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CABINET

MINISTERIAL COMMITTEE ON ECONOMIC STRATEGY

BRITISH GAS METHANE TERMINAL AT CANVEY ISLAND

Note by the Secretaries

The attached minutes to the Prime Minister will be discussed at the Committee's meeting on Thursday 12 March -

- i. of 3 March from the Secretary of State for the Environment
- ii. of 4 March from the Secretary of State for Employment
- iii. of 6 March from the Secretary of State for Energy.

Signed ROBERT ARMSTRONG  
 P Le CHEMINANT  
 D J L MOORE

Cabinet Office

9 March 1981



Prime Minister

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INSTRUCTIONS  
The Rules

1. You will recall that soon after taking office the Government reviewed the potential hazards at Canvey Island. The issues were considered by E (EA) Committee on 28 June 1979 and on 11 July you wrote to the Secretary of the Castle Point Refineries Resistance Group setting out the Government's view.
2. Events have now moved to the point where I need to take further action. It may help if I briefly rehearse the background.
3. Following local pressure an exploratory public inquiry was held in 1975 into the possibility of revoking a planning permission for an oil refinery which had been granted to United Oil Refineries Limited (URL). The outcome was a recommendation by the Inspector in favour of revocation, but one of the assessors recommended a study of the inter-related risks of the Canvey Area. It was in the light of this study by the HSE that we concluded in 1979 that subject to certain safety measures there was no sufficient case for closing any existing installation on Canvey, but that we should reopen the inquiry into the URL permission so that a final view could be taken in the light of the HSE report on whether to start revocation proceedings.
4. I now have the Inspector's report of the completed inquiry.



5. The serious issue is that in the course of making his recommendations on URL the Inspector, General Richard Ward, makes the crucial point that URL in itself is acceptable but that the methane terminal is an unacceptable risk. I quote paragraphs 223 and 224 of his conclusions:

"223. As I have already intimated, the greatest potential menace stems from the Methane Terminal. A major spill could cause very high casualties. Such a high risk potential should not be sited so close to highly populated areas and it can only be nullified by a conscious decision of the Gas Board to install a foolproof source of ignition on the terminal's perimeter. If that is considered to be too dangerous, the only alternative is to close it down and move it elsewhere.

224. Any other alternative which continues to allow the people of Canvey and others to be exposed to what could be an accident of major proportions would be to my mind both foolhardy and irresponsible."

6. You will immediately appreciate the seriousness of these comments made by a senior Inspector appointed by the Government which support arguments identical to those which many local people - and particularly Sir Bernard Braine - have put forward.

7. As soon as I received this report I had urgent consultations with Jim Prior (who is, of course, responsible for the HSE). He has also explained the position to David Howell, who then approached Sir Denis Roche to see if he would be in a position,



when the Inspector's report was published, to give an undertaking about the eventual running down of the terminal. We thought that if an announcement to this effect could be made simultaneously with publication of the Inspector's report, we could justify taking no further action on this aspect of the report.

8. In the event British Gas have expressed themselves completely opposed to action to run down the terminal. They regard the terminal as essential for supply purposes and consider that there are no sufficient safety grounds to warrant closure. David supports them in this view, while the HSE who have been further assessing the hazards do not think they would be justified in using the powers which they have to require closure of the terminal on safety grounds.

9. I am bound to publish the Inspector's report and in so doing indicate my conclusions. If I delay doing this, I shall lay myself open to charges of suppression. In the normal course of events the report will be ready for publication next week and I cannot issue instructions to delay this. I have to decide therefore what I should say about the report and any action we consider necessary. David, I know, has doubts about the Inspector's evaluation of risks and the HSE have done some further work which suggests that these may not be quite as great as originally thought. However that may be, I do not think we can merely dismiss the Inspector's central conclusion that the order of risk arising from the terminal is unacceptable. The public is entitled to proper reassurance and they will not be reassured unless a further public process of enquiry is conducted that reaches different conclusions from

those contained in this report. To publish and to do nothing is, in my view, unthinkable.

10. There is no point in reopening the inquiry already held. That has already been reopened once and it has been directed to what is no longer the main issue i.e. the revocation of the URL permission.

11. What I think we should do is to consult Castle Point District Council with a view to arranging another exploratory public inquiry, this time into whether, jointly with David Howell, I should initiate proceedings for the discontinuance of the methane terminal. The District Council themselves would probably feel unable to contemplate discontinuance action on their own account, not least because of the very substantial liability to compensation involved. (We have no precise assessment of this, but it could amount to well over £100M). If we pursue this course, it will give all concerned, including British Gas, the opportunity to put their point of view, and the latest assessment of risks by HSE can also be considered at the inquiry. I suggest proceeding by way of exploratory inquiry rather than moving straight to a discontinuance order (which would itself involve a public inquiry) as we do not want to create a preconception that discontinuance is clearly justified.

12. I accept that if we embark on this course, it will be politically very difficult not to accept a resulting recommendation to take discontinuance action, if this was the outcome. That in turn would have serious financial implications as we would be expected to meet any compensation liability by an ex gratia payment. It seems to me, however, the only course we can reasonably take; moreover, it is

possible that faced with the prospect of discontinuance action we may find British Gas more forthcoming than their initial response suggests.

13. You will appreciate the quasi-judicial position in which I find myself in this matter, which I realise is of the first moment. I thought it right to let you know of my views in case you would wish the matter to be further discussed. David Howell will be letting you have his views in the light of this letter.

14. I am copying this to all members of E Committee and to Sir Robert Armstrong.

MH  
3 March 1981



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4 MAR 1981
FILING INSTRUCTIONS
FILE No. _____

cc Mr 1570  
 Mr Chinn  
 Mr Rose  
 Mr Peter

PRIME MINISTER  
 CANVEY ISLAND

I have seen Michael Heseltine's minute to you of 3 March and would like to record that I endorse his proposed way forward. It is certainly true that the Inspector's report has some serious deficiencies and that HSE now assesses the risks as significantly less than it did previously, but I do not think that this alters the central point, which is that it would be insupportable for us to take no action on the Inspector's report.

I am copying this to all members of E Committee and to Sir Robert Armstrong.

JP

4 March 1981

PRIME MINISTER

BRITISH GAS METHANE TERMINAL AT CANVEY ISLAND

6 MAR 1981  
PLANNING INSTRUCTIONS  
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I have seen Michael Heseltine's minute to you dated 3 March about the Inspector's Report on the public inquiry into the possible revocation of the planning permission granted to United Oil Refineries Ltd for an oil refinery at Canvey Island.

I have not of course been able to show the Inspector's Report to the British Gas Corporation (BGC), owing to its being subjudice, but I have discussed the Inspector's conclusions and recommendation with the Chairman, Sir Denis Rooke, and I have also discussed with him the BGC's long-term need for their terminal at Canvey.

First of all, I should make it clear that I am entirely persuaded that the Canvey terminal constitutes an essential part of the BGC's operations and that without it they could not meet their statutory obligation to supply. (The detailed case for the retention of the terminal is set out in the Annex).

Secondly, if we agree to start proceedings for discontinuance of the methane terminal on the basis of a report which is admitted to have serious deficiencies and when the HSE assesses the risks now as being significantly less than when it had recommended against such a course in 1979, we could seriously undermine the credibility of the HSE. If so there could be disastrous consequences not simply for BGC, but for major energy and industrial developments involving hazardous activities, both now and in the future. For example, BGC's other liquefied natural gas (LNG) terminals, including in particular the plant at Partington, near Manchester, might well come under pressure; there could be pressure from the vociferous objectors to the petrochemical complex at Mossmoran to re-open the planning issues; and nuclear power station projects would be particularly vulnerable targets if HSE's advice has been seen to have been over-turned in respect of a "conventional" LNG terminal.

I fully accept that the Inspector's Report must be published, and this will undoubtedly increase public pressure at Canvey for the closing down of the methane terminal. We must however, in my view, stand our ground and allow HSE to argue their case against the Inspector's

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recommendation. It is surely essential that they are seen to be adopting a consistent approach at all sites of this nature. To give way at Canvey and start discontinuance proceedings would bring peace in that particular struggle but only at the expense of much more difficult battles over other major industrial developments e.g. the forthcoming public inquiry into the FWR.

Thirdly, you will see from the analysis in the Annex that Canvey is absolutely essential to BGC's operations. Without it there would be severe disruption of gas supplies. Therefore, I do not see that I could use my powers under the Gas Act to close it down. Clearly, in the light of the HSE's advice their powers could not be used. Michael proposes we use the broad powers under the Town and Country Planning legislation to start discontinuance proceedings on what would clearly be safety grounds. This would lead to immediate closure, to which I could not agree because BGC would need an equivalent site. Any new site would have to be on the north side of the Thames estuary near Canvey, because of the constraints of the transmission and distribution networks. Whether BGC would obtain planning permission for such a site when they had vacated Canvey for what would clearly be interpreted as safety reasons - whatever reasons might be adduced in public - is very problematical. If it did prove possible to find such a site, however, BGC estimate that it would cost around £150m to reprovide equivalent facilities, i.e. LNG and LPG storage, liquefaction plant and importing facilities. The lead-time would be of the order of 5 to 10 years and therefore this would not be a practicable alternative.

I hope that colleagues will agree with me that the arguments against closing the Canvey terminal are overwhelming. An equivalent terminal would have to be built elsewhere at enormous cost (assuming a site could be found); HSE's credibility would be undermined to the extent that they would not be able to sustain their position at a significant number of sites; and we would be giving potential objectors to

Industrial planning applications more ammunition.

I am copying this minute to all members of E Committee, to the Secretaries of State for Scotland and Wales and to Sir Robert Armstrong. In view of the point on which powers would be used, I am also copying it and Michael's minute to the Attorney General.

SECRETARY OF STATE FOR ENERGY

6 March 1981

PEAK-SHAVING

2. The terminal is strategically located on the south-eastern loop of the national gas transmission system in order to provide peak-shaving capacity to the south of London. Peak and the main body of the capacity of the terminal are to serve the peak-shaving capacity of the transmission system at the discretion of the transmission system operator into the distribution system.

- 1) During particularly severe weather conditions the peak-shaving capacity will be used to supply gas to the south of London. The peak-shaving capacity will be used to supply gas to the south of London. The peak-shaving capacity will be used to supply gas to the south of London.

## BRITISH GAS TERMINAL AT CANVEY ISLAND

## EXISTING FACILITIES

1. BGC's terminal comprises:

- i) above-ground and in-ground storage for LNG;
- ii) plant for the liquefaction of natural gas coming from the North Sea via the national transmission system;
- iii) LNG import facilities;
- iv) LPG storage (above ground)

The LNG storage comprises 8 above-ground tanks - 6 tanks each of about 4,000 tons nominal capacity and 2 tanks each of about 1,000 tons capacity - and 4 in-ground tanks each of about 21,000 tons capacity. The total nominal capacity is therefore 108,000 tons, but the maximum operating capacity is 41,000 tons. The in-ground storage is in the process of being de-commissioned. The nominal LPG storage is 20,000 tons but it is maintained at a maximum of 3,000 tons in order to meet ESE conditions.

## PEAK-SHAVING

2. The terminal is strategically located at the end of the south-eastern loop of the natural gas transmission system in order to provide peak-shaving gas supplies to the eastern half of London, Essex and the south-east area generally. Because of the constraints of the transmission system Canvey is the only terminal able to serve the area north of the Thames, with the exception of some substitute natural gas plant. The purpose of peak-shaving facilities is to provide substantial volumes of gas at the extremities of the transmission system ready for quick release into the distribution network at very short notice in a number of different circumstances, as follows:

- i) during particularly cold weather when the flow of North Sea gas is insufficient to meet peak demand from customers with a right to a continuous supply;
- ii) in the event of an interruption in supplies owing to a breakdown at the gas field itself, or on the transmission system, or as a result of standing-down plant for maintenance purposes.

Unusually cold weather during the Summer could raise difficulties just as much as during the Winter, bearing in mind BGC's reduced contractual Summer offtake from the gasfields.

3. London and the south-east is one of the most critical areas in terms of supply/demand match at times of peak demand. Almost 70% of peak demand is attributable to the domestic market, over

which BGC have virtually no control. The corollary to this is that there is comparatively little "interruptible" gas to industrial customers to cut off before "firm" customers are affected. This is one of the Regions where there is the strongest risk of having to cut off supplies to domestic customers in an emergency. Canvey is held on one-hour standby, in contrast to the minimum 12 hours' notice required to cut off interruptible customers.

4. The peak output from Canvey is 270 mcf (million cubic feet a day), representing 13.5% of the BGC's peak-shaving capacity. It equates to the daily demand of nearly three-quarters of a million domestic customers. Even after all the additional peak-shaving installations currently under construction have been commissioned, Canvey will still provide 9% of the industry's peak-shaving capacity. On average stocks of LNG at Canvey the rate of 270 mcf could be sustained for about 5 days, without replenishment of stocks, in the event of a failure of the sole transmission line from Bacton supplying the south east. There are an average of 50 interruptions per month in the supplies from Bacton: these vary from a few minutes to a few hours and may constitute either reduced pressure or a complete break in supply involving a loss of up to 1,000 mcf. At such times Canvey's peak shaving capacity is essential to supply "firm" customers and to maintain adequate pressures in the distribution system.

LNG IMPORT FACILITIES

5. Canvey is the only BGC terminal in the whole of Great Britain with import facilities for LNG, which is currently imported from Algeria. The great advantage of importing LNG is that it replenishes the storage very quickly, compared with the slow process of liquefying gas from the national grid. One LNG tanker carries about 11,000 tons whereas the liquefaction plant can only replenish LNG at the rate of 200 tons a day. Furthermore once the LNG stocks had been depleted, e.g. during a very cold spell, they could not be replenished by liquefying natural gas from the national grid until the weather had improved sufficiently for there to be "spare" gas in the system, and this might not happen for a considerable time.

6. Moreover, although the amount imported is not high in relation to total demand it is sufficient to ensure that BGC remains actively involved in the world trade in LNG and it means that BGC are able to maintain their technical and commercial expertise in this field.

• Interruptible gas is gas supplied to large industrial customers under contracts permitting BGC to interrupt supply for a specified number of days per year.

LPG STORAGE

7. Until recently the LPG at Canvey was used only for emitting low calorific value LNG. BGC are now, with HSE's consent, commissioning facilities for mixing the LPG with LNG in order to provide a further 20 mcf peak-shaving capacity for the North Thames area. This will be piped along existing pipelines to east London.

POSSIBLE ALTERNATIVES TO THE RETENTION OF CANVEY

8. We have examined with BGC a number of possible alternative ways of providing this essential peak-shaving capacity without the benefit of the Canvey terminal. These are as follows:

- (i) Bringing in another feeder from the Southern Basin via Bacton Terminal, Norfolk

Such a pipeline could not feed in natural gas at a sufficiently fast rate to provide large volumes at very short notice. Moreover, it would have to be routed through Greater London and the required pressure of 1,000 psi would not be permitted through an urban area on safety grounds. (A rupture of such a high pressure main could produce a fire about 500 metres high.)

- (ii) Development of alternative facilities at Isle of Grain LNG terminal

80,000 tons of LNG storage is currently under construction at the Isle of Grain and this will be commissioned in two stages, in 1982 and 1983. This will provide a second offtake - south of the river - from the transmission pipeline coming from Bacton, thus giving a higher degree of security of supply in London and the south east. This additional storage will replace the in-ground storage at Canvey (which is now in the lengthy process of being decommissioned for commercial reasons). However, it will nevertheless be essential to retain the Canvey offtake from the Bacton main and the 26,000 tons of above-ground LNG storage because only Canvey can make a sufficiently speedy response to a demand for peak-shaving gas supplies to the London area north of the Thames and into Essex by virtue of its direct position on the distribution network. The Isle of Grain, because of its situation south of the Thames and greater distance from the area of gas consumption north of the river, could not provide the same speed of response and could not maintain adequate pressures during high load conditions in the event of the failure of the Bacton main. The two terminals are designed to provide a simultaneous input to the two areas of high demand in London and the south east, and adequate volumes of LNG must be maintained at both sites in order for this to be possible.

(114) Development of Morecambe Bay gas field and  
rough storage

The new Morecambe Bay gas field and the development of the partially-depleted Rough field in the Southern Basin for seasonal storage purposes are due to be commissioned in 1984, if all goes well. However, they are both impracticable as alternatives to Canvey for the reasons stated at item (i) above.

CONCLUSION

9. Canvey is an essential back-up to BGC's supply operations in the south-east. Without it there would certainly be times when they would be unable to meet their statutory obligation to supply. If Canvey were closed, BGC would need to build an equivalent new terminal (including import facilities) at a cost of about £150 million. Any new terminal would have to be in the same area on the north bank of the Thames since otherwise the whole distribution system would have to be redesigned.