5)	(0.2)
6 **Total electricity supplied**	211.6	100.0	210.3	100.0	206.7	100.0	212.7	100.0	213.7	100.0

*Less than 0.1

TABLE 7
SOURCES OF COAL DELIVERED TO POWER STATIONS: IN MILLION TONNES

		1980/81	1981/82	1982/83	1983/84	1984/85
	NCB Region					
1	Scotland	–	–	–	–	–
2	North Eastern	10	9	10	8	1
3	Yorkshire	24	22	25	21	1
4	North Midlands	22	22	23	21	15
5	South Midlands	6	6	7	7	6
6	Western	10	11	11	10	6
7	South Wales	3	4	3	3	–
8	**Total NCB**	75	74	79	70	29
9	NCB licensed and other UK coals	2	3	4	3	2
10	Foreign coals	4	1	1	1	–
11	**Total**	81	78	84	74	31

THE MINERS' STRIKE

51 Throughout 1984/85 the Board's operations were affected by a shortfall of coal supplies from the National Coal Board as a result of industrial action by the National Union of Mineworkers (NUM). Deliveries of NCB coal to the CEGB were 29 million tonnes in the year, compared with 70 Mt in 1983/84. There were no deliveries of imported coal to the power stations until the last two weeks of March 1985, after the strike had ended.

52 The NUM imposed an overtime ban in support of its pay claim from midnight on 31 October 1983. On 8 March 1984 the NUM Executive endorsed the decision of the Yorkshire NUM to strike in opposition to pit closures and gave blanket endorsement to any other area which decided to strike in support. By 17 March 1984 a total stoppage of deep-mined coal production had been achieved in the Yorkshire, South Wales, North East, North Derbyshire and Kent Areas. However, support for the strike was not total elsewhere—production continued in the Midlands and Western Areas which could supply coal to power stations in the CEGB's North Western and Midlands Regions. There was a complete return to work by miners in early March 1985.

53 Power stations were picketed, but normally the number of pickets was low, and only occasionally was the free flow of deliveries impeded.

54 Selective action by some employees of the British Railways Board disrupted the free movement of coal by rail: only 36 per cent of coal was delivered by rail during the year, compared with 76 per cent in 1983/84. The CEGB compensated for the lost rail movements by the increased use of road haulage, and it took all possible steps to minimize the environmental effects of these operations.

SYSTEM MANAGEMENT

55 The Board's objective during the strike was to ensure that electricity supplies to consumers were maintained as far as possible. To meet daily requirements, coal-fired power stations were selected for operation with due regard to their available coal stocks and expected deliveries, and the operation of power stations not receiving deliveries was minimized. An important contribution was made by coal-fired power stations in the Midlands which received coal deliveries by road virtually amounting to their normal requirements.

56 The reduced output from coal-firing was offset by increased outputs from oil-firing and from gas-turbines, and by the growth in nuclear output. Valuable contributions were made by the three new AGR stations (see Paragraph 85). High outputs were achieved by the three new oil-fired stations, Grain, Ince and Littlebrook, which together supplied 38.8 TW h, and some 742 MW of reserve oil-fired plant was kept in service to provide additional capacity. The CEGB operated throughout the strike in close liaison with the two Scottish Electricity Boards.

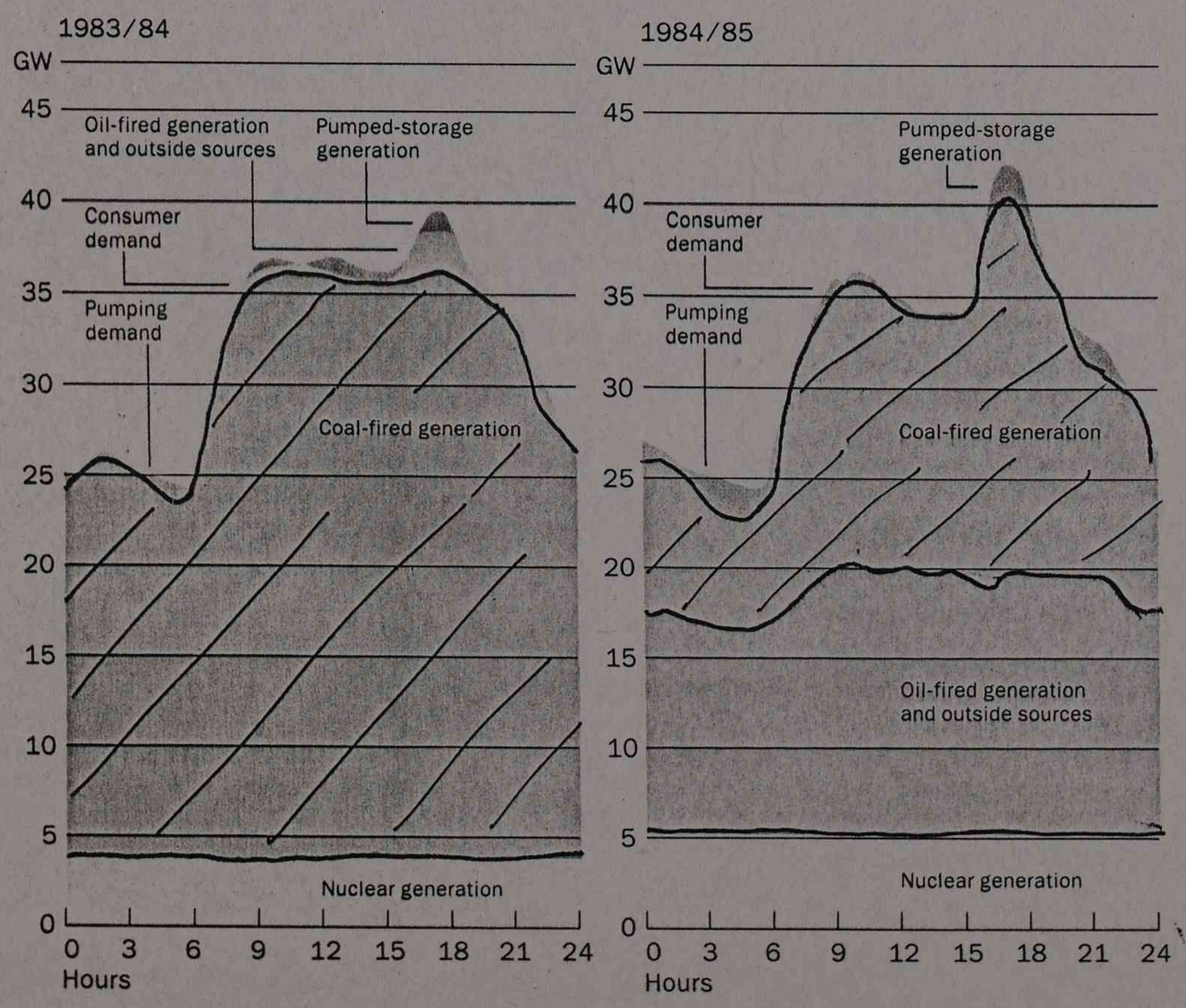

Figure 3
Plant contributions on typical winter days in 1983/84 (left) and 1984/85, illustrating the system's fuel flexibility in meeting the abnormal operating conditions caused by the miners' strike.

I. T. MANLEY CB
DEPUTY SECRETARY

DEPARTMENT OF ENERGY
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01 - 211 7301 / 3220

6 February 1986

David Moore Esq
HM Treasury
Parliament Street
LONDON
SW1P 3AG

Dear David,

ELECTRICITY PRICES TO INTENSIVE USERS

1 You may, very reasonably, have been wondering what has happened to the proposals for a scheme to help large intensive users of electricity.

2 During the latter part of last year, as you will recall, the Interdepartmental Working Group considered in some detail the NCB's and the ESI's proposal for a 'Third Tranche Scheme'. Under this, a separate tranche of coal would have been made available by the NCB to the CEGB, outside the Joint Understanding, to allow electricity prices to be reduced to the largest industrial consumers. We recognised, in the Working Group, that we required detailed information from the industries on certain aspects. I have now heard that in view of the difficulties inherent in the approach then being considered, which became evident as they sought to answer our detailed questions, the industries do not now wish to pursue it.

3 However, it is still the judgement of both industries that they face severe risks of losing sales in the future if nothing is done to moderate electricity prices to intensive users. They have devised a commercial arrangement, within the Joint Understanding, which they judge would help to reduce these risks.

4 The nature of what is proposed is as follows. The CEGB's best estimate of coalburn from NCB supplies in coal year 1985-1986 is 74m tonnes. It is agreed between the CEGB and the NCB that the price for first tranche coal under the formula in the Joint Understanding is £46.88 per tonne. The range within which the second tranche price might have fallen is wide. Import prices range from a minimum of about £28 per tonne (based on spot supplies of relatively small cargoes of South African or Australian coal) to upwards of £34 a tonne

5 The Joint Understanding would formally have limited the size of the second tranche to 6.25m tonnes. On this basis, the CEGB would have insisted on a price towards the bottom end of the range. Neither Board, however, thought it right to link second tranche prices too closely to the price of small cargoes of coal from countries with currencies that are probably untypically weak at present. They have therefore agreed to set the second tranche price at £33 per tonne, but to increase the amount of coal to which it applies (9m tonnes out of the 74m). Thus, the arrangements have the effect of increasing the amount of coal made available at prices directly related to import prices.

6 Of the 9m tonnes, the NCB and the CEGB have agreed to treat 2m tonnes (relating to the second half of the coal year 1985/86) as dedicated to specific categories of intensive users of electricity. This will enable the unit rate for the largest industrial consumers (essentially those taking over 100 mkWhrs a year) to be reduced to reflect the price of second tranche coal. The ESI are satisfied that they could defend this arrangement as not involving any undue preference, to the detriment of other consumers. The arrangements would be financially neutral to the ESI. The two industries envisage that the NCB would provide coal on the basis that existing consumers of electricity who fall within the ambit of the scheme would be eligible for a three year rolling contract, with the possibility of an initial five year agreement for any new facilities. This would imply that the level of "dedicated coal" would be 4m tonnes in the full coal year 1986/87. A few other details need to be agreed, such as the possibility of aggregating a number of sites where total take would exceed 100 mkWhrs, but the basic arrangements now seem to be agreed.

7 These arrangements have been negotiated between the two industries; the NCB and ESI are prepared to defend them as being within their commercial discretion and in their commercial interests. Our view, which I hope you will share, is that these arrangements are attractive, in that they should succeed in solving some of the difficulties on prices to intensive users. They accommodate an inevitable downward pressure on coal prices, in the light of a softening coal market, but within the general terms of the Joint Understanding, and in a way which desirably extends import-related pricing.

8 Unlike the earlier proposals, we believe that these arrangements should be accepted as within the discretion of the two industries. In our view, they do not require the approval of the Government;

indeed our approval, as such, is not being sought by the ESI or the NCB. My Secretary of State intends to describe the proposals to his colleagues in that spirit, but I thought it right to describe them to you and other colleagues first, at official level.

9 If it would be helpful to have a discussion, I would be happy to arrange one. I am copying this letter to DTI, the Scottish office, the Cabinet Office and to the No. 10 Policy Unit.

Yours,

I T MANLEY