PREM 19/785

PART 2 ends:-

AJC to RM 29/11/82

PART_____begins:-

35/DOI to PM 2/12/82

TO BE RETAINED AS TOP ENCLOSURE

Cabinet / Cabinet Committee Documents

| Reference | Date |
|---|-------------------|
| EX (81) 1 EX (81) 18V Meeting, Minutes EX (81) 2nd Meeting, Minutes | 19.1.81 |
| EX(81) 18V Meeting, Minutes | 21.1.81 |
| FX(81) 2nd Mexima, Minutes | 9.3.81 |
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The documents listed above, which were enclosed on this file, have been removed and destroyed. Such documents are the responsibility of the Cabinet Office. When released they are available in the appropriate CAB (CABINET OFFICE) CLASSES

Signed OWayland

Date 4 September 2012

PREM Records Team

PERSONAL AND CONFIENTIAL





Hong Kong

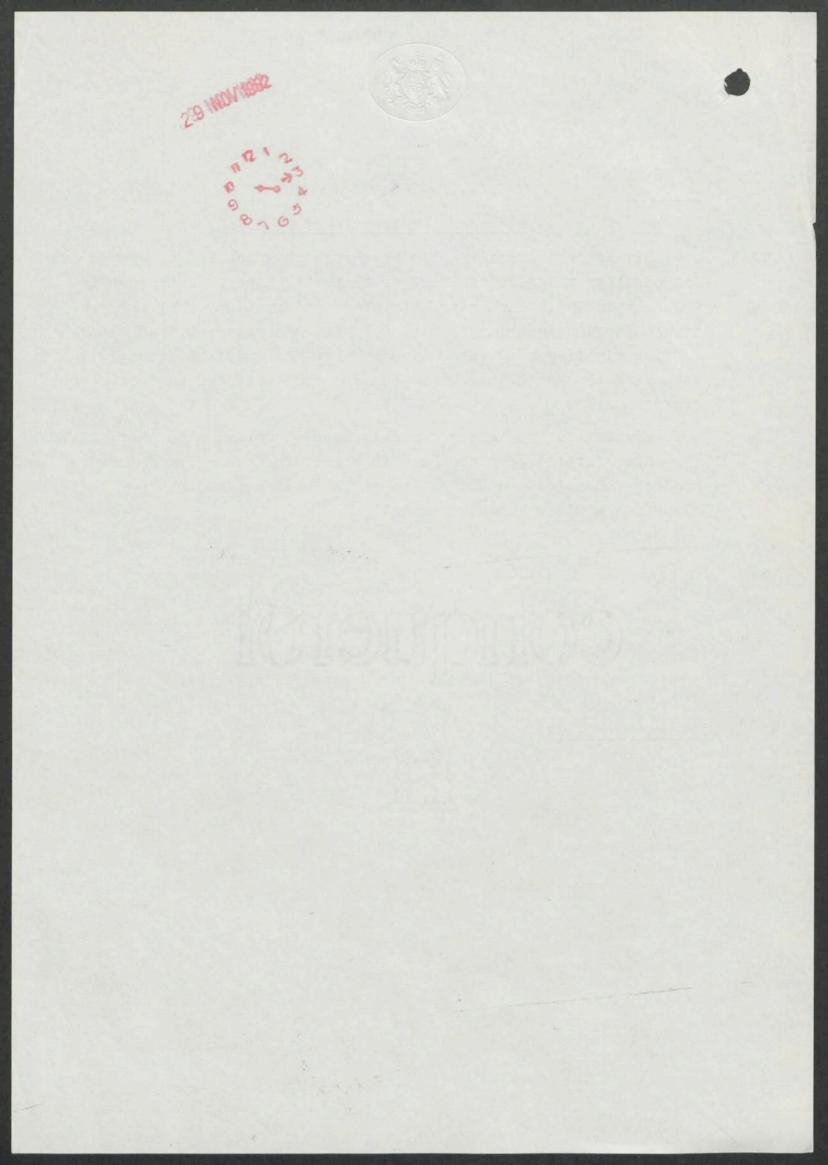
SIR ROBERT ARMSTRONG

GUANGDONG NUCLEAR POWER STATION

Thank you for your minute of 26 November about Sir Walter Marshall's latest information from China. As you may now know, the Chinese mission was in London last week (rather than this) - the Secretary of State for Industry was due to meet them on Friday.

A. J. COLES

29 November 1982



CONFIDENTIAL



Treasury Chambers, Parliament Street, SWIP 3AG

26 November 1982

N. B. P. A.

The Rt. Hon. Patrick Jenkin, MP Secretary of State for Industry Department of Industry

M 29

In Patrick

GUANGDONG NUCLEAR PROJECT

I have seen a copy of your minute of 2/5 November to the Prime Minister.

Naturally, the proposal to increase our offer of subsidy for this project is unwelcome to me. My concern is not just with the subsidy cost. At a time of widespread concern about the growth of protectionism I think it would be particularly unfortunate for the UK to expose itself yet again internationally to the charge of leading the credit subsidy race.

My assumption up till now has been that the Chinese decision will turn ultimately on the importance they attach to the Hong Kong connection (and the associated foreign currency earnings). I note from your minute that the Hong Kong card may not now be a very strong one for us, but to try and compensate for this by offering cheap credit could be financially ruinous. It would also be futile since the French will be bound to match whatever we do on credit. In my view the right strategy for us now is to sit tight and refuse to be drawn into a competitive counter-bidding race with the French which can do neither of us any good.

At the same time, I recognise that both in terms of potential subsidy cost and the size of our exposure the terms on which you now envisage bidding for the contract pose less of a problem for the Treasury than we might have had to face. If you are really convinced, in the light of your knowledge of the negotiating situation, that an offer to capitalise interest would clinch the deal for GEC, and would not simply be the



prelude to another round of bargaining and competitive counter-bidding, I would not wish to press my objections on financial grounds. This is on the understanding that we have now reached our negotiating limit, and that whatever the Chinese response there will be no question of further topping up our offer with aid money, Industry Act assistance or other financial concessions.

I am copying this minute to the Prime Minister and the other recipients of yours.

GEOFFREY HOWE

29 NOV 1982

Honk Veny, Guardong

CONFIDENTIAL



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Foreign and Commonwealth Office London SW1A 2AH

26 November, 1982

Dear John,

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Guangdong Nuclear Project

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This is to confirm, as I told you on the telephone, that Mr Pym agrees with the line in Mr Jenkin's minute of 25 November. British participation in the project would thicken our bilateral relations with China considerably and also have favourable implications for the future of Hong Kong. But as Mr Jenkin points out, our position in Hong Kong (the 'card' referred to in paragraph 4 of his minute) is not something we can play up very strongly with the Chinese in present circumstances to offset the technical advantage held by the French. Further financial concessions therefore seem appropriate.

I am copying this to the Private Secretaries of the recipients of Mr Jenkin's minute.

Your eve

(J E Holmes) Private Secretary

A J Coles Esq Private Secretary 10 Downing Street 20 Maria Company

CONFIDENTIAL



Jo & Hong Kain

10 DOWNING STREET

From the Private Secretary

26 November 1982

GUANGDONG NUCLEAR PROJECT

The Prime Minister has seen the minute of 25 November by the Secretary of State for Industry.

Mrs Thatcher agrees that at the final meeting which Mr. Jenkin will be having with Mr. Li Peng today we should offer full capitalisation of interest instead of the concession we have already made on the financing of local costs. She notes that the Treasury and ECGD are content with this proposal.

The Prime Minister does not consider that we should offer local cost support in addition at this stage. But she would be willing to examine this possibility if, at a later stage, Mr. Jenkin thought it necessary to secure the contract for the conventional island.

I am copying this letter to John Holmes (FCO), John Kerr (HM Treasury), Julian West (Department of Energy), John Rhodes (Department of Trade), John Gieve (Chief Secretary's Office, HM Treasury) and Richard Hatfield (Cabinet Office).

A.J. COLES

Ms Caroline Varley, Department of Industry.

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CONFIDENTIAL

Prime Minister

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JH 365



PRIME MINISTER

Para 5 is the nuls.

You may think that at this stage we should offer full capitalisation of interest, while treasing and ELOS could support.

We should then he able to consider adding local costs support later.

GUANGDONG NUCLEAR PROJECT

The M Agree? A.J.C. 25

The purpose of this minute is to up-date you and colleagues on the negotiations on this project; and to recommend that we should now make an improved but final credit offer to the Chinese.

The French deeply impressed the Chinese with the scale of their nuclear programme. And in support of their strong industrial position the French have offered the equivalent of the UK's credit terms. Their new formal offer is 10% over 15 years with support for local costs up to 15% of the French project content, or equivalent support for capitalisation of pre-commissioning interest and the Chinese have now told my officials that the French have undertaken to consider further the case for full capitalisation of interest and other measures which would reduce the effective interest rates on the loans. I think we must assume that some further French inducement will be forthcoming if the Chinese decide to place the whole project with the French. Building on this, the French have proposed to the Chinese that they should take the lead on the whole project, offering GEC some sub-contract work on the conventional island in



recognition of the British interest in the project through Hong Kong.

- In effect, the French appear to have rejected our overtures for co-operation on this project and to have played a strong hand to win the whole project. It would not be acceptable to us or to GEC simply to be sub-contractors for comparatively minor items of plant.
- 4 In the light of this I have reconsidered our negotiating position. Despite their excellent engineering capabilities and proven export record, GEC cannot match the depth of PWR experience which the French can offer. It is not easy to determine how far our weaker industrial position is counterbalanced by our position in Hong Kong. In the present delicate state of negotiations on the future of the territory, it may not be possible to play this card too hard. In informal discussions with my officials over the last couple of years Lord Kadoorie has indicated that he would be unwilling to refuse outright to purchase power from a nuclear station in which the UK did not have a major industrial role, though he would be less willing to purchase a major share of the electricity output in the early years. In the present climate the Hong Kong Government too may not wish to press British industrial interests too hard. My view is that to secure the conventional island for GEC we shall need to enhance the Hong Kong card with an attractive credit package.



- 5 I believe, therefore, that at the final meeting I shall have with the Chinese on Friday 26 November I should indicate to Li Peng that we would be willing to offer a final concession on credit on condition that he was prepared to agree that the contract for the conventional island should be awarded to GEC. My officials have discussed with the Treasury and ECGD two possible alternatives. The first is the granting of full capitalisation of interest without strings instead of the concession we have already made on the financing of local costs. The alternative is the full capitalisation of interest in addition to the local costs support. Treasury and ECGD would be prepared to recommend the first but not the second. Whilst the first would undoubtedly be helpful I feel that it would be worthwhile going for the second if we were able to clinch the I attach at Annex A a short schedule which shows the cost deal. and level of subsidy for these two options compared with the offer we have already made. The discount rate used is the current long-term dollar bond rate of 11.6% since the financing is likely to be in dollars.
- 6 There is clearly a risk that the French will again match our credit package, but I am convinced that we should make this improved offer in a final attempt to secure the conventional island for the UK, and at the same time to give Li Peng a concession, beyond what was offered by my officials in Guangdong



in July, which he can take back to the State Council.

7 I am copying this minute to Francis Pym, Geoffrey Howe, Nigel Lawson, Arthur Cockfield, Leon Brittan and Sir Robert Armstrong.

PJ

PJ

95 November 1982

Department of Industry



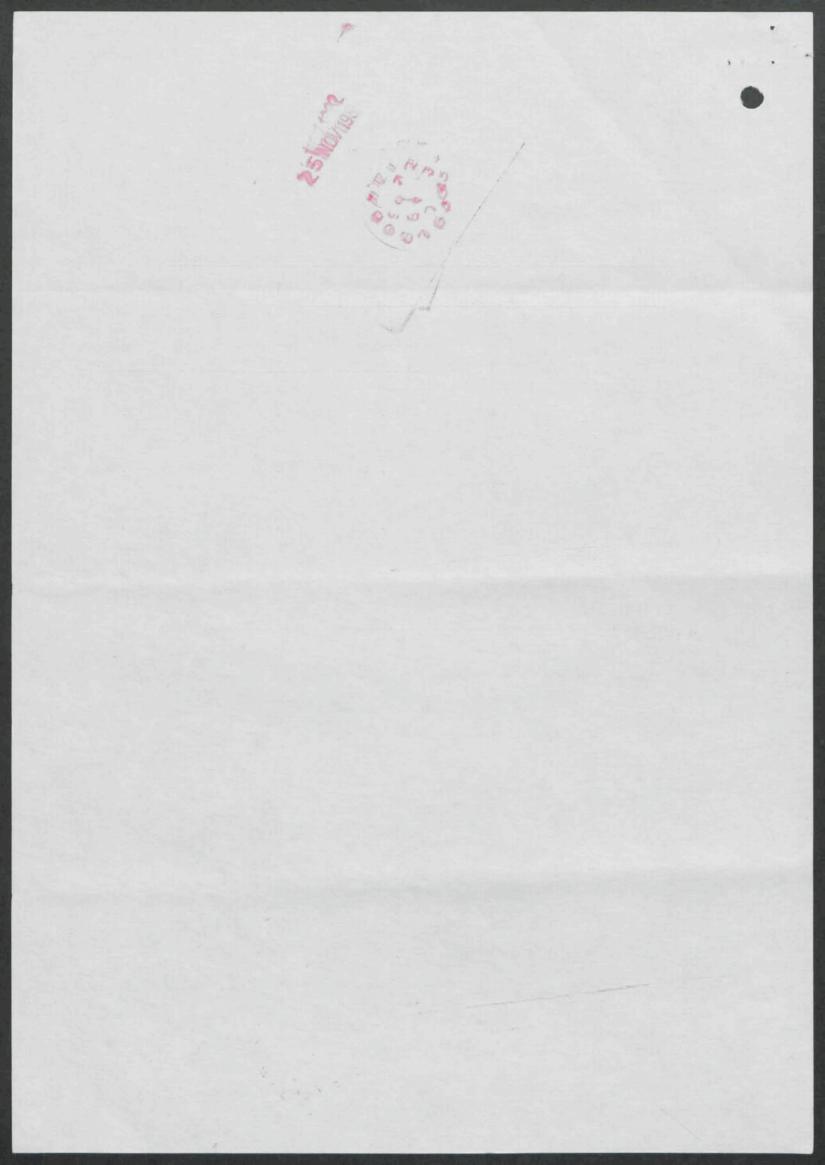
GUANGDONG PROJECT

Subsidy Element involved in the provision of Interest Subsidy

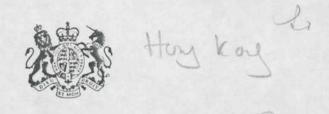
Conventional Island, Escalated Cost £598.44m

| | Actual HMG Subsidy | Discounted HMG Subsidy | Subsidy Element |
|--|-----------------------|---------------------------|--------------------|
| | £m | £m | % |
| A. Present Offer (85% + local costs) | 124.08 | 45.13 | 11.02 |
| B. Alternative Offer (85% + Gapitalisation) | 157.21 | 53.86 | 13.15 |
| C. Proposed Offer (85% + local costs + capitalisation) | 184.95 | 63.37 | 15.47 |

NOTE: Discount rate used is the current long term dollar bond rate of 11.6%



CONFIDENTIAL



10 DOWNING STREET

From the Private Secretary

18 November, 1982.

Guangdong Nuclear Project

The Prime Minister has noted the minute of 17 November by the Secretary of State for Industry, and, subject to the views of the other recipients of the minute, agrees with the proposals in paragraphs 7 and 8 for the further handling of this matter.

I am sending copies of this letter to John Holmes (Foreign and Commonwealth Office), John Kerr (HM Treasury), Julian West (Department of Energy), John Rhodes (Department of Trade), John Gieve (Chief Secretary's Office, HM Treasury), and Richard Hatfield (Cabinet Office).

A. J. COLES

Jonathan Spencer, Esq., Department of Industry.

CONFIDENTIAL

JH 293



PRIME MINISTER

Agree will pars. 7 and 8?
A.J.C. 17.

GUANGDONG NUCLEAR PROJECT

In my minute of 29 October I undertook to recommend to you and to colleagues the line we should take in discussions with Vice Minister Li Peng of the Ministry of Water Conservancy and Electric Power, following our discussions with the French at the summit.

- 2 Following his visit to France, Li Peng will arrive in the UK for a week of industrial visits and discussions with Government on 19 November.
- 3 Many uncertainties remain on this project. Despite the fact that Premier Zhao reiterated to Lord Nelson at the beginning of November his statement to you in September, Mrs Qian, the Minister of Water Conservancy and Electric Power told Lord Nelson that the Chinese wanted open competition. A move in the American position remains a theoretical possibility but there is no sign of any change in the State Department's non-proliferation policy towards China. Undoubtedly, the present Chinese focus is on French nuclear capability.
- 4 You will remember that the discussions at the summit were inconclusive. Alsthom's interests remain a major political



difficulty. I was unable to get a commitment from either M.

Jobert or M. Chevenement to a joint Anglo/French project - which would carry with it the implication that they would exclude Alsthom. You may recall that I told you that Jobert wrapped my knuckles because we had not reported developments to them immediately after your visit to Peking, and because, in his view, our terms for Guangdong went beyond the spirit of the Consensus. I believe Chevenement is more favourably inclined to a Framatome/GEC proposal, but before reaching a view on our proposals for collaboration the French will no doubt want to hear what Li Peng says in the current discussions in France.

- Accordingly we shall have to focus on the conventional island in our discussions with Li Peng, though there may be an opportunity to underline again our interest in supplying fuel under the dual sourcing arrangements the Hong Kong Government are likely to seek.
- This situation presents us with a dilemma on financing terms.

 Our present terms for the conventional island of 10% over 15

 years with provision to cover local costs up to 15% of the UK

 content are significantly more attractive than the French offer

 of 10% over 10 years with no support for local costs. If we are

 eventually to do a deal with the French there is a strong argument to

 offer nothing more at present. If, however, we are in

 competition with the French it will be difficult to send Li Peng

away empt the Frence accurate

away empty handed. My officials will be seeking to find out how the French talks have gone but it will not be easy to obtain accurate information.

On balance, on present information I believe we should make no further major concessions at this stage unless we need to respond to an improved French offer.

We might, however, invite the Chinese to indicate those areas in which they would find useful the expert technical services which the UK could supply. I have in mind the kind of technical help which was supported under the Industry Act to secure the Castle Peak projects. In response to Chinese reactions we could consider what modest measures of support might be possible: first estimates suggest that such services for the conventional island might cost £10m-£20m.

9 Lawson, Arthur Cockfield, Leon Brittan and Sir Robert Armstrong.

27

PJ

17 November 1982

Department of Industry

H-K. Controly And Control Brown 645



Hore Kong

10 DOWNING STREET

From the Private Secretary

8 November 1982

GUANGDONG NUCLEAR PROJECT

The Prime Minister has noted without comment the contents of the minute of 4 October on the above subject by the Chancellor of the Exchequer.

I am copying this letter to the Private Secretaries to the Foreign and Commonwealth Secretary, the Secretary of State for Energy, the Secretary of State for Trade, the Chief Secretary, HM Treasury and Sir Robert Armstrong.

A.J. COLES

John Kerr, Esq., HM Treasury





Treasury Chambers, Parliament Street, SWIP 3AG 01-233 3000

PRIME MINISTER

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GUANGDONG NUCLEAR PROJECT

I have seen Patrick Jenkin's minute to you of 29 October, and we had some discussion about it at your briefing meeting for the Anglo-French Summit on 1 November.

- I agree with Patrick Jenkin that there is much to be said for trying to reach an exclusive agreement with the French. The financial and other risks of the project would be much less than under the American option, and there is force in the point which Patrick Jenkin made at your meeting that a deal with the French should make it possible to avoid a competition with them on financial terms.
- As things stand, we have already offered more generous terms than the French. I also understand that at a recent OECD meeting in Paris the French would have been prepared to accept a US proposal for banning the use of mixed credits in relation to exports of nuclear power stations, and that the UK was the only country which could not accept the proposal. In any discussion of financing terms with the French I suggest our line should be that we have offered enough concessions already and would welcome a moratorium on further concessions as part of any Anglo/French agreement.
- I agree with Patrick Jenkin that we may need a collective discussion of the financing issues after the Summit. I think such a discussion should precede any move to start negotiating direct with the Chinese for the conventional "island".
- I am copying this minute to the other recipients of Patrick Jenkin's minute of 29 October.

(G.H) NOV ? 4 October 1982 Hong Kong. Guangden.

PERSONAL AND CONFIDENTIAL





10 DOWNING STREET

From the Private Secretary

SIR ROBERT ARMSTRONG

GUANGDONG NUCLEAR POWER PROJECT

Thank you for your minute of 27 October. I have this morning written to Jonathan Spencer, conveying the Prime Minister's comments on the minute of 29 October by the Secretary of State for Industry and giving an account of the discussion which took place at yesterday's briefing meeting for the Anglo/French Summit. That letter has of course been copied to you. My impression is that we now have a policy for the immediate future and that, subject to your views, there is no need at the moment for the Cabinet Office to prepare recommendations to Ministers.

A. J. COLES

2 November 1982

CONFIDENTIAL THE C FLO 10 DOWNING STREET 2 November 1982 From the Private Secretary Lear Constitue, GUANGDONG NUCLEAR POWER PROJECT The Prime Minister has seen Mr. Jenkin's minute of 29 October on this subject. Mrs. Thatcher minuted that she was content that Vice-Minister Li Peng should be invited to London in November. She commented further that she was loath to give up the idea of Anglo/US

co-operation on this project since she feared that the French aim would be to obtain the whole project for themselves.

There was some discussion of this matter at yesterday's briefing meeting for the Anglo/French Summit. The Prime Minister reiterated her concern that the French would try to secure the whole project. Your Secretary of State pointed out that if we could reach agreement with the French on pursuing the project jointly, we should avoid competitive bidding between the United Kingdom and France. The French now said that they had been asked to tender separately for both the nuclear and conventional If we were to preserve the possibility of obtaining work for British industry, we should have to fight very hard. He therefore recommended that at the Anglo/French Summit we should take the line that the project presented an opportunity for constructive Anglo/French partnership and we should agree how to frame a joint project. This approach would not necessarily rule out the American option. We should not exclude this possibility unless and until we had arrived at a satisfactory arrangement with the French. The Prime Minister indicated that she was content to speak accordingly in Paris.

I am copying this letter to John Holmes (Foreign and Commonwealth Office), John Kerr (HM Treasury), Julian West (Department of Energy), John Rhodes (Department of Trade), John Gieve (Chief Secretary's Office) and Richard Hatfield (Cabinet Office).

for our

Jonathan Spencer, Esq., Department of Industry.

JH 177

Also attached is an account by Six Robert annistrung of his conversation with Sir Walter Marshale. Do you agree with he strategy set out by Mo Jenkin

PRIME MINISTER

un paragraphs 11-15 à tus minute? GUANGDONG NUCLEAR PROJECTO

Your Private Secretary's letter of 20 October asked for a report on our aims and tactics on this project.

- This minute makes recommendations on the line we should take on the project at the Anglo-French summit.
- 3 The Chinese have requested further talks with the UK in November; decisions on the financing terms we should offer cannot be taken yet.

Chinese Request for Further Discussion

4 Vice-Minister Li Peng, of the Ministry of Water Conservancy and Electric Power, has indicated that he would like to come to London for further discussions with the UK Government in November, provided that we have something more to offer than in Guangzhou in July. He also plans to visit France on the same trip and will receive there proposals from both Framatome and Alsthom. I believe we must welcome this opportunity for further discussions, but we need to establish quickly where we stand on collaborating with a nuclear partner.



Nuclear Partner

- Seports through CLP suggest that some Chinese officials at least at provincial level still favour Westinghouse, largely because they believe their technology is more advanced than the French. Nevertheless, your discussions both in Peking and Guangzhou indicated clearly a strong preference for an Anglo-French proposal, reiterating Premier Zhao's comments to Humphrey Atkins in January. The Premier's remarks must presumably be given greater weight than any countervailing views in Guangzhou. Moreover, there is little hope of movement in the State Department's position on nuclear exports to China before the end of the year at the earliest. And first indications are that a Westinghouse/NNC nuclear island could not compete on price with Framatome.
- At the same time there are strong arguments for seeking

 French support for GEC and Framatome entering into an agreement
 between themselves (which would exclude Alsthom) to present a
 joint bid:
 - a) Premier Zhao's remarks combined with Lord Kadoorie's long standing support for a GEC/Framatome solution indicate a strong customer preference;
 - b) GEC's preference has always been for an agreement of this kind with Framatome; Lord Weinstock has recently



expressed this view to my officials, Lord Kadoorie and Sir Walter Marshall;

- c) co-operation with the French would reduce ECGD's financial exposure to about £1000m from £4000m for an Anglo-American proposal. The absolute cost of any concessions on financial terms would be reduced. And perhaps most important, we would avoid being played off by the customer against the French on Finance terms;
 - d) we could try to secure UK participation in the fuel supply through negotiation with the French; if we negotiate with the Chinese for the conventional island business only, British Nuclear Fuels Limited will have little opportunity to secure contracts which could establish them in the international PWR fuel market;
 - e) if the French were to supply the nuclear island they would carry the primary responsibility for securing non-proliferation assurances though the UK could also be involved in negotiating assurances if we supply fuel.

 Present indications are that, unlike the Americans, the French would be satisfied with a statement from the Chinese which the Chinese are willing to give that the station would be used only for peaceful purposes.



Officials renewed informal discussions with French officials on 20 October. The French said that the Chinese have asked for separate bids from Alsthom and Framatome. Exclusive GEC/Framatome co-operation could not be contemplated unless the Chinese specifically requested such a bid. Although the French were concerned about the implications of price and credit competition for the conventional island business, they maintained that they were responding to the requests of the customer. And it would be difficult for the French Government publicly to indicate any willingness to exclude Alsthom: Alsthom have a substantial plant at Belfort in the electoral area which M Chevenement represented until recently. However, in discussion with my officials and GEC, Framatome have said that they would prefer to work with GEC.

8 Despite this negative response at official level, I consider we should press the advantages of a GEC/Framatome exclusivity agreement to our opposite numbers at the Anglo-French summit, since the arguments for Anglo-French co-operation are very strong. However, it is still possible that US policy on nuclear exports to China could change rapidly for wider political reasons. To discard the Anglo/American option would deprive UK industry of an important chance of using the project to build up its PWR capacity and experience and of obtaining a foothold in export markets: only if we are able to secure an exclusive agreement with the French should we close the door on the American option.



Financial Terms

9 The French have offered standard consensus terms: 11% over 15 years for the nuclear island and 10% over 10 years for the conventional island. We have offered 10% over 15 years, with a provision for local costs up to 15% of the UK content, on the conventional island. Both these offers are subject to satisfactory guarantees from the Bank of China.

10 My officials believe that some improvement in our financing offer - principally capitalisation of pre-commissioning interest - will be necessary, eventually, if the project is to go forward. But until we have sounded the French, I do not believe we can decide what we should say to the Chinese in November. Depending on French moves, we may need a collective discussion of the financing issues on the project shortly after the Summit. (A background note on the financing issues is attached.)

Recommendations

- Il There are very strong advantages in reaching an exclusive agreement with the French: we should pursue this vigorously at the Anglo/French summit.
- 12 If we can secure an exclusive agreement with the French we should inform the State Department, Westinghouse and the National Nuclear Corporation of the UK's change of policy.

13 If we inform West China, but on the Angulate only.

13 If we cannot secure an agreement with the French we should inform Westinghouse and NNC of the views expressed to you in China, but make no move beyond this so that the door remains open on the Anglo/American option.

14 If we cannot reach agreement with the French, we should negotiate direct with the Chinese for the conventional island only.

15 We should formally invite Li Peng to visit the UK. In the light of French moves, officials should prepare a paper on financing terms for Ministerial consideration before discussions with the Chinese begin.

16 Given the continuing uncertainties surrounding the project I do not think we can take our strategy further at present. Much depends on the French.

17 I am copying this minute to Francis Pym, Geoffrey Howe, Nigel Lawson, Arthur Cockfield, Leon Brittan and Sir Robert Armstrong.

PJ

PJ

29 October 1982

Department of Industry

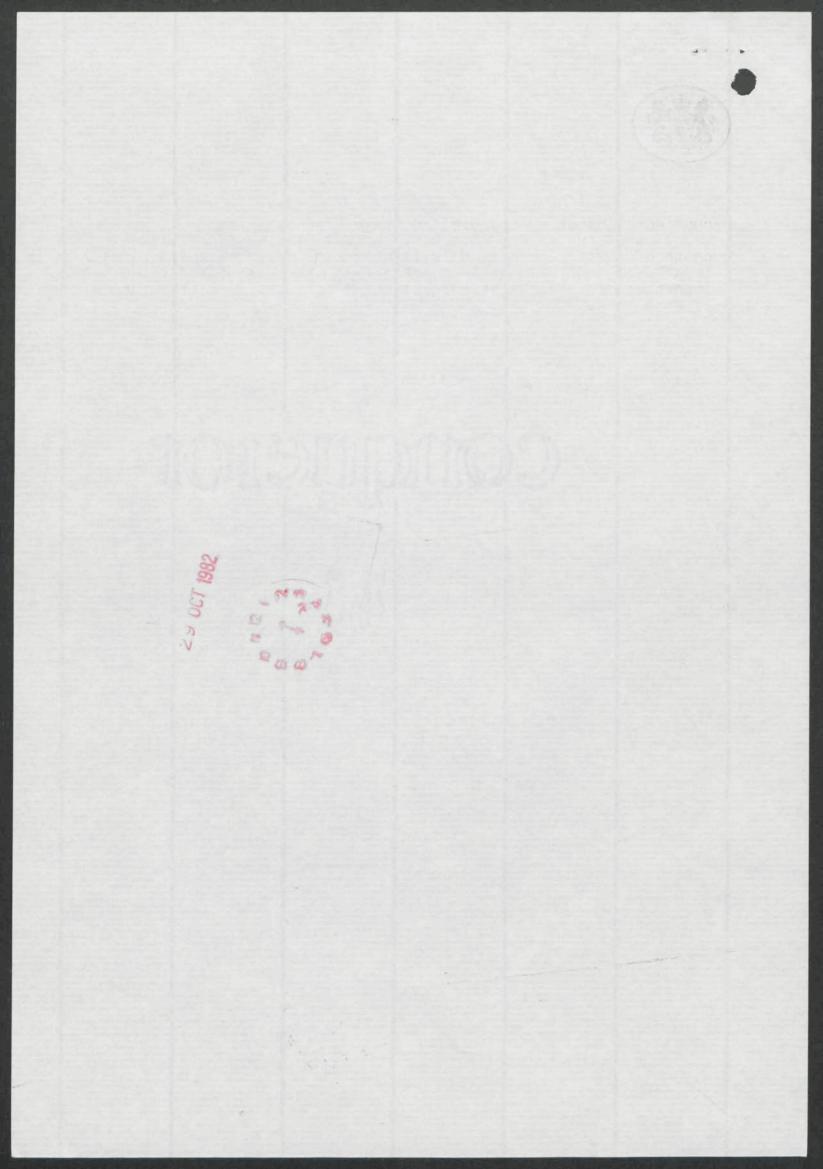


BACKGROUND NOTE

- Constraining our negotiating position on finance is pressure to extend the Consensus to cover nuclear plant. The Americans perhaps as a delaying tactic since they are not able to take a commercial interest in the project at present - are pressing hard for agreement to charge premium interest rates over long repayment periods for nuclear plant, while opposing any other concessionary measures. This pressure will increase the difficulty of offering financial concessions of any kind in the future.
- 2 Nevertheless, some improvement in our offer will be necessary if the project is to go forward. Recently revised assessments of the feasibility of the project confirm that at current Consensus interest rates capitalisation of pre-commissioning interest or increased investment by the Chinese Government would be vital to make the project viable, given the eight to nine year construction period when no revenue would be earned. The Chinese have so far refused to provide further equity investment.
- Although at present they have no mandate to capitalise, French officials have indicated that they would be prepared to concede at least some degree of capitalisation - though not local cost cover - in the course of detailed negotiations. Within Whitehall Treasury and ECGD officials are strongly opposed to capitalisation. Department of Industry officials, however, believe that it will be necessary to concede capitalisation eventually, but in return for comprehensive guarantees for the foreign loans and agreement on a satisfactory financial structure for the operating company. At a discount rate of 12½% capitalisation would raise the subsidy level on the ECGD financing from about 16% for our present terms to 26%
- We should also need to be satisfied about the general viability of the project, and the undertakings from the Hong Kong authorities regarding long term off-take arrangements before we give irrevocable commitments to the Chinese.
- If we can secure an exclusive agreement with the French my officials believe that it may be possible to hold concessions on financing terms to capitalisation and to meet further financing pressure by pushing the customer to put more equity into the project. If however, we cannot reach agreement with the French, we will undoubtedly be pressed to make further concessions, principally an input of aid. This could prove costly, would excite strong criticism in the Consensus and could in the end be matched by the French.
- 6 These difficult financing issues will need Ministerial



consideration at an appropriate stage - possibly in the next few weeks depending on French moves. The financial and political costs of making concessions will need to be weighed against the industrial and commercial importance of the project and its wider importance for our bilateral relations with China and the future of Hong Kong.





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CENTRAL ELECTRICITY GENERATING BOARD

Sudbury House, 15 Newgate Street, London EC1A 7AU. Telephone 01-248 1202

From the Chairman Sir Walter Marshall, CBE, FRS

25 October 1982

Sir Robert Armstrong, KCB Secretary of the Cabinet The Cabinet Office London SW1

Dear Sir Robert

I have now had a chance to reflect upon our conversation on Thursday night and I would like to offer you an interpretation of the conversations.

In the first conversation, Walter Marshall was referred to in very glowing and flattering terms - not just in terms of "high regard" but also "long standing friendship". This would have very special significance for the Chinese who put enormous weight on friendships which have survived years. They would therefore have interpreted this conversation as a very dramatic and wholehearted endorsement of everything I said when I was last in Guangdong. They would not feel it necessary to look for more. They would look upon this as a very strong endorsement of an Anglo/American concept.

However, of course they do not want to throw away the French concept until the last minute (if then) and they are not going to commit themselves to any formal Government decision until they know exactly what they are committing themselves to and until they know that the US State Department will behave sensibly. They would therefore brief their Prime Minister to mention the French concept just to keep us on our toes and the way he did that is to my mind very significant indeed. He did not say "I favour the French proposal". He did not say "We are considering the French proposal". He said "I understand the Guangdong people are giving their main concern to the French proposal". This, I believe, is designed to place the French proposal on record as a competitor to us but primarily to indicate that the decisions have been delegated to Guangdong and that we can rely on the recent conversations I have had with the Guangdong people.

Cont'd ...

I think, therefore, I can reconcile my understanding of the conversation with the conversations you were kind enough to describe to me. Of course I cannot prove I am correct and I do not know I am correct

However, I recognise the force of the counter argument that (i) the Chinese must be nervous about the US State Department and could well have shifted their position since I talked to them - and (ii) they, the Chinese, were supposed to make their preference clear and did not do so.

I discovered on Friday that the Chinese have given a half promise to send a further message to me at the end of next week. That may be helpful. I shall keep in touch.

What a difficult, confusing matter this is!

Yours sincerely

W Marshall

PERSONAL AND CONFIDENTIAL Hong Kong

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B. U. When the advise of the Sols & hally, while I have

requalted, is available.

A. J. C. 25.

Ref. A09834 MR COLES

Guangdong Nuclear Power Project

Thank you for your minute of 19 October.

- 2. I saw Sir Walter Marshall on 22 October, and read over to him the relevant paragraph of the record of the Prime Minister's meeting in Guangdong.

 I also said that Premier Zhao Ziyang had appeared to indicate to the Prime Minister that the Guangdong authorities were planning to pursue the Anglo-French option rather than the Anglo-American option.
- 3. Sir Walter Marshall said that he had had a message from his contacts in the Guangdong Provincial Government, proposing a meeting in Canton at which they would make available to his representative the Chinese version of the Prime Minister's conversations with the Governor of Guangdong Province. He had, however, been instructed by the Department of Industry not to take up this offer.
- 4. It is clear that the account which Sir Walter Marshall has received of the Chinese version of the Prime Minister's meeting with the Governor of Guangdong Province is different from our own record of the meeting. Our record suggests that there was no reference either to the Anglo-French project or to the Anglo-American project. I suppose that it is possible that the Chinese interpreted the Prime Minister's favourable references to Sir Walter Marshall as an indication that she favoured the Anglo-American project with which Sir Walter Marshall is associated. Sir Walter Marshall is of course anxious to promote the Anglo-American project because it fits in with the plans for PWR developments in this country. Lord Weinstock's preference, on the other hand, would no doubt be for the Anglo-French project in which GEC would be closely involved.
- 5. Sir Walter Marshall thought that the Chinese might have turned away from the Anglo-American project towards the Anglo-French project because of the problems about nuclear proliferation and the objections of the United States Government to transferring nuclear technology to the Chinese. He remarked that, if the British Government were involved in an equity stake in the Anglo-

PERSONAL AND CONFIDENTIAL

American project, and the construction was put in the hands of Bechtel and the equipment was provided by British manufacturers, then there would be British technicians on the site for 30 years; and he had been told by the State Department in Washington that that would resolve the problems about nuclear proliferation.

- 6. It seems as if we do need to get a clearer reading of the position of the Chinese authorities on this project. This may necessitate further contacts with the authorities concerned. It would be for question whether these were undertaken by British Embassy personnel in Peking; or by a mission from the British Government, led by Mr Gordon Manzie of the Department of Industry; or by Sir Walter Marshall. Sir Walter Marshall firmly believes that the Chinese authorities trust and respect him, and do not trust or respect Mr Manzie, and therefore they will not reveal their real thoughts to Mr Manzie. The Departments of Industry and Energy, on the other hand, are likely to think that Sir Walter Marshall is not sufficiently detached in these matters to undertake this sort of mission.
- 7. I have not put anything in writing to Sir Walter Marshall, and he did not press me to do so.

ROBERT ARMSTRONG

22 October 1982

Hong Kong: Gable Real Pt 2.

ATHEORISMO - IN



DEPARTMENT OF INDUSTRY ASHDOWN HOUSE 123 VICTORIA STREET LONDON SW1E 6RB

TELEPHONE DIRECT LINE 01-212 - 6904 SWITCHBOARD 01-212 7676

21st October 1982

N. Bythe FORS

F.E.R. Butler Esq.,
Principal Private Secretary to
Prime Minister,
No.10 Downing St.,
London, SW.1.

A. J. C. 2/10.

Des Mohini,

GUANGDONG NUCLEAR PROJECT : LORD WEINSTOCK

I was grateful to you for sending me on the 17th October the record of your telephone conversation with Lord Weinstock. He has subsequently talked to me about the project and you may like to have the attached copies of letters which Lord Weinstock has written to Sir Walter Marshall and to Lord Kadoorie telling them that he wishes now to pursue the Anglo/French option.

My Secretary of State will of course be giving advice to the Prime Minister on the Guangdong Power project in response to John Coles letter to Jonothan Spencer of 20th October.

Gordon berve.

A.G. MANZIE

15th October, 1982 Now that the Chinese government has announced its intention with regard to the PWR station proposed for Guangdong province, we ought to get on with the formulation of an attractive Anglo-French package. We therefore intend to approach Mr. Boulin and Mr. Lenny to ascertain whether they will work with us to realise this objective. I hope we can rely on the CEGB to give its full support. We will keep you informed of developments. Lord Weinstock Sir Walter Marshall, FRS, Chairman, Central Electricity Generating Board, Sudbury House, 15 Newgate Street, LONDON EC1A 7AU. 1/158

15th October, 1982 This is just to let you know that following the visit of the Prime Minister to the Far East and the subsequent statements concerning the PWR proposed to be constructed in Guangdong province, we will now approach Framatome to discuss the formation of a suitable offer of a French nuclear island with GEC Turbine Generators. We will keep you informed of our progress. Lord Weinstock Lord Kadoorie, Chairman, China Light & Power Co. Ltd. 147 Argyle Street, Kowloon, HONG KONG.

Hong Hong Guarydong

CONFIDENTIAL



10 DOWNING STREET

Hory Kong

From the Private Secretary

20 October 1982

GUANGDONG POWER PROJECT

I think it would be helpful if your Secretary of State could let the Prime Minister have advice, in the light of the conversations which took place during her visit to China, as to our aims and tactics with regard to this Project in future.

In general, nothing was said by the Chinese to suggest that the American option was still realistic. Such comments as they made seemed to imply that only the French option was active. But it may be that the Department of Industry, or other Whitehall Departments, have fresh information from other sources.

I am copying this letter to John Holmes (FCO), John Kerr (HM Treasury), John Rhodes (Department of Trade), Julian West (Department of Energy) and Richard Hatfield (Cabinet Office).

A. J. COLES

Jonathan Spencer, Esq., Department of Industry.

PERSONAL AND CONFIDENTIAL



Hong Kong

10 DOWNING STREET

From the Private Secretary

SIR ROBERT ARMSTRONG

GUANGDONG NUCLEAR POWER PROJECT

Thank you for your minute of 15 October. I see no difficulty about your reading to Sir Walter Marshall the relevant paragraph of the record of the Prime Minister's meeting in Guangdong. But, as I explained to you, we have also had enquiries from others, in particular Lord Weinstock. I intend to seek guidance from the Departments most closely concerned as to what interpretation should be placed on the various points made by the Chinese about this project during the Prime Minister's visit and what our own line should be for the future. If you are able to delay putting anything in writing to Sir Walter Marshall for the time being, you may agree that this would be best.

AL COLES

19 October 1982

PERSONAL AND CONFIDENTIAL

14 September 1982 I am writing on behalf of the Prime Minister to thank you for your letter of 9 September about the role of British Electricity International Limited in the development, construction and operation of the Castle Peak A and B Power Stations. We have included your letter in the Prime Minister's briefing for the visit. The Prime Minister will, I know, be grateful for your good wishes for this very important visit. M. C. SCHOLAR Austin W. Bunch, Esq., C.B.E.

2/10/15/15

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10 DOWNING STREET

From the Principal Private Secretary

11 October 1982

Dew Gudon,

A CONVERSATION WITH LORD WEINSTOCK

I was very grateful for your informal advice before I returned Lord Weinstock's call this evening about what had passed between the Prime Minister and the Chinese leaders about the Guang Dong nuclear project. You may like a record of our conversation.

Lord Weinstock said to me that he wondered if I could help over what had been said during the Prime Minister's visit to China about this project.

I told him that I had been present at the meeting with Premier Zhao Ziyang and at the meeting with the Governor of Guang Dong Province, Mr Liu Tian-fu, at which the project had been mentioned. At the meeting with Zhao Ziyang the Prime Minister had said that the British Government were deeply interested in the project and ready to work with any nuclear partner of China's choice; and she was glad that a visit to the United Kingdom by the Guang Dong Power Company and China Light and Power had indicated that GEC would be competent to make the turbine island. I said that Premier Ziyang had taken us by surprise by saying that, if the price and agreed terms were favourable, the Chinese were planning to use French made reactor equipment and British generating equipment. The Prime Minister had asked whether this was a decision in favour of the French and against the Americans, and Ziyang had said that his inquiries indicated that the Guang Dong Power Company were not pursuing formal contacts with the United States.

I told Lord Weinstock that the exchange with Governor Liu had been more elliptical, but on reflection, equally significant. The Prime Minister had referred to the project and to her friendship with Sir Walter Marshall. The Governor had responded by paying tribute to Lord Kadoorie, adding that it was largely owing to his enthusiasm that the proposed joint venture was under discussion. I said that I had not understood the significance of this discussion at the time, but, since I had subsequently understood that Lord Kadoorie was associated with the French

CONFIDENTIAL

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option, and Sir Walter Marshall with the American option, I thought that this might be a further signal in favour of the French alternative.

Lord Weinstock said that he was sure that my interpretation was correct. Lord Kadoorie was the key to making progress with the project, and had been saying for a long time that the Chinese wanted the French system. Sir Walter Marshall on the other hand had been troublesome because he would not give up pressing for the American alternative. Lord Weinstock said that he had had to reassure Lord Kadoorie at regular intervals that too much account should not be taken of Sir Walter Marshall's activities. He asked whether there would be any follow up from 10 Downing Street. I said that no follow up was planned from this office as such. The United Kingdom had, of course, already been invited to present an equipment and finance package, and the outcome of the discussions in China would be taken into account in this. Lord Weinstock said that GEC would also be following the matter up: the message I had given him confirmed what he had heard from others and he was very grateful.

Your sincerely.
Robin Button

A G Manzie Esq., Department of Industry.

HI. 10 September 1982 Guandong Nuclear Power Station The Prime Minister has noted the minute of 7 September by the Foreign and Commonwealth Secretary in which Mr. Pym concludes that it is very unlikely that the Americans will be able to agree, before the Prime Minister's visit to China, to release US technology for the Guandong project. I note that the line to take suggested by Mr. Pym in paragraph 2 of his minute will be developed in the briefing which is being provided. JOHN COLES

John Holmes, Esq., Foreign and Commonwealth Office.

THE ELECTRICITY COUNCIL 30 MILLBANK LONDON, SWIP 4RD AUSTIN W. BUNCH, C.B.E. TELEPHONE: 01-834 2333 Chairman The Rt Hon Margaret Thatcher MP Prime Minister 10 Downing Street London SW1 9 September 1982 Dear frim Minister I am writing to you as Chairman of British Electricity International Ltd, which as you know is the overseas consultancy arm of the UK Electricity Supply Industry. transfers technology on a commercial basis to overseas power utilities and it is our objective (for obvious reasons unannounced) to act in a way in which we can best support the UK export effort in the power supply field. I am therefore very pleased to hear that you have agreed to formally open the Castle Peak 'A' Power Station, built by the China Light & Power Company, in Hong Kong on 28 September. Unfortunately I cannot be there, although Stephen Baker, BEI's Managing Director will be. Whilst no doubt you will be well briefed as to the involvement of British Industry in this important project, you may not be fully aware of the role that BEI has played in the development, construction and operation of the 'A' Station and is continuing to play in a similar way on the new 'B' Station. We have also been involved in the design and construction of the new 400 kV transmission system in Kowloon and the New Territories. Cont /

- 2 -9 September 1982 The Rt Hon Margaret Thatcher MP For the 'A' Station, we have supplied some 300 man years of technical support to China Light & Power, covering engineering design and station layout, transmission system design, quality assurance during the course of manufacture, technical support during the construction period, the provision of commissioning and operating staff and the supply of a training simulator. It is fair to say that the success of these projects has been due in no small part to the continued support by BEI which presently has some 27 members of its staff, mainly drawn from the CEGB, resident with their families in Hong Kong. I hope that you will have the opportunity of meeting some of them during your visit. Their presence as "BEI" personnel is not too apparent since, for political (with a small p) reasons they are all treated as expatriate employees of C.L. & P. I thought I should remind you of our involvement in this project which is an example of how the technology of a national industry is being deployed in support of a UK hardware package. Hong Kong, thanks to Lord Kadoorie and Bill Stones, was the first of these packages, and you have of course been personally involved with the Indian proposal where we are similarly engaged. I wish you every success in your Far Eastern visit. Lows Sincercle -Stuste DD unch.



PS/82/76
PRIME MINISTER

Unfortunate - but I am told by the

FIC.O. Oak it is quite clear that the

Americans will not be able to take the

decision we want before you go to China.

A. J. C. 7

q.

Guandong Nuclear Power Station

1. Since I sent you my minute of 19 August, United Kingdom and United States' officials have held two meetings in Washington to discuss Sino/Pakistani collaboration in nuclear matters, and Under-Secretary of State Stoessel has replied to the personal message I sent to George Shultz. From these contacts, it has become clear that the Americans are still not yet able to agree to the release of US technology for the Guangdong project. They are still seriously concerned about the extent of Chinese involvement in the Pakistani nuclear weapons programme, and suspicions of Chinese reticence on this subject. Even if you personally take the matter up with President Reagan, it seems very unlikely that this obstacle can be overcome before your visit to China. Under these circumstances, it would now seem right for you to make it quite clear to the Chinese that it is only US hesitancy which is standing in the way of a joint UK/US bid for the Guangdong project. You could perhaps then go on to say that while we fully respect the Chinese wish to keep Guangdong entirely separate from wider political issues, anything they and we can do to reassure the Americans that the proposed deal raises no issues of genuine non-proliferation concern would be helpful to us both. This line of thought will be developed further in the briefing for your visit.



3. I am copying this minute to the recipients of my minute of 19 August.

H.

(FRANCIS PYM)

Foreign and Commonwealth Office 7 September 1982

SECRET



Hole Vos

10 DOWNING STREET

From the Private Secretary

25 August 1982

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The Prime Minister has seen the Foreign and Commonwealth Secretary's minute of 19 August, about the Guangdong Nuclear Power Station project, for which she was grateful. She has commented that she hopes we get the necessary clearance.

I am sending copies of this letter to John Kerr (H.M. Treasury), John Rhodes (Department of Trade), Jonathan Spencer (Department of Industry) and Julian West (Department of Energy).

TIMOTHY FLESHER

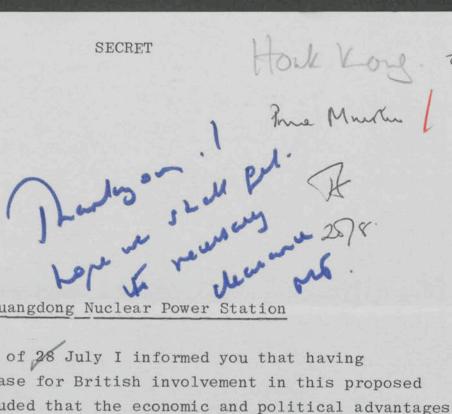
John Holmes Esq., Foreign and Commonwealth Office.





PM/82/91

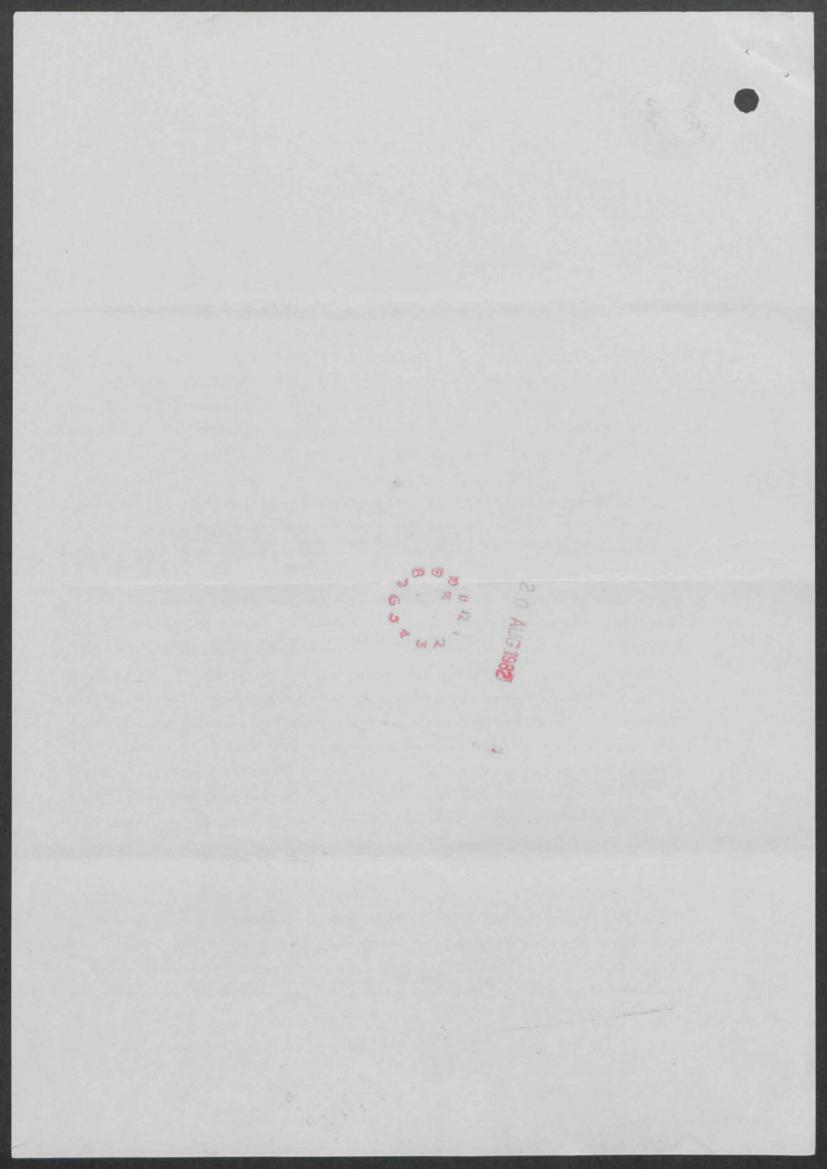
PRIME MINISTER



Guangdong Nuclear Power Station

- In my minute of 28 July I informed you that having considered the case for British involvement in this proposed project, I concluded that the economic and political advantages of co-operation with the PRC out-weighed the possible consequences for our non-proliferation policies.
- However, you should be aware that there are now signs that our view may not be shared by the US Government, with possible consequences for the proposed UK/US bid for the Guangdong project. This bid emerged from recent discussions with the Chinese as more promising and as offering potentially greater rewards for British industry than the alternative UK/French proposal, but it has still not yet received the necessary clearance from the US Government. Earlier this year, on advice from US Government officials and Westinghouse that such clearance was required, our Embassy in Washington wrote to the State Department seeking an assurance that the US Government would not seek to prevent Westinghouse licensing the NNC to supply nuclear reactor equipment of Westinghouse design for Guangdong. No definitive reply has been received to this request despite unremitting pressure from officials of the Department of Industry, Department of Energy and my own Department.
- One reason which the Americans have recently put forward for the delay is the belief, which in our view is not well-founded, that the Chinese are aiding Pakistan's clandestine nuclear weapons programme. This problem is to be reviewed urgently by

/US and





US and British officials in Washington during the next few days. However, in view of your impending visit to China, I have also sent a personal message to George Shultz asking him to look into the problem and provide the assurance we seek well before you leave for China, and hopefully in time to allow further contacts at official level with the Chinese before your visit. If the right answer is not quickly forthcoming — and I am not optimistic that this will happen — it will be for consideration whether you should then take the matter up personally with President Reagan.

I am copying this minute to the recipients of my previous minute.

AJ.

(FRANCIS PYM)

Foreign and Commonwealth Office 19 August 1982

Copied to: Kerroth Barrets
Office(DIE)
FCO
D/Emp. 10 DOWNING STREET 9 August, 1982 From the Private Secretary The Prime Minister has asked me to thank you for your letter of 27 July, in which you suggest that she might visit the Castle Peak power station when she is in Hong Kong. I am pleased to be able to tell you that the Prime Minister has accepted an invitation from Lord Kadoorie, Chairman of China Light and Power Company Ltd., to perform the opening ceremony for the power station on 28 September. A formal announcement will be made shortly. The Prime Minister has accepted the invitation because, like you, she considers that the success of this project reflects very favourably upon the hard work of all concerned including the British Companies involved and the China Light and Power Company itself. TIMOTHY FLESHER G. H. Laird, Esq.

ce Hong Kong: Trop Paling DEPARTMENT OF INDUSTRY ASHDOWN HOUSE 123 VICTORIA STREET LONDON SW1E 6RB 6401 TELEPHONE DIRECT LINE 01-212 FROM THE MINISTER OF STATE FOR INDUSTRY AND INFORMATION TECHNOLOGY SWITCHBOARD 01-212 7676 Kenneth Baker's Office A J Coles Esq Private Secretary 10 Downing Street Whitehall 9 August 1982 PRIME MINISTER'S VISIT TO HONG KONG: CASTLE PEAK On 29 July you sent John Rhodes at the Department of Trade a letter to the Prime Minister from Mr Gavin Laird, General Secretary Elect of the AUEW, in which he suggests that the Prime Minister might visit the Castle Peak power station while she is in Hong Kong. I now attach a draft reply and I am sorry for the delay in replying. I understand that, although a formal announcement of the Prime Minister's visit has not yet been made, her visit to Hong Kong is public knowledge and the Foreign Office has no objection to a reference to it in the correspondence. I am copying this to Francis Richards (FCO), John Rhodes (Trade) and Barnaby Shaw (Employment). MRS E A RILEY PRIVATE SECRETARY M55/M55AAA 1

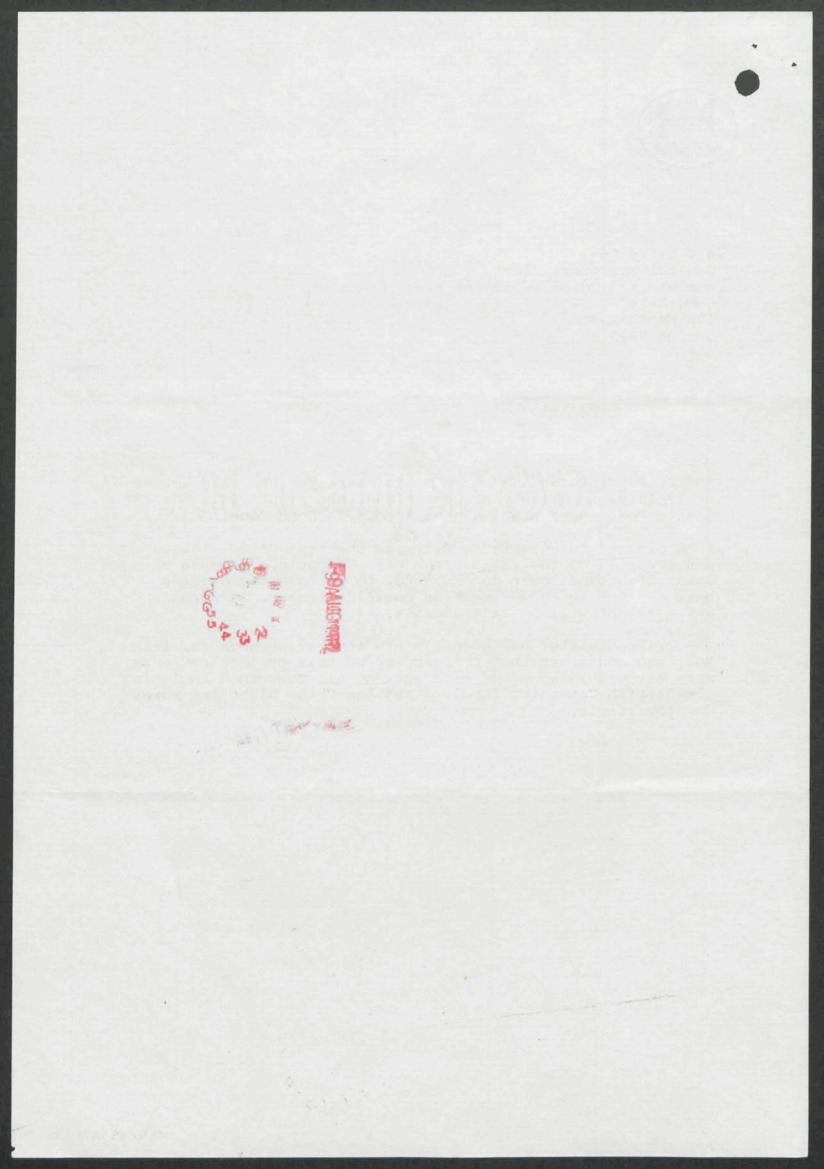


G H Laird Esq General Secretary Elect Amalgamated Union of Engineering Workers 100 Peckham Road London SE15 5EL

The Prime Minister has asked me to thank you for your letter of 27 July, in which you suggest that she might visit the Castle Peak power station when she is in Hong Kong.

I am pleased to be able to tell you that the Prime Minister has accepted an invitation from Lord Kadoorie, Chairman of China Light and Power Company Ltd, to perform the opening ceremony for the power station on 28 September. A formal announcement will be made shortly.

The Prime Minister has accepted the invitation because, like you, she considers that the success of this project reflects very favourably upon the hard work of all concerned including the British Companies involved and the China Light and Power Company itself.



Hoy Kong da

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10 DOWNING STREET

From the Private Secretary

30 July 1982

Guangdong Nuclear Power Station

The Prime Minister has noted the minute of 28 July by the Foreign and Commonwealth Secretary and, in particular, Mr. Pym's conclusion that the economic and political advantages of co-operation with China on a project of this scale outweigh the non-proliferation concerns.

The Prime Minister was relieved to see this conclusion because, so far as she is aware, the extensive earlier correspondence about the project at no point suggested that there was any possibility of abandoning proposals for UK participation on non-proliferation grounds.

A. J. COLES

Francis Richards, Esq., Foreign and Commonwealth Office.

CONFIDENTIAL

29 July 1982 PRIME MINISTER'S VISIT TO HONG KONG: CASTLE PEAK I enclose a copy of a letter which the Prime Minister has received from Mr. Gavin Baird, General Secretary Elect of the AUEW about the possibility of the Prime Minister visiting the Castle Peak Power Station project while in Hong Kong. I should be grateful if you could let me have a draft reply for my signature by 2 August. I am copying this letter and enclosure to Jonathan Spencer (Department of Industry), Francis Richards (Foreign and Commonwealth Office) and Barnaby Shaw (Department of Employment). A. J. COLES John Rhodes, Esq., Department of Trade.

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PRIME MINISTER

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power station.

A-J-C. 25

Guangdong Nuclear Power Station

- 1. I have considered the case for British involvement in a nuclear power station to be built in the Guangdong province of the People's Republic of China. There is a possibility that the UK could supply the whole of the conventional island, incorporating the turbogenerator and ancilliary equipment together with up to 60% of the nuclear island. There would also be opportunities for the sale of nuclear fuel.
 - 2. The successful conclusion of this contract would lead to significant export opportunities (up to US \$2 billion) for British companies seeking to participate in the project. Success here would also provide a foothold in the Chinese market. There would be attendant benefits to long-term relations between the UK and PRC and more particularly between the PRC and Hong Kong. Such industrial cooperation (Hong Kong facilities would take some of the generated electricity) would help to maintain confidence in Hong Kong at a time when the territory's future is coming under close scrutiny.
 - 3. There are difficulties, however, arising from the non-proliferation aspects of the sale. Since the Chinese insist that they will not accept International Atomic Energy Agency safeguards or any other form of inspection, the contract will represent an apparent retreat from our long-held position on nuclear transfers with attendant damage to the credibility of our non-proliferation policy. We can expect criticism from India and the Soviet Union on this apparently preferential treatment for China.
 - 4. On the other hand, the proposed sale raises no issues of genuine non-proliferation concern. The deal would not conflict with our formal obligations under the NPT or with the Nuclear Suppliers Guidelines. China has already attained a nuclear weapons capability without our help. None of the equipment or materials to be supplied are capable of significantly enhancing that capability even if it were economically sensible to divert them to military use. The development of contacts with the Chinese on nuclear

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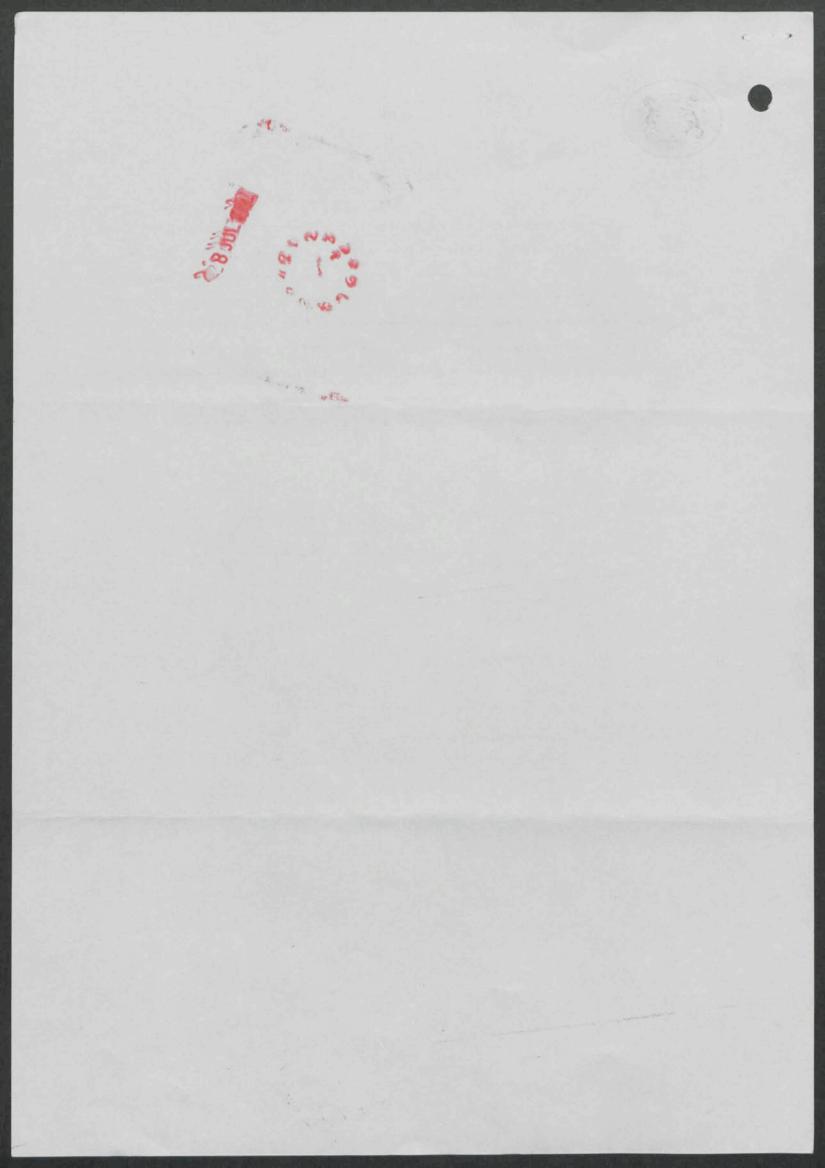
matters will give us an opportunity of encouraging them to move closer to the international main streams. And if we refuse to supply this power station the French will certainly step in, so the Chinese will get the technology anyway. In these circumstances I have concluded that the economic and political advantages of co-operation with the PRC on a project of this scale outweigh these non-proliferation concerns.

5. I am copying this minute to OD colleagues, Sir Robert Armstrong and the Secretaries of State for Energy and Industry.

F.

(FRANCIS PYM)

Foreign and Commonwealth Office 28 July 1982



ma ack sent 29/7

Please confine each letter to one subject



Amalgamated Union of Engineering Workers (ENGINEERING SECTION) 110 Peckham Road London SE15 5EL 01-703 4231 Telegrams EDIFYING LONDON SE15

SIR JOHN BOYD, C.B.E., General Secretary to whom all communications should be addressed

Our ref GHL/DMK

Your ref

FIRST CLASS

27th July 1982.

The Rt. Hon. Margaret Thatcher, M.P., 10 Downing Street, London, S.W.1.

Dear Prime Minister,

On Wednesday, the 21st of this month, I visited Hongkong en route to London, having spent the previous ten days lecturing in Japan to my counterpart in the International Metalworkers' Federation Japanese Council.

I took advantage of being in the Far East to go to Hongkong specifically to visit the Castle Peak power station project as I had been involved in a peripheral sense with that project for many years.

Whilst visiting this tremendously impressive project I understood from the British expatriates working there that there was a possibility of you visiting the site some time in September when you are en route to Peking.

I am taking the liberty of communicating with you to say two things. First of all, the Castle Peak project is a credit to all who are associated with it, be they G.E.C., Babcock Power or the Government Departments who did so much to ensure that the United Kingdom secured the order. It is particularly worthy of note that a similar project in another part of the new territories is being constructed by the Japanese who, I am delighted to say, are behind schedule compared to the U.K. project. This reflects the fact that the many tons of sophisticated equipment and parts required to construct the power station have been shipped on or before their due date and assembled on site in extremely confined physical conditions.

/continued

- 2 -The second point I want to make is that if you do take the time to visit the site, then this will be considered by the people concerned with the project as an endorsement of their excellent effort and, as far as I am personally concerned, more important, could result in British workmanship getting praise rather than condemnation. Yours sincerely, adin H. daid Gavin H. Laird Executive Councillor General Secretary Elect



Foreign and Commonwealth Office London SW1A 2AH

26 April 1982

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Dea John,

Guangdong Power Project

With reference to your letter of 19 April to Jonathan Spencer, Mr Pym agrees that Mr Jenkin should proceed as suggested in paragraphs 5 and 6 of his minute of 15 April to the Prime Minister.

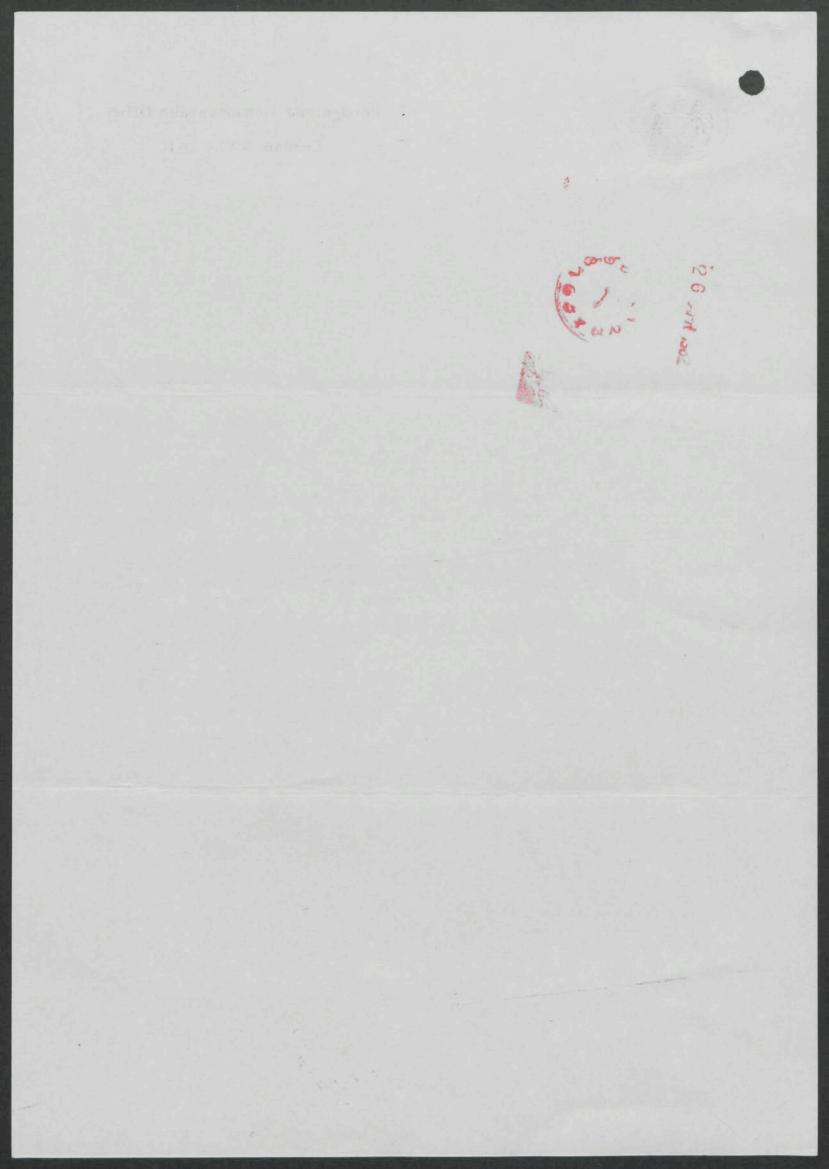
I am copying this letter to Jonathan Spencer (Department of Industry), John Kerr, HM Treasury), John Rhodes (Department of Trade) and Julian West (Department of Energy).

Yours eve for Homes

(J E Holmes)

Private Secretary

A J Coles Esq 10 Downing Street





CC FCO FUTCT DOT DIN

10 DOWNING STREET

From the Private Secretary

19 April 1982

Guangdong Power Project

The Prime Minister has seen Mr. Jenkin's minute of 15 April and, subject to the views of colleagues, is content that he should proceed as he proposes in paragraphs 5 and 6.

I am copying this letter to John Holmes (Foreign and Commonwealth Office), John Kerr (H.M. Treasury), John Rhodes (Department of Trade) and Julian West (Department of Energy).

A. J. COLES

5

Jonathan Spencer, Esq., Department of Industry.



Secretary of State for Industry

HKeng

DEPARTMENT OF INDUSTRY ASHDOWN HOUSE 123 VICTORIA STREET LONDON SW1E 6RB

TELEPHONE DIRECT LINE 01-212 SWITCHBOARD 01-212 7676 3301

16 April 1982

John Coles Esq Private Secretary to the Prime Minister 10 Downing Street London SW1

GUANGDONG POWER PROJECT

My Secretary of State minuted the Prime Minister on 15 April 1982 about the Guangdong power project. I would be grateful if you and recipients of this letter would classify their copy 'Confidential'. Please accept my apologies for any inconvenience caused.

2 I am copying this letter to the Private Secretaries to the Foreign Secretary, the Chancellor, and the Secretaries of State for Trade and Energy.

K' BENSON

Private Secretary

1 6 APR 1982



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PRIME MINISTER

Contest, subject to views of colleagues,
that we should proceed as in paragraphs

5 and 6.

A. J. C. 16.

GUANGDONG POWER PROJECT

You may like to have a brief report of the recent visit to the UK by the delegation from the Guangdong Power Company (GPC) and the China Light and Power Company (CLP); and the next steps we contemplate in taking forward our options on this project.

- 2 The delegation, consisting of senior officials from both companies, visited the UK from 13-25 March, at the invitation of GEC. At the insistence of the Chinese, the visit focussed almost exclusively on the conventional island. There was no real clarification of Chinese thinking on the nuclear island vendor.
- I am enclosing a note on the details of the visit. The general assessment is that it went well. GEC are now highly regarded by the Chinese in terms of their technical and manufacturing competence; and the discussions with officials on financing went as far as could reasonably be expected in terms of identifying the issues to be resolved.
- 4 In line with our desire to keep up momentum on the project I believe it essential that we prepare to respond positively to a

CONFIDENTIAL



Chinese invitation to send a delegation to Guangdong to discuss further financing for the conventional island.

- of the State Department in Washington on whether clearance would be given for PWR technology to be transferred to China through the National Nuclear Corporation as Westinghouse's licensee.

 If the response is encouraging, Westinghouse, the National Nuclear Corporation and GEC will need to proceed to further detailed discussions. The next step would be to respond to an invitation which has been given by GPC to the National Nuclear Corporation (NNC) to lead a delegation to Guangdong to discuss the prospect for supplying an Anglo/American nuclear reactor. Provided a coherent and convincing package can be put together by Westinghouse, NNC and GEC, I consider an NNC led mission to Guangdong should take place, though its exact timing will be a matter for careful consideration.
- 6 In line with our general policy I also propose that discussions with the French should be renewed, both at official level in Government and at commercial level between GEC and Framatome. We need to clarify French thinking on the project and to define further the possible collaborative role for the UK including fuel supply and services in a French nuclear island.
- 7 Through these initiatives we should be able to make progress on both options before your visit to China in September. Indeed we shall make every effort to ensure your visit can be used to

CONFIDENTIAL

CONFIDENTIAL



maximum advantage to spur decisions on the Chinese side, though I fear the track record on this project does not encourage us to expect rapid developments.

8 I am copying this minute to Francis Pym, Geoffrey Howe, Arthur Cockfield and Nigel Lawson.

PJ

P J /5 April 1982

Department of Industry



NOTE ON THE VISIT TO THE UK BY THE DELEGATION FROM THE GUANGDONG POWER COMPANY AND THE CHINA LIGHT AND POWER COMPANY, 13-25 MARCH

- 1. The first week of the visit concentrated on GEC's technical and manufacturing capabilities and the UK's record in the power plant field. The programme included visits to GEC works, to CEGB power stations where GEC equipment is in operation, and to British Nuclear Fuels Limited. The second week concentrated on financial discussions with Government and with GEC's financial advisers, Schroders. Throughout the visit the delegation was accompanied by a representative of the Chinese Embassy, and representatives of the Bank of China attended the financial discussions.
- 2. The delegation appeared to have been impressed by the technical presentations and manufacturing facilities of GEC. Officials believe that the Chinese now accept that the large high speed turbines which GEC are offering would be suitable for the project.
- 3. In the financing discussions the delegation was pressed for clarification on the timing of the project, the choice of nuclear partner, and the proposed financial structure of the operating company. The Chinese gave no clear answer on timing. On the choice of nuclear partner, in formal discussions the Chinese reiterated that they were considering the options originally contemplated in the feasibility study for the project, namely Westinghouse, Framatome and KWU of West Germany. In informal discussions, however, the Chinese appeared to favour Framatome.
- 4. On the financial structure of the operating company, a number of critical questions were pressed, including responsibility for cost/time overruns. Officials also pressed the need for a 100% guarantee for both ECGD and commercial loans for the project. As anticipated, many of these issues appeared not to have been addressed by the Chinese and CLP despite their fundamental importance in terms of the viability of the project. The delegation said that they would need time to consider the points raised.
- 5. On the terms which ECGD might be prepared to offer to finance the purchase of equipment for a conventional island, the Chinese pressed the UK to put a specific offer on the table. It was explained that without answers to the major questions raised on the UK side it was difficult to be specific. Prevailing consensus terms were outlined 85% of the UK element of the contract at an interest rate of 10% repayable over 10 years or perhaps slightly longer from the commissioning of the station. Officials also said the UK would be willing in principle to consider matching offers made by other countries for the conventional island supply, and to consider aligning terms with the nuclear island supplier when selected. At the request of the Chinese, Schroders also outlined the likely terms on which commercial loans might be secured.
- 6. It was suggested that a delegation from the UK including ECGD and Schroders should visit Guangdong to discuss these financing questions further. We await a formal invitation.
- 7. One further point of interest was that the Chinese asked what conditions including credit facilities, would be applied by HMG if they decided to buy nuclear fuel services for the proposed power plant from the UK. This would be very valuable business; officials indicated that the UK would probably be able to meet Chinese requirements. However the Chinese said that, as a nuclear weapons State, they



would not accept inspection of their nuclear facilities. The FCO will wish to look carefully at non-proliferation safeguards if we are able to agree a specific proposal on fuel with the Chinese.

Department of Industry 13 April 1982

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10 DOWNING STREET
THE PRIME MINISTER

Dide

24 29 March 1982

Dear Lord Kadoorie,

Thank you for your letter of 4 March about the Guangdong project.

I do understand the fears you express about the kind of Anglo-American package proposed by the Atomic Energy Authority. However I can do no more than repeat my earlier message to you that the UK stands ready to meet the needs of the customer. Securing the conventional island for the UK - if possible through a negotiated contract - remains our first objective. On the question of a nuclear island vendor we await a signal from the Chinese. I can assure you that during their current visit to the UK the delegation from the Guangdong Power Company and the CLP will not be lobbied on the choice of nuclear island vendor, from whatever quarter. I shall look forward to hearing the outcome of the visit in due course.

I was very glad to have your news on the successful commissioning of the first units at Castle Peak A. This is certainly a very remarkable achievement and I hope you will give my warmest congratulations to all those who have worked so very hard to achieve it.

Every good wish, Yours sincerely,

MT

The Rt. Hon. The Lord Kadoorie, C.B.E., J.P.

DB 100.10 does not recognise hard his Pr. Han, the should be addressed as amended, 29/3

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JH 390



Secretary of State for Industry

J Coles Esq Private Secretary to the Prime Minister 10 Downing Street London SW1

Dear Folue,

DEPARTMENT OF INDUSTRY
ASHDOWN HOUSE
123 VICTORIA STREET
LONDON SW1E 6RB

AKOP

TELEPHONE DIRECT LINE 01-212 3301
SWITCHBOARD 01-212 7676

19 March 1982

The letter pl.

GUANGDONG POWER PROJECT

In my letter of 11 March, enclosing Lord Kadoorie's reply of 4 March to the Prime Minister's letter of 26 February, I undertook to provide advice and a draft reply.

- 2 As was to be expected, Lord Kadoorie remains uneasy about the UK's policy on this project. His response contains no new points but the Prime Minister may wish to note officials' comments.
- 3 We are conscious that the Feasibility Study carried out jointly by the Guangdong Power Company and the China Light & Power Company envisaged separate nuclear and conventional islands. However, we consider that it would be unwise to regard the assumptions and conclusions of the Feasibility Study as binding. Rather, the Feasibility Study may well prove to be simply the starting point for further discussions. In other words we cannot be sure that a "package deal" will not eventually emerge. In paragraph 4 of his letter Lord Kadoorie mentions that China Light & Power are advocating a negotiating strategy along the lines of that adopted for the Castle Peak power station. It is certainly our aim to try to secure a negotiated contract along the lines of the Hong Kong power stations. However, as yet it is by no means clear whether the Chinese will be willing to adopt this approach.
- In paragraphs 5 and 6 of his letter, Lord Kadoorie points to the well established position of the French in the Chinese market and the dangers of an all-French bid for the whole power station. In evaluating the advantages of various options on this project, officials here have always attached great importance to the strong position of France in the Chinese market. But the Chinese are likely to perceive an all-French bid as less attractive to the Hong Kong interests in the project than a proposal which draws in UK manufacturers. And we cannot afford to accept without question Lord Kadoorie's assumption that putting in an Anglo-French bid would necessarily preclude an all-French bid. At present the French appear to be reluctant to take discussions with the UK further, for whatever reasons.
- 5 In paragraphs 7 and 8 of his letter, Lord Kadoorie suggests



that the National Nuclear Corporation (NNC) may have encouraged differences of views on a nuclear island vendor among the Officials suggest that the situation is probably much Chinese. less straightforward. There appear to be some groups within China who are anxious to foster competition for the nuclear island, and others who positively favour American technology. However, in the course of the current visit to the UK by the Guangdong Power Company and the China Light & Power Company discussion will focus on the ability of GEC to provide the appropriate technology for the conventional island. questions are raised by the Chinese on the nuclear island, all involved in the visit have been briefed to take the line that we await an indication of the customer's preference. The Prime Minister can assure Lord Kadoorie that the Anglo-American option will not be pressed by the NNC.

- To set the current visit to the UK in perspective, the Prime Minister may wish to note that the Guangdong Power Company have invited an NNC led mission to visit Guangdong after Easter to explore the possibilities of providing a Westinghouse reactor. The NNC have been circumspect in entering into any commitment on the timing of such a visit. It will clearly be necessary to review this proposal in the light of the outcome of the current visit to the UK and the response to the approach which will shortly be made to the State Department of Washington to seek clearance under the Non-Proliferation Act for the NNC as a Westinghouse Licensee to supply PWR technology to China. Ministers' views will be sought on this proposed further visit to China in due course.
- Finally, Lord Kadoorie comments on the joint achievement of GEC and CLP in achieving "steam to set" on the first 2 units of the Castle Peak A power station in Hong Kong. The Prime Minister will wish to congratulate Lord Kadoorie on this achievement. (My Secretary of State is writing to congratulate Lord Weinstock).
- More generally, however, our strong advice is that the Prime Minister should avoid further detailed exchanges about the project with Lord Kadoorie. Until the Chinese are prepared to give a firmer indication of their thinking on the principal issues - the timing of the project and the choice of nuclear vendor - further correspondence would be unproductive.
- A short draft letter is attached.

10 I am copying this letter and enclosure to the private secretaries to the Foreign and Commonwealth Secretary, the Chancellor of the Exchequer and the Secretaries of State for Trade and Energy.

Yours ever,

CAROLINE VARLEY Private Secretary



DRAFT REPLY FROM THE PRIME MINISTER TO LORD KADOORIE

Thank you for your letter of 4 March about the Guangdong project.

I do understand the fears you express about the kind of Anglo-American package proposed by the Altomic Energy Authority. However I can do no more than repeat my earlier message to you that the UK stands ready to meet the needs of the customer. Securing the conventional island for the UK - if possible through a negotiated contract - remains our first objective. On the question of a nuclear island vendor we await a signal from the Chinese. I can assure you that during their current visit to the UK the delegation from the Guangdong Power Company and CLP will not be lobbied on the choice of nuclear island vendor, from whatever quarter. I shall look forward to hearing the outcome of the visit in due course.

I was very glad to have your news on the successful commissioning of the first units at Castle Peak A. This is certainly a very remarkable achievement and I hope you will give my warmest congratulations to all those who have worked so very hard to achieve it.





PS/ Secretary of State for Industry

John Coles Esq Private Secretary to the Prime Minister 10 Downing Street LONDON SW1

Bear Tolur,

GUANGDONG POWER STATION

4.372 I enclose a reply from Lord Kadoorie to the Prime Minister's letter of the 26 February 1982, which was sent to us through the Diplomatic Bag.

Officials have a copy of the letter and are providing advice and draft reply for the Prime Minister which will be sent to you in due course.

Yours ever,

DEPARTMENT OF INDUSTRY ASHDOWN HOUSE 123 VICTORIA STREET LONDON SW1E 6RB

TELEPHONE DIRECT LINE 01-212 3301 SWITCHBOARD 01-212 7676

// March 1982

Prime Minister

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advise.

A.J. C. 13

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CAROLINE VARLEY Private Secretary

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100, 10 does not recognise this. For hype on amended, FROM: The Rt. Hon. the Lord Kadoorie, CBE, JP St. George's Building Hong Kong March 4, 1982 The Rt. Hon. Mrs. Margaret Thatcher, MP Prime Minister 10 Downing Street London SW1 ENGLAND Dear Prime Minister, Proposed Nuclear Power Project for Guangdong Province 1) Thank you for your letter dated February 26, 1982. I appreciate your desire to retain flexibility. Perhaps, however, I should set out the reservations which I explained to Michael Jopling regarding the kind of Anglo/American package advocated by the Atomic Energy Authority. The Feasibility Study carried out by China Light and Power/ Guangdong Power Company envisages separate nuclear and conventional islands and that, all things being equal, preference should be given to the United Kingdom for supply of the conventional island. It also suggests that the nuclear island in its entirety be supplied by either Westinghouse, Framatome or Kraftwerk Union. Nowhere in the study is there any mention of a package deal to include the supply of both the nuclear and conventional islands. Now, though somewhat beyond the findings of the Feasibility Study, China Light and Power (CL&P) is advocating to Guangdong Power Company (GPC) a negotiating strategy along the lines of that adopted for the contract placed through the Department of Industry for Castle Peak Power Station. We are convinced that this method of approach is in the best interests of the Chinese, the United Kingdom and Hong Kong. After considerable personal effort both here and in Paris, I succeeded in persuading Electricite de France and Paribas (owners of Framatome, Alsthom Atlantique and Creusot Loire) to accept, somewhat reluctantly, a joint Anglo/French approach - conditional on Framatome providing the nuclear island and General Electric Company (GEC) the conventional island. By following this course we eliminate Britain's strongest competitor, the French, from quoting for the conventional island. (2)/.....

FROM: The Rt. Hon. the Lord Kadoorie, CBE, JP St. George's Building Hong Kong The Rt. Hon. Mrs. Margaret Thatcher, MP March 4, 1982 Page (2) It must not be forgotten that the French have already offered the Chinese two complete nuclear stations on exceptionally favourable terms and that, after much debate, Beijing has agreed to allocate the first of these units to Guangdong Province. If any UK organization, such as National Nuclear Corporation (NNC) puts forward an alternative at this time, it will leave the door wide open to France and others to offer a total package for both nuclear and conventional islands - a situation I have tried hard to avoid. In view of this I must tell you frankly that I am concerned at the effect on the Chinese of attempts by NNC, or their representative, to press on Chinese officials the merits of a NNC/Westinghouse/GEC alternative to my proposal. This has contributed to the differences of view amongst some Chinese to which you refer, including the emergence of the concept of competitive bids instead of my proposal for a negotiated contract which would at least ensure allocation of the conventional island to GEC. It is important, particularly during this month's visit of a GPC/CL&P delegation to Britain, that advice different from that advocated by CL&P should not be pressed on the delegation by NNC. This would not be incompatible with the flexibility you wish, provided an Anglo/American alternative is kept in reserve - but completely in the background - for use with the Chinese only in the event of it being impossible to arrange a negotiated contract. Nothing should be said to them about it meanwhile. I am aware of the differences of view held by certain of the Chinese Authorities and that the Department of Second Machine Building have even advocated delay on grounds that they could build the nuclear power station themselves. 10) China is unpredictable, but the really interested parties with whom we are in close contact, and with whom the final decision will rest, know that this is but wishful thinking. They are pressing for early action and expect some decision before the end of the year. To end this letter on a more positive note, I am happy to tell you that "steam to set" at Castle Peak Power Station took place last Saturday, just three years eight months and twelve days since gaining access to the site - and that only four days later the turbine was synchronized to the transmission system. (3) 7

FROM: The Rt. Hon. the Lord Kadoorie, CBE, JP St. George's Building Hong Kong The Rt. Hon. Mrs. Margaret Thatcher, MP March 4, 1982 Page (3) I believe this constitutes a record of which Mr. Stones, his team and all concerned, can be proud - more especially when one considers that the site had to be completely reclaimed from the sea. We are greatly looking forward to seeing you here in September and in conclusion I would like to record my thanks to you for your interest and assistance which has done so much to achieve this satisfactory result. Sincerely yours, Kadonig. Kadoorie



Hong kong

10 DOWNING STREET

From the Private Secretary

26 February 1982

Lear Tonalton,

Guangdong Nuclear Power Project

The Prime Minister has now been able to consider your Secretary of State's minute of 8 February and the subsequent minutes by the Foreign and Commonwealth Secretary, the Secretary of State for Energy and the Chief Secretary to the Treasury.

The Prime Minister broadly agrees with the advice contained in these minutes. She takes the view that it would be wrong to close the option of a UK/US package. She believes that the French might then try to take the whole contract and has observed that our experience with them on collaborative projects has not been good. Furthermore, a resolution of the current political problems between the United States and China could lead to the Americans being preferred as contractors. In that case we should get a bigger share of the available work.

The Prime Minister has therefore written to Lord Kadoorie on the lines of the draft annexed to your Secretary of State's minute. I enclose a copy with this letter.

I am copying this letter and enclosure to the Private Secretaries to the Foreign and Commonwealth Secretary, the Secretary of State for Energy, the Chief Secretary to the Treasury and Sir Robert Armstrong.

you was.

Jonathan Spencer, Esq., Department of Industry

CONFIDENTIAL

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cc:Industr



10 DOWNING STREET

THE PRIME MINISTER

26 February 1982

Dear Lord Kadoorie,

On his return from Hong Kong, Michael Jopling told me of his conversation with you about the Guangdong nuclear power project, and he mentioned in particular your unease about the Anglo/American package advocated by the Atomic Energy Authority. I attach special importance to your personal views on this project, and in view of your reported concern, I asked for a full assessment of the present situation.

I am very conscious of your consistent advocacy of an Anglo/French approach and I myself believe that the arguments in favour of working with Framatome remain very strong. However, I think you will agree that so far we have had conflicting signals from the Chinese in Peking and Canton about when they intend to go forward with this project, and no definitive statement of their preference as regards a nuclear island supplier. In these circumstances I believe that it would be wrong for the UK to dismiss the prospect of working with Westinghouse. I know you have reservations about this option, and fear it may be rejected by the Chinese as unproven. I fully endorse your views that the UK's first priority must be to meet the requirements of the customer. I would not under any circumstances ask you to associate yourself with a proposal which disregards these. However, in view of the continuing uncertainties in the situation, I consider it worthwhile for GEC and Westinghouse together to seek to develop a credible alternative proposal.

/Until

Until Chinese intentions are clearer, I believe that flexibility must be the keynote in our strategy.

I hope this will help to clarify the UK position. I shall continue to follow developments on the project with interest, and look forward to my visit to Hong Kong

Yours sincerely,

(sgd) MT

The Rt. Hon. The Lord Kadoorie, C.B.E., J.P.





PS / Secretary of State for Industry

DEPARTMENT OF INDUSTRY ASHDOWN HOUSE 123 VICTORIA STREET LONDON SWIE 6RB

TELEPHONE DIRECT LINE 01-2123301 SWITCHBOARD 01-212 7676

23 February 1982

John Coles Esq
Private Secretary to the
Prime Minister
10 Downing Street
LONDON
SW1

Bear Frui,

M.7. C. 24

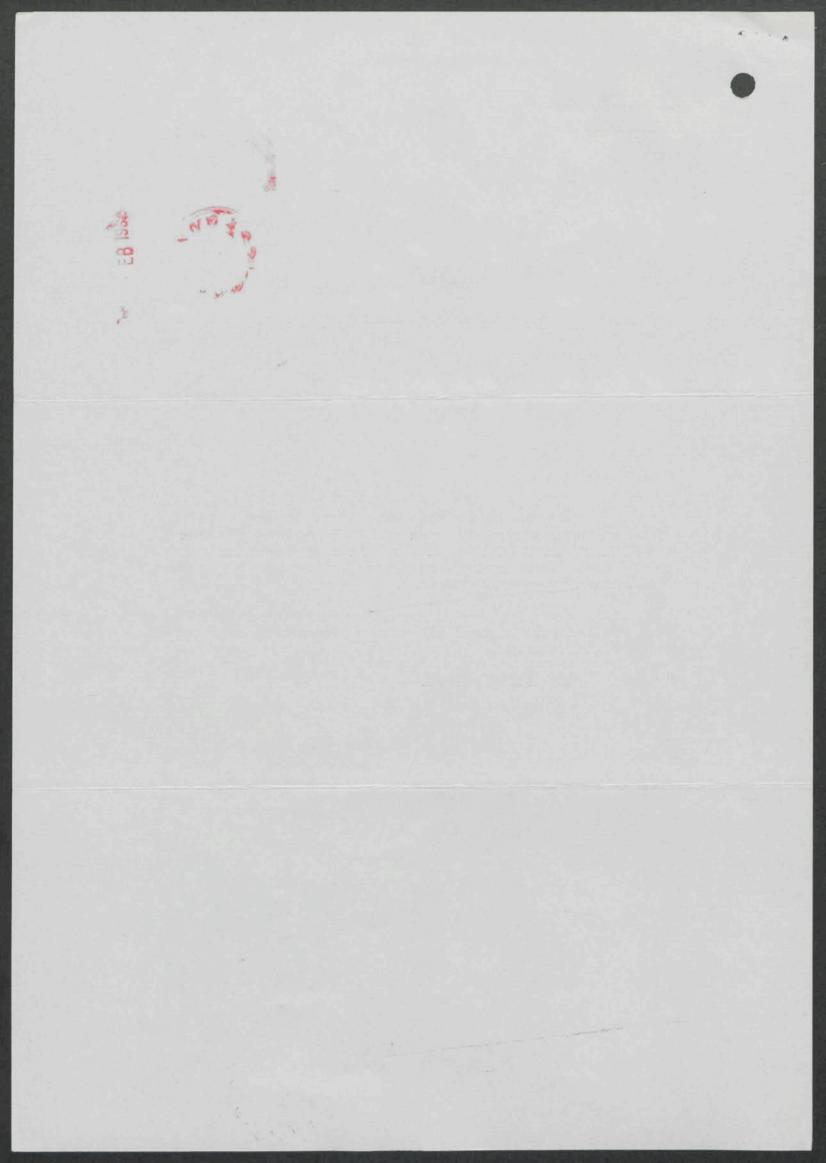
INVITATION TO THE PRIME MINISTER TO OPEN CASTLE PEAK . A POWER STATION

I enclose a letter from Lord Kadoorie in reply to the Prime Minister's acceptance of the invitation to open Castle Peak A Power Station.

> Your ever, Candinie Varley

CAROLINE VARLEY
Private Secretary

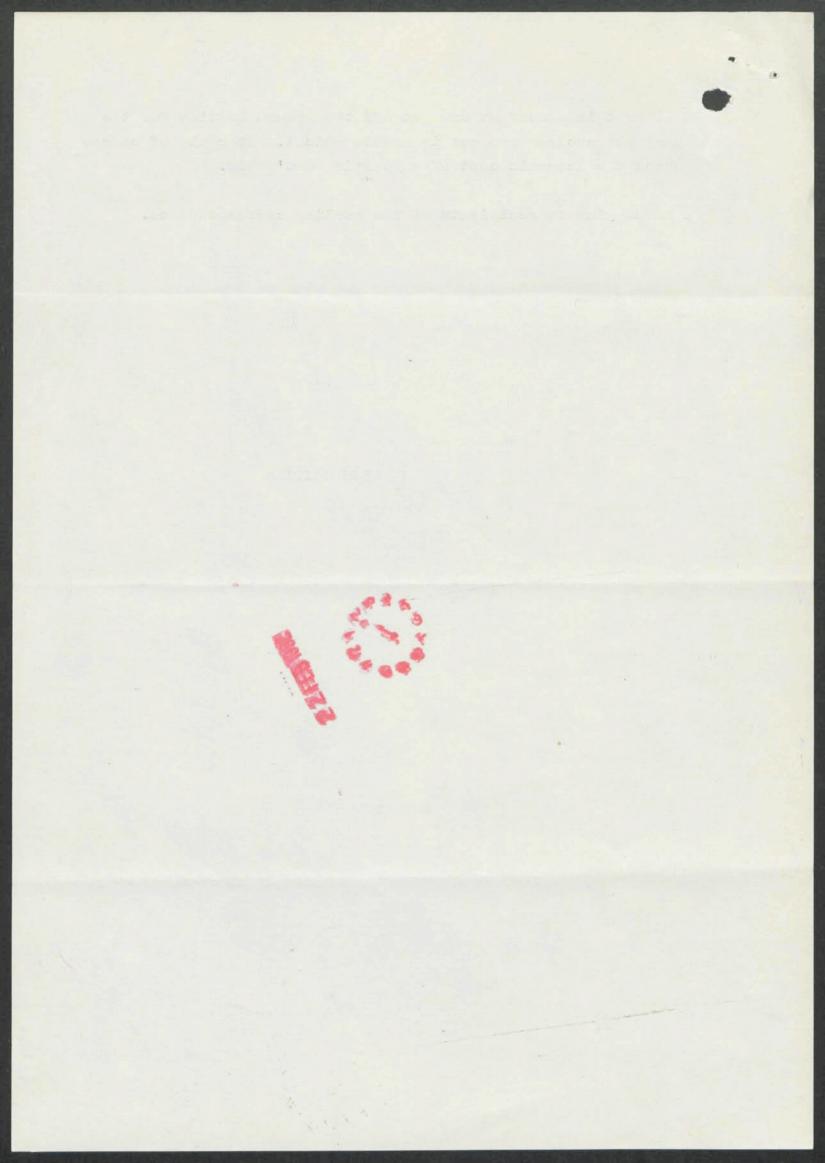
FROM: The Rt. Hon. the Lord Kadoorie, CBE, JP St. George's Building Hong Kong February 9, 1982 The Rt. Hon. Mrs. Margaret Thatcher, M.P. Prime Minister 10 Downing Street London SW1 ENGLAND Dear Prime Minister, Many thanks for your letter dated January 26, 1982, giving me the good news that you would be prepared to perform the official opening ceremony of Castle Peak 'A' Power Station and related transmission system during your forthcoming visit to the Far East in September of this year. Needless to say, all here are delighted and we hope that both you and your husband will enjoy a pleasurable and interesting stay in Hong Kong. With kindest regards, Yours sincerely, Kadoorig: Kadoorie



22 February, 1982

PRIME MINISTER GUANGDONG NUCLEAR PROJECT I have seen Patrick Jenkin's minute to you of 8 February. I have no reason to quarrel with Patrick's judgement that the best course is to keep both options open. In the circumstances I agree that it would be wise for you to write to Lord Kadoorie as Patrick Jenkin proposes. Since Peter Carrington mentioned the financing aspects, I ought to sound one note of warning. The normal export credit terms which we would expect to have to provide for a project of this sort would require a subsidy of 25-30% of the export content. The eventual cost to exporting Governments of this project could well be higher: if, as is all to likely in this sort of case, the Chinese succeed in playing one competitor off against another to provide extra concessions such as longer repayment terms, finance for local costs and capitalisation of pre-commissioning interest, this could take the subsidy element to 40% or even more. I think therefore that our posture towards this project ought to be as non-committal as possible until we are clearer about the cost. This consideration reinforces Patrick Jenkin's arguments for avoiding too firm a commitment to either option. 4. It is perhaps worth adding that moves are currently afoot within OECD which could lead eventually to an agreement among the power-plant exporting countries to reduce the subsidy element in export credit for nuclear and conventional power plant. 1.

Whether this agreement can get off the ground in time for the Guangdong nuclear project is problematical. It could of course reduce the economic cost of supporting GEC's bid. I am copying to recipients of the earlier correspondence. L.B. LEON BRITTAN 22.2.82?



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The French would by to leter the whole control and our expension work them on PRIME MINISTER collaborative projects has nother food. GUANGDONG NUCLEAR POWER PROJECT

Further assolution 1 the Cohtried resture with

1 am sorry to present you with such a complex set of we the papers, but this is an important project which will cost some putting £2 billion and from which British industry could benefit to the contratos tune of between £300 million and well over £500 million. 11- Wat- were The procedural problem is: how do we reply to Lord Kadoorie's at approach to the Chief Whip (Flag A) arguing that we should go for tigger share of a UK/French package rather than a UK/US package? The substantive problem is: do we keep open both options or put all our money on the UK/French package? The Secretary of State for Industry's minute of 8 February (Flag B) argues that for the time being we should continue to hold open both options and recommends that you should write to Lord Kadoorie on the lines of the draft at Flag C. The Foreign and Commonwealth Secretary's minute (Flag D) supports this approach as does the Energy Secretary's minute of 18 February (Flag E). But there is a difficulty. Mr. Jenkin's minute states confidently (paragraph 8) that GEC endorse his views. Lord Weinstock has told Sir Robert Armstrong (Flag F) that GEC's views are in fact quite different, namely that we should "follow Kadoorie" (though we need not completely disengage from Westinghouse). The Cabinet Secretary would prefer that we do not reveal this private conversation to the Department of Industry. We thus have GEC and Lord Kadoorie urging one course of action and the three Ministers concerned urging that we keep both options open. / The procedural

DRAFT LETTER FROM THE PRIME MINISTER TO LORD KADOORIE

On his return from Hong Kong Michael Jopling told me of his conversation with you about the Guangdong nuclear power project, and he mentioned in particular your unease about the Anglo/American package advocated by the Atomic Energy Authority. I attach special importance to your personal views on this project, and in view of your reported concern I asked for a full assessment of the present situation.

I am very conscious of your consistent advocacy of an Anglo/ French approach and I myself believe that the arguments in favour of working with Framatome remain very strong. However, I think you will agree that so far we have had conflicting signals from the Chinese in Peking and Canton about when they intend to go forward with this project, and no definitive statement of their preference as regards a nuclear island supplier. In these circumstances I believe that it would be wrong for the UK to dismiss the prospect of working with Westinghouse. I know you have reservations about this option, and fear it may be rejected by the Chinese as unproven. I fully endorse your views that the UK's first priority must be to meet the requirements of the customer. I would not under any circumstances ask you to associate yourself with a proposal which disregards these. However, in view of the continuing uncertainties in the situation, I consider it worthwhile for GEC and Westinghouse together to seek to develop a credible alternative proposal. Until Chinese intentions are clearer I believe that flexibility must be the keynote in our strategy.

I hope this will help to clarify the UK position. I shall continue to follow developments on the project with interest, and look forward to my visit to Hong Kong later in the year.

Not set 22.

DRAFT LETTER FROM JOHN COLES TO PRIVATE SECRETARY, DEPT OF INDUSTRY

The Prime Minister has considered your Secretary of State's minute of 8 February about the Guangdong nuclear power project, and the subsequent minutes by the Foreign and Commonwealth Secretary and the Secretary of State for Energy.

She is inclined to doubt whether a posture of keeping both options open is likely to reassure Lord Kadoorie or to impress the Chinese. In the present situation the inside track seems to belong to the Guangdong Provincial Government (GPG) and China Light and Power (CLP). It does not seem very likely that the United Kingdom will have any stake in the project except through CLP. Lord Kadoorie is clearly set on the Anglo-French option and it would seem best to make it very clear in the letter to him that that is our preferred option.

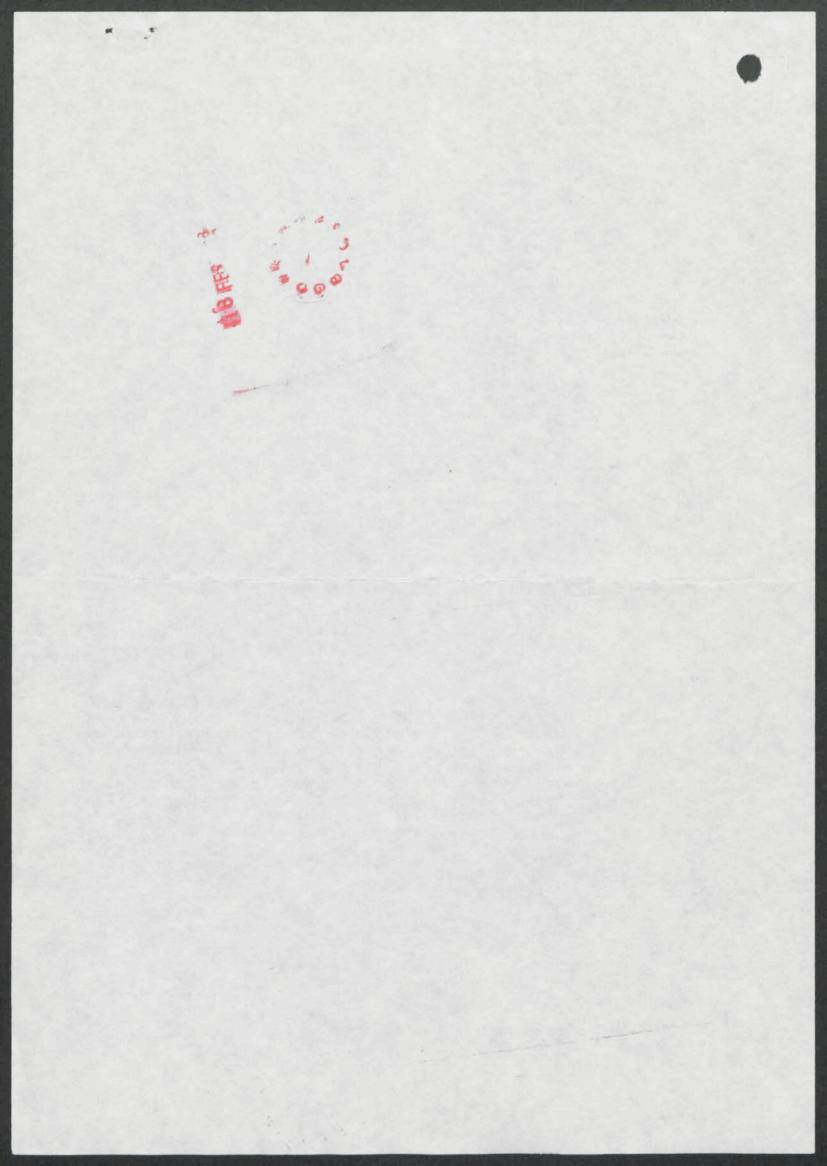
On that basis, the second paragraph of the letter would need to be reworded, perhaps on the following lines:

"I am very conscious of your consistent advocacy of an Anglo-French approach, and our strong hope and preference is that we shall be able to work out such an approach with you and with Framatome, on a basis which will be acceptable to the Chinese. But the signals coming out of China are not all clear and consistent. If they were to show an interest in a station based on a Westinghouse reactor we should not want - and I hope you would not want us - to be completely excluded from participating in the project.

It may well be that it is very unlikely that the Chinese would opt for Westinghouse, but so long as that seemed a possibility, it would be difficult for me to ask our people here to abandon their discussions with Westinghouse. I can assure you, however, that our strong preference would be to work with you and Framatome on the development of a project which would meet the requirements of the Guangdong Provincial Government."

The Prime Minister believes that a letter on these lines would be more reassuring for Lord Kadoorie and, unless your Secretary of State has any further comment, she proposes to despatch such a letter in the next few days. But she would also be grateful if your Secretary of State, together with the Secretary of State for Energy and the Foreign and Commonwealth Secretary, could give further thought to the question of whether, if in practice we work equally hard at both options in the coming months, we do not run the risk of alienating Lord Kadoorie whose good will seems essential to our chances of success.

01 211 6402 Rt Hon Patrick Jenkin MP Secretary of State for Industry Department of Industry Ashdown House 123 Victoria Street 18 February 1982 LONDON SW1 Dear Sevetony of State TPHICK GUANGDONG NUCLEAR PROJECT Thank you for copying to me your minute of 8 February to the Prime Minister. I have also seen Peter Carrington's minute. I support your general recommendation and your suggestion that it would be useful for the Prime Minister to write to Lord Kadoorie in the terms you have drafted. I note that there are some reservations by officials on the timing of an approach to the State Department to seek clearance for NNC to supply Westinghouse PWR technology to China. In view of the UK's interest in bringing the UK/Westinghouse option as quickly as possible to a state of readiness for negotiation, I hope you will agree that the approach should be made soon. A firm expression of the State Department's view would enable both NNC and Westinghouse to commit resources to negotiations with greater confidence. I am copying this letter to the recipients of yours. Your Sirvely David Lunlay NIGEL LAWSON (Approved by the Secretary of State and signed in his absence)



Ref. A07556

MR COLES

Guangdong Nuclear Power Project

You drew my attention recently to the apparent inconsistency between Lord Weinstock's view, as reported in paragraph three of my minute of 16 February, and the statement in paragraph eight of the Secretary of State for Industry's minute of 8 February that GEC endorsed the view expressed in paragraph seven of that minute about continuing to pursue an Anglo-American package.

- 2. It seemed that the only way to resolve this discrepancy was to speak to Lord Weinstock, which I did this evening.
- 3. Lord Weinstock said that GEC had not endorsed and did not endorse that view. GEC's view was as conveyed by him to me and as reported in my minute of 16 February. His message was that we had to "follow Kadoorie". This did not mean that we should completely disengage from Westinghouse. That option could be kept on the back-burner. But, given that for us the only way into the project was via CLP and thus dependent on Lord Kadoorie, there did not appear to be very much of a future in an option which seemed to be no part of Lord Kadoorie's thinking.
- 4. I very much hope that in any dealings with the Department of Industry you will be able to protect the confidence of my dealings with Lord Weinstock in this matter.

RA

ROBERT ARMSTRONG

18 February 1982

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to Every.

DRAFT LETTER FROM THE PRIVATE SECRETARY/ PRIME MINISTER TO THE PRIVATE SECRETARY/ SECRETARY OF STATE FOR INDUSTRY

The Prime Minister has now had a chance of studying your Secretary of State's minute of 8 February about the Guandong nuclear power project.

Her judgment of the balance of argument would be rather different from your Secretary of State's. She doubts whether a posture of keeping both options open is likely to reassure Lord Kadoorie, or to impress the Chinese. In the situation we have, the inside track seems to belong to the Guandong Provincial Government (GPG) and China Light and Power (CLP). It does not seem to be very likely that the United Kingdom will have any stake in the project except through CLP. Lord Kadoorie is clearly set on the Anglo-French option. We had better make it clear to Lord Kadoorie that we are firmly committed to that option, and put the Westinghouse option on a back burner.

On that basis, the letter to be sent to Lord Kadoorie would need to be rather differently cast. The second paragraph would need to be reworded, perhaps on the following lines:

I am very conscious of your consistent advocacy of an Anglo-French approach, and our strong hope and preference is that we shall be able to work out such an approach with you and with Framatome, on a basis which will be acceptable to the Chinese. But the signals coming out of China are not all clear and consistent. If they were to show an interest in a station based on a Westinghouse reactor we should not want - and I hope you would not want us - to be completely excluded from participating in the project. It may well be

that it is very unlikely that the Chinese would opt for Westinghouse, but so long as that seemed a possibility, it would be difficult for me to ask our people here to abandon their discussions with Westinghouse. I can assure you, however, that our strong preference would be to work with you and Framatome on the development of a project which would meet the requirements of the Guandong Provincial Government.

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Ref. A07515

MR. WHITMORE

Before the weekend I sent you a copy of a letter from Lord Kadoorie to Lord Weinstock about the Guangdong nuclear power project, which had been forwarded to me by Sir Kenneth Bond (in Lord Weinstock's absence).

- 2. Lord Weinstock rang up yesterday to reinforce the message contained in Lord Kadoorie's letter.
- 3. His message was in effect that the key to this project is held by the China Light and Power Company (CLP) and Lord Kadoorie. CLP is dealing with the Chinese Provincial Government concerned, which has confidence in CLP and a well-established connection with it. Whether there is any British involvement in the project therefore depends entirely on CLP. There is no possibility of our providing the nuclear reactor; nour stake can only be in the conventional equipment. Lord Kadoorie and CLP want to buy as much British as possible; but they also want to go to the French for the nuclear reactor. It is no good our supposing that CLP would accept an alternative deal involving the National Nuclear Corporation (NNC) and Westinghouse, of the kind which Dr. Marshall is trying to put together. If we do not go ahead in a joint project with the French doing the nuclear reactor, we shall have no involvement at all, and CLP will probably go to the French for the whole thing.

RA

ROBERT ARMSTRONG

16th February, 1982

PERSONAL AND CONFIDENTIAL

CONFIDENTIAL

Ref. A07486

PRIME MINISTER

At Lord Weinstock's request (he is out of the country) Sir Kenneth Bond has sent me a copy of a letter which Lord Weinstock has received from Lord Kadoorie about the Guangdong nuclear power project. Lord Kadoorie is saying, roughly speaking, that, if we abandon the partnership with the French and go for Dr. Marshall's proposals for a joint project with the United States, we are in danger of losing the whole thing.

2. You will want to see this as background to the minute recently sent to you by the Secretary of State for Industry on this subject.

XUT

ROBERT ARMSTRONG

12th February, 1982

CONFIDENTIAL

THE GENERAL ELECTRIC COMPANY LIMITED

1 STANHOPE GATE LONDON WIA 1EH

01-498 8484

9th February, 1982

Hr Gregson Hr Hoare Hr Wade-Gery

Dear Sir Robert,

Lord Weinstock is at present abroad. In his absence I am enclosing a copy of a letter he has received from Lord Kadoorie expressing strong views about the Guangdong nuclear power project which, I feel, the Prime Minister would wish to see.

Lord Kadoorie has been a very good friend of Britain, especially over recent years, and I believe it would be sensible to give considerable weight to his advice and not to irk him.

Yours sincerely,

Sir Kenneth Bond Deputy Managing Director

Sir Robert Armstrong, KCB, CVO, Cabinet Office, 70 Whitehall, LONDON, SW1A 2AS.

SIR ELLY KADOORIE & SONS

FOUNDER

SIR ELLY KADOORIE, K.B.E.,
Commendeur de la Legion d'Honneur.

PARTNERS

The Rt. Hon., THE LORD KADOORIE, C.B.E., J.P.,
Chev. Leg. Hon., Officier de l'Ordre de Leopold.

HORACE KADOORIE, C.B.E., J.P.,
Chev. Leg. Hon., Officier de l'Ordre de Leopold.

CONFIDENTIAL

ST. GEORGE'S BUILDING HONG KONG Cables: "KADDORIE", Hong Kong Telephone: 5-249221 Telex: 73427

cc. Mr. R.J. Davidson, GEC T.G's, Rugby

January 29, 1982

The Rt. Hon. the Lord Weinstock The General Electric Co. Ltd. 1 Stanhope Gate London W1A 1EH ENGLAND

Dear Arnold,

Proposed Guangdong Nuclear Power Project

Further to my letter of December 23, 1981, I will not hide from you that I am concerned at the turn of events.

In consequence, I am sending you herewith copy of my Private and Confidential Memorandum of today's date, which sets out our point of view.

Bill Stones has been in touch with Bob Davidson who can give you further information.

'Kung Hei Fat Choy' - A Very Happy Chinese New Year.

Sincerely yours,

Comments:

Encl: Memo dated January 29, 1982

5)

SUBJECT: GUANGDONG NUCLEAR PROJECT

- It is essential we do not lose sight of the primary object why we have been giving, and are giving, consideration to this project.
- 2) Of basic importance is the effect a joint venture between China Light & Power (CLP) and the Guangdong Power Company (GPC) would have on Hong Kong's future.
- In the post-war period there has never been a project of this size, and with such political implications, between China and any Western power.
- 4) Unique to this project are the following:
 - a) If built, this power station would be the first large, commercially owned and operated nuclear generating station in China.
 - b) The joint venture would provide for the power station to be paid for in foreign currency from the sale of the electricity it would produce, and would eventually revert to the GPC.
 - c) Joint construction and operation of the power station over a minimum period of ten years, or possibly until all international loans raised for its construction had been repaid, would provide the Chinese with knowledge and expertise which they do not yet have and which will be invaluable to them for the development of their Four Modernizations Programme.
 - d) The financial arrangements to raise international loans of the size required, and the conditions attached to those loans, will set the pattern for the management and control systems necessary for other projects of equal importance.
 - We must bear in mind the 'three pillars' upon which the foundation of Hong Kong's future rests:
 - a) The continuing beneficial interest to China
 - b) The continuing beneficial interest of the United Kingdom
 - c) The need to better the living conditions and future prospects of Hong Kong's younger generation.
 - In order to satisfy condition 5(b) above, it is necessary for the project to have a substantial British content and the way to achieve this has been very carefully considered.
- A first nuclear power station in China will create substantial international interest, since it will play an important part in fixing the rules and regulations which will apply to future installations of this kind and consequently in the nature of plant to be supplied.
- 7) With this in mind considerable international competition for this 'prize' must be anticipated.

- 8) The feasibility study carried out by GPC/CLP has advocated competition but has provided - that all things equal - the United Kingdom will be given priority. 9) With the primary object of Hong Kong's future in view it, therefore, behoves us to devise a strategy so designed as to give the United Kingdom the advantage of supplying plant which can be manufactured in the United Kingdom. 10) The feasibility study also provides for reliable and proven equipment. Since the United Kingdom does not produce any PWR's they can only qualify in this category to the extent of the conventional 11) On the other hand, several nations - the French, the Germans, the Swedes and the Americans (indirectly) - can all qualify for a total package to include both the conventional and nuclear islands. (Of these nations, the French have, over the past several years - thanks to the efforts of Giscard d'Estaing followed by Mitterand, established themselves as being in the lead.) 12) It becomes obvious, therefore, that the chances of the United Kingdom obtaining any part of this project will be enhanced by anything that can be done to eliminate competition. 13) With this in mind and, after protracted and difficult negotiations in which CEC, the UK Department of Industry, GEC and Electricte de France have all been involved, LK has persuaded the French (the leading competitor for a complete package) to hold off making a total package deal - on the assurance that they can quote for the nuclear island and balance of plant leaving the conventional island to the United Kingdom. My understanding was that this was last confirmed to them in Paris by Mr. A.G. Manzie of the Department of Industry 14) At this stage of the game we are informed that "GPG" wishes to discuss with NNC delegation the supply by NNC of American nuclear island equipment for Guangdong Nuclear Power Station by NNC, despite any other views expressed by any other departments within the People's Republic of China." 15) This information is completely contradictory to CLP's understanding of the wishes of the Guangdong Power Company. 16) At the last Executive Meeting held between GPC and CLP on January 15, 1982, it was clearly stated by GPC that under no circumstances would they consider a hybrid package with the consequent danger of complications and problems which could arise from divided authority. They (GPC) would insist on full responsibility for the nuclear island 16) and balance of plant being carried by the suppliers of that plant just as they would insist all items within the conventional island would
- have to be carried by the supplier of that island.

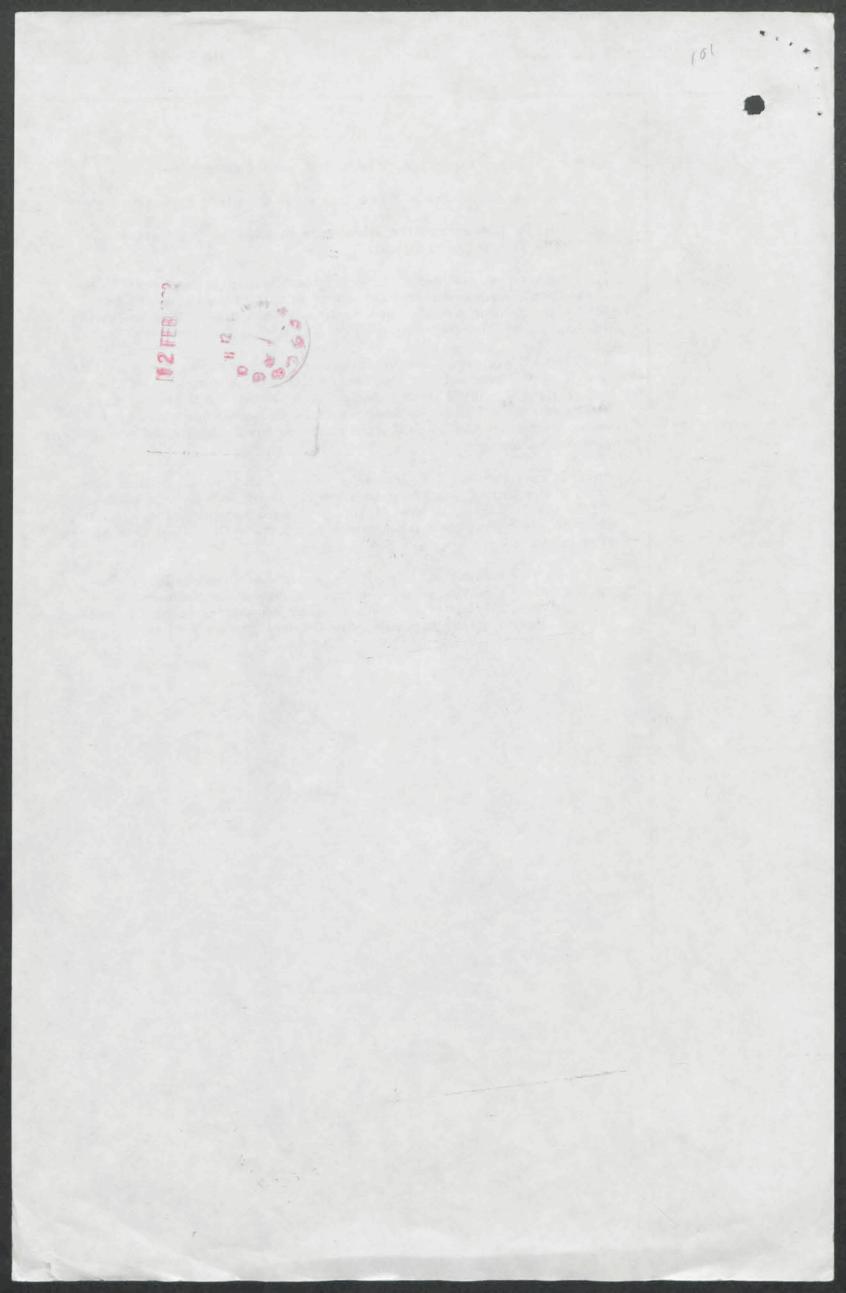
 GPC have further indicated that after studying the negotiating procedures used by China Light in regard to Tap Shek Kok, that they were convinced this would be the best method to follow and they have asked, and it has been agreed, that Mr. Stones of CLP to the authorities there.

- 19) CLP's strategy, therefore, if adopted, would guarantee:
 - a) to the purchaser a fair price for the plant he is buying
 - to UK industry the advantage of priority in offering the conventional island.
- It is, of course, not for CLP to instruct British industry as to how they should endeavour to participate in this project, but in the interests of Hong Kong's future, it is very much CLP's concern to strengthen the foundation upon which that future rests.
- CLP has, therefore, used their best endeavours over the past two years in this respect and has warned the UK authorities of the grave danger they run in interfering with the tried procedures we have devised here in Hong Kong, with knowledge gained over many years, in how to deal with problems involving British/Hong Kong/China relations.
- In this memorandum I repeat this warning and would further state that if the United Kingdom does decide to offer a hybrid package, GEC, the DOI and LK are in honour bound to inform the French accordingly before this takes place and before they find this out for themselves.
- The result of making such an offer would be, in my opinion, to open up the whole question of supply to a number of competitors who are in a far better position to offer an attractive and proven package deal and, as a result, the UK will get no part in the award of the contract.



Kadoorie

LK/mw





PM/82/8

PRIME MINISTER

Guangdong Nuclear Project

- 1. I have seen Patrick Jenkin's minute to you of 8 February. This was agreed in draft by FCO officials.
- In all the circumstances the proposal to pursue both French and American options vigorously seems to me still to represent the best course to promote our interests. I recognise that both Lord Kadoorie and HM Ambassador Peking have been arguing persuasively for a firm decision to go in now with the French; certainly Peter Rees and Humphrey Atkins were both told at senior Ministerial level in Peking that, all things being equal, the Chinese favoured Anglo-French package. But as Patrick Jenkin points out, there are two strong arguments for not committing ourselves at this stage, both of which are based on very recent information - namely, French reluctance to commit themselves to us; and recent indications from those Chinese involved in the detailed consideration of the project at Provincial level that they intend to consider various nuclear partners including French and American before making up their minds. Indeed the Chinese Premier spoke of the Chinese wish for competitive bids when he saw Humphrey Atkins.
- 3. Since political factors play a considerable part in Chinese decision-making you might welcome a brief assessment of how we see the current standing of the French and Americans in Chinese estimation. The 'special position' into which the French appeared to have manoeuvred themselves under President Giscard has been eroded to some extent with the advent of President Mitterrand (and difficulties during the French Trade Minister's visit last autumn over the sentencing of the Chinese fiancee of a French diplomat). The Chinese are also upset at the resumption of French aid to Vietnam. But these are likely to be temporary setbacks.

/The



The commitment to the French option still seems strong among senior Ministers in Peking.

- 4. The Americans on the other hand are going through a very difficult patch with the Chinese as a result of differences over arms sales to Taiwan. The Taiwan issue is very emotive for the Chinese. A downgrading of relations still cannot be ruled out. This would obviously affect the acceptability of a US option to the Chinese. Nevertheless, since the timescale of the project is both uncertain and in any case lengthy, it is too early to say how far current Sino-US difficulties might affect the Chinese decision.
- 5. The overriding consideration may indeed turn out to be the well-known Chinese propensity for seeking the cheapest possible option and therefore their encouragement to the various interests -US, French and British - to put in competing bids. They are very worried about the cost of the commitment the nuclear project would represent. They are also by nature and by ideological conviction suspicious of exclusive offers by foreign capitalist enterprises. There are those who profess to believe that China has in the past been the victim of unscrupulous overseas business interests. The implications for us and for GEC are that although a negotiated contract may appear to offer the tidiest and possibly the most economic route for both the bidders and for the customer the Chinese may well reject such a proposal as limiting their freedom of manoeuvre. If that is so, we are clearly in no position to prevent their seeking competitive bids. The only effect of our closing one of our present options might be to push the Chinese into exploring the possibility of cooperation with other partners in an arrangement in which we would play no part. This strengthens me in the belief that for the present the line proposed by Patrick Jenkin is the right one. In any event, if the French do not wish to go firm, we can hardly do so.



- 6. But clearly it will be necessary to handle Lord Kadoorie with some sensitivity; I agree that it would be helpful if you were to write to him in the terms suggested.
- 7. As Chinese intentions become clear we may of course have to work fast. The more preparatory work that can now be done by way of (a) contacts with both the Americans and the French, and (b) consideration of the financing problems, the better. I am very conscious that your visit to China in September may be a good opportunity to promote British participation further. We need to have a much clearer idea by then of the main factors (including finance, and likely UK share of the project) involved in the two principal options open to us. Officials should be instructed to purse these points with all necessary speed.

 8. I am copying this to the recipients of Patrick Jenkin's minute.

anigha

(CARRINGTON)

Foreign and Commonwealth Office

CONFIDENTIAL

11 FEB 1982

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PRIME MINISTER

GUANGDONG NUCLEAR PROJECT

In the light of Michael Jopling's report to you of his conversation with Lord Kadoorie in Hong Kong you asked for an assessment of the situation on the Guangdong project. A background note is attached at Annex A: the principal issue for consideration at present is whether we should choose to work in partnership with the French or the Americans on the nuclear island.

2 You may recall that in February 1981, against the background of the final discussions on the Castle Peak B station in Hong Kong and the need to give particular weight at that time to the views of Lord Kadoorie, colleagues agreed that GEC should seek to enter into an agreement with the French nuclear suppliers, Framatome. In the event, it proved possible to gain the Castle Peak contract without entering into a firm agreement. The French for their part have since been content to stand back from any firm commitment. In the interim, in the absence of any clear indication that China will go forward with the project in the near future, it has been possible to take forward the alternative



possibility of collaborating with Westinghouse.

3 As discussions now stand the likely shape of the package which would emerge with either partner would be broadly as follows. With the French, Framatome would supply the nuclear island and the fuel supply while the UK would provide the conventional turbine island. In view of the UK's limited PWR experience it is unlikely that we would be given responsibility for the overall project design and management of the project. With the Americans, the core of the nuclear island, the nuclear steam supply system, would be provided by Westinghouse. In addition to the conventional turbine island, the UK would supply some of the balance of nuclear plant components and a large proportion of the long term fuel supply, with some chance of supplying the first fuel charge. The note at Annex B summarises the principal arguments for and against each partner on the basis of packages structured on these lines, though it is important to note that the extent to which the Chinese would be prepared to accept major nuclear island components from UK suppliers remains uncertain.

In weighing the merits of each partner I attach great importance to the views of China Light and Power (CLP) and those of Lord Kadoorie in particular. When he visited the UK in October last year he stressed to me the importance he placed on an Anglo French approach to this project. As joint customer with the Guangdong Power Company (GPC) for the power from the plant, and as advisor to the Chinese on technical issues and negotiating



tactics CLP stand in a key position. I also attach considerable weight to the comments made by Vice Premier Gu Mu to Peter Rees and by Prime Minister Zhao Ziyang to Humphrey Atkins on their recent visits to Peking, suggesting that - other things being equal - the Chinese still favour the French for the nuclear island and the UK for the conventional island. HM Ambassador in Peking certainly takes the view that the Chinese are likely to opt for the French. However, even if we thought it in our interests to seek to make a pre-emptive bid with the French now, recent soundings suggest that Framatome are likely to be reluctant to sign an agreement with GEC at present. The French say that they think a Chinese decision to go forward with the project is still a long way off.

5 Turning to the Anglo/American option, which is the one favoured by the Chairman of the Atomic Energy Authority, Dr Marshall, the fact remains that, despite the statements in Peking to Peter Rees and Humphrey Atkins there are factions within China which appear to favour Westinghouse. Indeed, I understand there has been one bid at provincial level to encourage a team composed of Westinghouse, GEC, the relevant national nuclear authorities and Department of Industry officials to visit Guangdong to explain an Anglo/American package. A formal invitation for such a visit has yet to be received, and I am advised that in any case



the major decisions of principle on the project will be taken in Peking rather than at provincial level. However, I believe we cannot discount these counter-signals. Moreover, Westinghouse, in contrast to Framatome, are now pressing for rapid progress. Westinghouse are anxious that the UK Government should now approach the State Department in Washington to seek clearance under the Non-Proliferation Act for the National Nuclear Corporation as a Westinghouse licensee to supply PWR technology to China. Officials accept that such an approach is a necessary step in developing the Anglo/American option, though its precise timing will require consideration. Providing outstanding contractual and technical difficulties can be resolved, and we receive a favourable response from the State Department, in two or three months it may be possible to achieve a credible Anglo/American package to weigh against the Anglo/French package which has already been developed. I understand, however, that GEC are less sanguine than Westinghouse about the likely rate of progress.

6 There are several risks attached to continuing to hold open both options. HM Ambassador in Peking has advised that if we delay too long in seeking to make a pre-emptive bid with one partner, we may miss the opportunity to influence the thinking and attitude of such an unsophisticated and uncertain customer as



support of Lord Kadoorie. We risk either the French or the Americans seeking to make a pre-emptive bid on their own - we know that both the French turbine company Alsthom and Westinghouse's turbine division have made overtures to the Chinese. And if we had to go to the negotiating table at short notice in the near future we could find ourselves unprepared: a detailed position on certain technical questions and on a financial package cannot be finalised until we know with which partner we may be working.

7 Nevertheless, despite these risks, my assessment is that for the present we should continue to pursue both routes and seek to bring the American option to a state of readiness for negotiation comparable to the French option. The primary advantage in pursuing this course is that it would enable the UK to keep its negotiating strategy as flexible as possible. It is clear that some elements at least within the Chinese authorities are seeking to keep their own negotiating options as wide as possible and I consider that it would be premature to narrow the options on the UK side at this stage. Unless and until we have an indication to the contrary from the customer we should continue to pursue an Anglo/American package within our range of options since this holds the prospect of providing a higher proportion of goods and services from the UK.

8 GEC endorse this view. While the French at present appear to



be the most favoured, GEC do not consider that a final choice of prospective partner can be made until there has been further contact with the Chinese. Given the uncertainties surrounding the project, GEC consider flexibility must be the keynote to our strategy. Dr Marshall agrees with this, even though he favours an Anglo/American approach.

9 If you and the other colleagues to whom I am copying this letter agree with this general recommendation I suggest we would seek to offer reassurance to CLP that the Government's position remains one of holding open both options until such time as the Chinese provide a clear indication of their preference. The best way of doing this might be for you to write to Lord Kadoorie on the lines of the attached draft.

10 I am copying this minute to Peter Carrington, Geoffrey Howe, John Biffen and Nigel Lawson, and in view of his interest, to Michael Jopling.

PJ

PJ

8 February 1982

Department of Industry

GUANGDONG NUCLEAR POWER STATION PROJECT

Background

- In 1980 China Light and Power Company Limited (CLP) and the Guangdong Electricity Company (GEC) of the People's Republic of China (PRC) conducted a joint study on the feasibility of constructing and operating a nuclear power station in Guangdong, part of the output of which would be sold to Hong Kong. Ministers approved a continuing UK industrial and official involvement in the study, and gave their support in general terms subsequently to the Chinese and to CLP. Ministers have also agreed that since China is a Nuclear Weapons State we should not seek to insist upon the application of safeguards, but that we should seek assurances that equipment and materials will not be diverted to military use nor reexported without prior consultation and will receive adequate physical protection.
- 2 The study was formally given to the Chinese in December 1980 and is now under consideration in Peking. The study concluded that it is feasible for the Guangdong Electricity Company and CLP jointly to construct and operate a 2 X 900 MW PWR station some 30 miles north-east of Hong Kong.

 The total cost of the project is estimated at £2,000m; the foreign exchange costs would be met from electricity sales to Hong Kong. This project is being weighed by the Chinese against the alternative possibility of developing hydro-electricity in other areas of China.
- There can be no certainty that the Chinese will proceed with the project. The suspension of a number of capital construction projects and announcement of a more rigorous policy of retrenchment suggests that they will approach it with caution. We must nevertheless work on the assumption that the project will go ahead. In that event it would offer the prospect of substantial commercial benefits to UK industry. It would also lead to further co-operation between

the UK, Hong Kong and the People's Republic of China (PRC) in a period when re-assurance over the future of Hong Kong will be important given the expiry in 1997 of the lease on the New Territories. While the UK can supply the bulk of the necessary plant and equipment, we cannot supply the heart of the station - the pressurised water reactor and the remainder of the nuclear steam supply system - representing about 15% of the total project cost. A partnership with a PWR manufacturer - Framatome (French) or Westinghouse (American) are the front runners - would therefore be necessary. GEC are the favoured supplier for the conventional island; they have made it clear that technically they would be able to co-operate with either the French or Americans.

4 The French position on non-proliferation is similar to our own and while there are some doubts about the US Government's attitude to the sale of nuclear equipment direct from the United States, Westinghouse would be able to supply from one of their licencees outside the USA. Both Framatome and Westinghouse have indicated their willingness to work with the UK in this way.

The UK Position

- The UK provided technical support to CLP from Dr Walter Marshall (Chairman of UKAEA) and partly as a result of his efforts the UK has the possibility of gaining a major share of the project. CLP favour a substantial UK involvement in the project. Both the French and the American companies currently appear to perceive the UK as being the front runners to win a major share. The Government of Hong Kong, naturally, supports the UK's interest as UK participation would be arguably the best way to meet its requirement for safety and continuity of supply of electricity.
- 6 The UK's negotiating position is based upon the need for the nuclear power

station to be party financed by the sale of electricity to Hong Kong. This in turn would require the Government of Hong Kong to be able to assure itself as to the safety of the reactor, the continuity of supply, and costs of electricity to be purchased, before allowing CLP to enter into an off-take agreement.

However our position is less strong than it appears. The decisions to proceed China fort.

and on the choice of reactor will be taken by the PRC. As CLP have prepared the feasibility study jointly with GPC it would be difficult for them to reject a competitor's commercially sound and technically competent package which excluded UK participation. Equally the Government of Hong Kong would find it difficult to object to CLP purchasing power from such a source providing they were satisfied as to the safety of the station as it might affect Hong Kong and its reliability as a source of electricity supply.

- Thus the Hong Kong connection, while helpful, does not of itself guarantee UK participation. Equally GEC have limited relevant technical experience from which to offer high speed 900 MW turbine generators, but do have considerable experience of low speed 900 MW sets in Korea. Neither does the UK have any experience in building or operating complete PWR nuclear stations. Both Framatome and Westinghouse have the ability to offer complete stations based on proven designs. Following a visit of President Giscard d'Estaing, the French appeared to have established a favoured position in Peking having secured an agreement in principle that France would be the preferred supplier of China's first nuclear station. However with the passing of time the strength of this commitment to the French has become less certain.
- 8 Despite these drawbacks there is still a good prospect that the UK can obtain a central role in this project. The French and Americans probably over-value our influence in Hong Kong. Secondly the UK does have a considerable

breadth of expertise in organising and regulating a muclear industry and in supplying it with components. On a realistic timescale for the Guangdong Project it appears possible for the UK to arrange for the provision of the required expertise.

9 It could also prove desirable to select one of the two potential partners in preference to the other and present a joint collaborative package to the Chinese. In doing so, it will be prudent to keep alternative options open, particularly with regard to the other potential supplier, since the final decision rests with the Chinese.

ANNEX B

ARGUMENTS FOR AND AGAINST AN ANGLO-FRENCH OR ANGLO-US PACKAGE

A

FRAMATOME

The arguments for a partnership with Framatome are:

- (1) Through the initiative taken by President Giscard d'Estaing in 1980 the French established a strong position in Peking and the recent statements to visiting British Ministers suggest that the French remain the favoured nuclear partner;
- (2) CLP and Lord Kadoorie in particular favour a partnership with the French because they believe this has the best chance of success;
- (3) GEC consider the French are more likely to obtain the nuclear island, for the reasons set out above;
- (4) The French are likely to be able to offer more competitive financial terms than the Americans. It is clear that this would weigh heavily with the Chinese;
- (5) A good deal of preparatory work on this option has been completed:
 an agreement between GEC and Framatome to work together on the
 project has been drafted but not signed;
- (6) Working with Framatome is likely to raise less problems on apportioning liability for the plant's performance and safety;

 Framatome are expected to be willing to accept liability for the whole nuclear island. Westinghouse have said that they are willing to accept a similar liability but it remains to be seen whether

they can work out the details of the necessary contractual relationship with their UK licensee, the National Nuclear Corporation (NNC);

The arguments against such a partnership are:-

- (1) It is clear that there are factions within China certainly at provincial and possibly also at national government level which favour a partnership with the Americans on the grounds that they are likely to be able to offer more advanced technology and greater technology transfer to China;
- (2) We could not expect to win more than approximately £300m of the total value of the contract since Framatome would expect to supply virtually all the nuclear island equipment;
- (3) The possibility of securing even a small proportion of the fuel supply contract say £50m-is not rated highly by British Nuclear Fuels Limited;
- (4) GEC have no practical experience of working with Framatome, and past Anglo-French industrial ventures have met with mixed success;
- (5) We would be expected to match the financial terms offered by the French which may involve conceding more favourable credit terms than an Anglo/American package;
- (6) While the granting of approval of the Sizewell PWR is a public issue it would be unhelpful for HMG to appear to cast doubts on the adequacy of the Westinghouse / NNC design.

CONFIDENTIAL WESTINGHOUSE The arguments for a partnership with Westinghouse are:-(1) This might raise the total value of goods and services supplied to perhaps as much as \$500m for the turbine generators plus the balance of the nuclear island which could be supplied from UK sources: (2) British Nuclear Fuels Limited would probably win a major share of contracts for the supply of fuel to the plant in its first 15 years, worth perhaps \$250m, and there is some chance of their supplying the first fuel charge. (3) Westinghouse are likely to be able to offer more advanced technology than Framatome; (4) GEC have already worked with Westinghouse on building PWRs in Korea; (5) This option would strengthen our existing involvement with Westinghouse on the UK domestic nuclear programme and would encourage a greater transfer of PWR technology to the UK. This is of great importance to Dr. Marshall. (6) The prospect of supplying components of the nuclear island for both Sizewell and Guangdong would offer a more worthwhile market for UK manufacturers The arguments against Westinghouse are:-(1) The Americans have achieved no special position with the Chinese CONFIDENTIAL

on the Guangdong project comparable to the French - though
Westinghouse have recently signed an agreement with the Chinese
to work together on the development of turbines;

- (2) This option may not prove viable because of the difficulties of the relationship between NNC and Westinghouse. In the context of American policy on non-proliferation the use of Westinghouse's technology would require formal approval from the State Department, as would any supply of components from the US. Serious problems would be unlikely if NNC were in a position to assume full responsibility for the nuclear island, with Westinghouse's involvement limited to that of licensor. But NNC cannot carry such a responsibility, particularly because it has insufficient capitalisation to shoulder more than a very minor share of the liabilities involved. Substantial and direct Westinghouse involvement could, however, raise problems with the State Department. Thus it may be necessary to present the NNC rather than Westinghouse as the main agency supplying PWR technology to China. But, in practice, in their contractual relationship, Westinghouse would have to assume the role of main contractor, with NNC as their sub-contractor.
- (3) CLP are strongly opposed to such a package and are adamant they would not recommend it to their colleagues in the Guangdong Power Company. Although Dr Marshall considers that one of the Korean PWR stations built by GEC and Westinghouse could be presented to the Chinese as a reference plant to support the viability of this option, CLP are likely to consider it unproven,

particularly since NNC will carry the responsibility of adapting the Korean plant designs to the Chinese site.

Lord Kadoorie has specifically warned Lord Weinstock that he is anxious to avoid such a "hybrid proposal under the guise of a British package" being submitted to the Chinese;

- (4) Moreover, messages received through CLP suggest that at least some of the Chinese authorities whose views will be influential in any major decision are strongly opposed to an Anglo/American package. It has been suggested that the Head of the Nuclear Bureau intends to indicate his opposition to such a proposal to the Embassy in Peking.
- (5) Even those factions within China which favour an Anglo/American package appear to want to buy the main components of the nuclear island direct from the United States rather than from manufacturers in the UK working under a Westinghouse License.
- (6) Pursuing an alternative option with the Americans may encourage the French to make an all French pre-emptive bid with the French turbine company, Alsthom, supplying the conventional island.



10 DOWNING STREET

John

the Private Office at Industry have 'phoned through an addition to the Sos's draft reply to load Kadoone

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Licometances ask you to associate youself with a proposal which dis regards these .

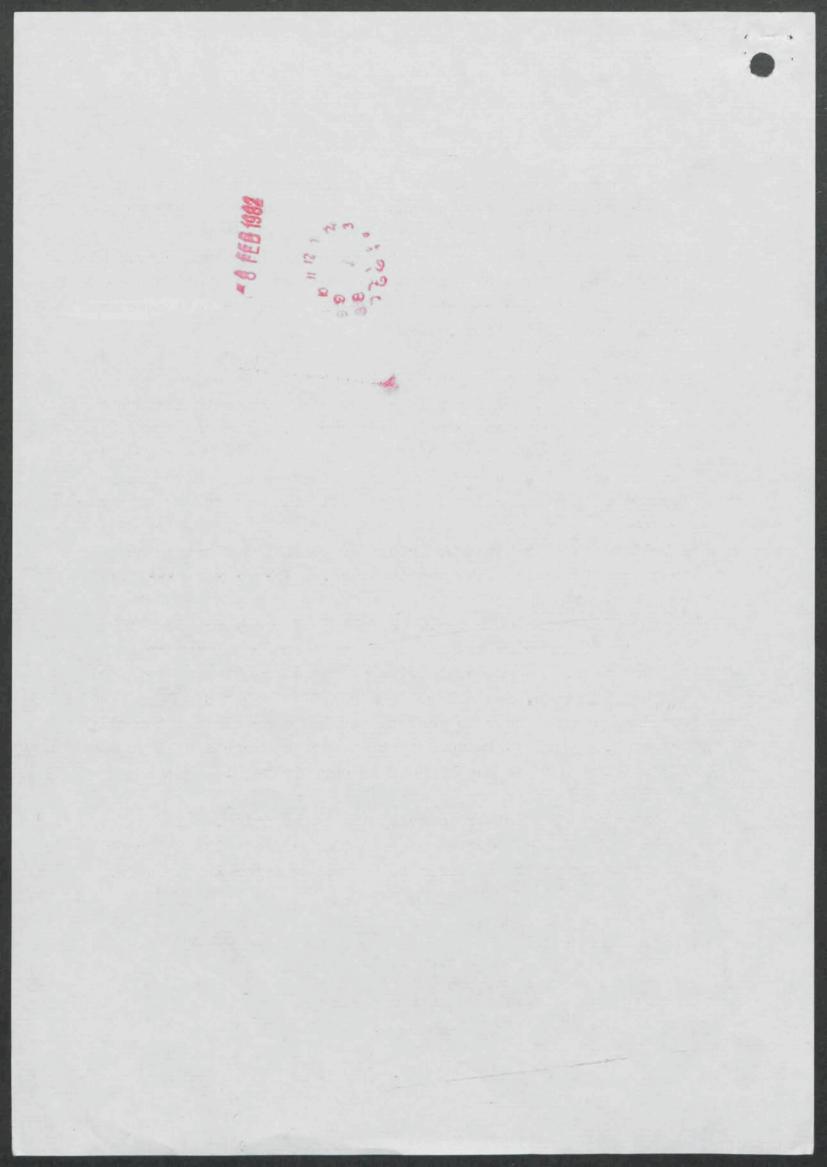
DRAFT LETTER FROM THE PRIME MINISTER TO LORD KADOORIE

On his return from Hong Kong Michael Jopling told me of his conversation with you about the Guangdong nuclear power project, and he mentioned in particular your unease about the Anglo/American package advocated by the Atomic Energy Authority. I attach especial importance to your personal views on this project, and in view of your reported concern I asked for a full assessment of the present situation.

I am very conscious of your consistent advocacy of an Anglo/ French approach, and I myself believe the arguments in favour of working with Framatome remain very strong. However, I think you will agree that so far we have had conflicting signals from the Chinese in Peking and Canton about when they intend to go forward with this project, and no definitive statement of their preference and a nuclear island supplier. In these circumstances I believe that it would be wrong for the UK to dismiss the prospect of working with Westinghouse. I know you have reservations about this option, and fear it may be rejected by the Chinese as unproven. I fully endorse your views that the UK's first priority must be to meet the requirements of the customer. However, in view of the continuing uncertainties in the situation, I consider it worthwhile for GEC and Westinghouse together to seek to develop a credible alternative proposal. Until Chinese intentions are clearer I believe flexibility must be the keynote in our strategy.

attacked note

I hope this will help to clarify the UK position. I shall continue to follow developments on the project with interest, and look forward to my visit to Hong Kong later in the year.



Cr Sura Brita Politic RM chia Mayora 10 DOWNING STREET 26 January 1982 THE PRIME MINISTER Thank you for your letter of 23 December inviting me to perform the official opening ceremony of the Castle Peak "A" power station in Hong Kong during my proposed visit to the Far East in September of this year. I should be delighted to and very much look forward to the occasion. We can consider precise dates later. It is kind of you to invite Denis too. I am sure that he would love to be present if we travel together on this occasion. May I bear this in mind until the final shape of my visit is settled. I was interested to learn that the Guangdong Power Company intends to send a delegation to this country in February to visit the GEC turbine works in connection with the projected nuclear power station in Guangdong Province. I would have liked to hear a first-hand report from your senior executive, Mr Stones, when he visits the UK but I am afraid my diary is already heavily committed in February. I wonder if Mr Stones could call on one of the Ministers in the Department of Industry to discuss progress on the project. I know they would be interested to hear. I look forward to seeing you in the Autumn if not before. (SGD) MARGARET THATCHER The Rt Hon the Lord Kadoorie, CBE, JP

AKap Foreign and Commonwealth Office London SW1A 2AH 22 January 1982 Dem John, A. f. C. 25 Official Opening of Castle Peak
'A' Power Station Thank you for the copy of your letter of 19 January to Caroline Varley. As a project of great significance to the UK and to Hong Kong, the Castle Peak 'A' Power Station deserves to have attention drawn to it by a prestigious opening ceremony. We strongly support the proposal that the Prime Minister perform the inauguration and foresee no difficulty in incorporating this in her programme in Hong Kong. I am sending copies of this letter to Caroline Varley (DOI) and John Rhodes (DOT). yours pur Lyne (R M J Lyne) Private Secretary

> A J Coles Esq 10 Downing Street

figal Initation for . A. 10 DOWNING STREET From the Private Secretary 19 January 1982 OFFICIAL OPENING OF CASTLE PEAK "A" POWER STATION You wrote to Mike Pattison on 18 January. As it happens, the Chief Whip, who has recently visited Hong Kong, told the Prime Minister yesterday that Lord Kadoorie nad also expressed to him the hope that Mrs. Thatcher, during her own visit to Hong Kong in September, would be able to inaugurate the Castle Peak "A" Power Station. The Prime Minister told the Chief Whip that she would very much like to do this. Subject to confirmation from the Foreign and Commonwealth Office that they see no difficulty in incorporating this event in the programme, I shall therefore place your letter and the proposed reply to Lord Kadoorie before the Prime Minister soon. Lord Kadoorie also discussed with the Chief Whip the latest situation regarding the Guangdong nuclear power station. He apparently argued that the only way of the UK obtaining a share of this business was to follow the approach which I understand he and Lord Weinstock had recommended earlier, namely that of a UK/French package. He believed that the line advocated by the UK Atomic Energy Authority, while it envisaged a bigger share of work to UK firms, had little or no chance of success. The Prime Minister made no comment on this point, but would be grateful for an assessment of the situation. I am sending copies of this letter to Roderic Lyne (Foreign and Commonwealth Office) and John Rhodes (Department of Trade). A.U. COLES Ms. Caroline Varley, Department of Industry.



Secretary of State for Industry

DEPARTMENT OF INDUSTRY ASHDOWN HOUSE 123 VICTORIA STREET LONDON SW1E 6RB

TELEPHONE DIRECT LINE 01-212 3301
SWITCHBOARD 01-212 7676

18 January 1982

Mike Pattison Esq Private Secretary to the Prime Minister 10 Downing Street London SW1

Har Mike,

OFFICIAL OPENING OF CASTLE PEAK "A" POWER STATION

I enclose an invitation which Lord Kadoorie, the Chairman of the China Light and Power Company (CLP) of Hong Kong, has requested we forward to the Prime Minister asking whether she would be willing to perform the official opening ceremony of the Castle Peak "A" Power Station in Hong Kong during her visit to the Far East in September of this year.

- 2 The project is of special significance to the UK for a number of reasons. As a result of an approach by Lord Kadoorie, the Department of Industry has co-ordinated the expertise of UK manufacturing industry, the electricity supply industry and the financial institutions in the City of London in securing for the UK orders with a present day value in excess of £1,000 million. The Prime Minister may recall that the latest of these orders was for the "sister" Castle Peak "B" power station, placed in August 1981: this was perhaps the largest single export contract ever awarded to the UK. There are excellent opportunities for the UK to continue this mutually beneficial relationship. As part of their ambitious development programme CLP are now planning joint ventures with the Chinese authorities on a nuclear power station and a pumped storage scheme in the adjacent province of Guangdong. If successful, these will have considerable political significance for the future relationship between Hong Kong, the UK and the People's Republic of China after the expiry of the UK lease on the New Territories in 1997. Accordingly we strongly recommend that the Prime Minister accept his invitation.
- 3 Lord Kadoorie suggests that it would be useful for the Prime Minister to discuss the Guangdong nuclear power station project with Mr Stones, CLP's senior executive, when Mr Stones accompanies a delegation from the Guangdong Power Company which



intends to visit the UK in February. However, we do not believe that it is appropriate for the Prime Minister to agree to see Mr Stones: the visit and its timing are somewhat uncertain and there may be few substantive new developments to report. We suggest that Mr Stones should be invited to give his report to a Department of Industry Minister.

4 If the Prime Minister is willing in principle to undertake the opening ceremony of the Castle Peak "A" station she may care to reply to Lord Kadoorie along the lines of the attached draft letter.

CAROLINE VARLEY
Private Secretary

. JU934 DRAFT REPLY FOR THE PRIME MINISTER TO SEND TO: It is hind of you to involte Lord Kadoorie CBL Denis too. I am some that he St George's Building Hong Kong would love to be present if we towal together on the occasion. May I bear this in wind will the final shape of my visit is suttled. Thank you for your letter of 23 December inviting me to perform the official opening ceremony of the Castle Peak "A" power station in Hong Kong during my proposed visit to the Far East in September of this year. Subject to any over-riding and unpredictable commitments that may occur I am delighted to accept your kind invitation. Perhaps some provisional dates for the ceremony could be explored through your contacts in the Department of Industry on much love fund to the occasion. We can canida precise dates later of I am interested to learn from your letter that the Guangdong Power Company intends to send a delegation to this country in February to visit the GEC turbine works in connection with the projected nuclear power station in Guangdong Province. I would have liked to hear a first - hand regot I am sure that I would find it of great interest to hear at first hand from your senior executive, Mr Stones, when he visits the UK but I am afraid my diary is already heavily committed in February. However, I would be most grateful if Mr Stones could call on one of my Ministers in the Department of Industry to discuss progress on the project and I have asked that the necessary arrangements be made. I shall certainly ask for a report on the outcome of the visit. I have they would be intoented to hear. main you Meanwhile I look forward to taking up your kind invitation and to visiting Hong Kong in the Autumnia wt below. DOL 25.

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FOLLOWING IS TEXT OF LETTER DATED 23 DECEMBER TO LORD WEINSTOCK.

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BEGINS

DEAR ARNOLD,

PROPOSED NUCLEAR POWER STATION FOR GUANGDONG PROVINCE

THIS LETTER IS WRITTEN IN ORDER TO BRING YOU UP-TO-DATE AS TO THE LATEST POSITION REGARDING THE PROPOSED NUCLEAR POWER STATION FOR GUANGDONG PROVINCE.

LAST WEEK-END, MR. STONES ATTENDED A MEETING IN CANTON AT WHICH HE WAS TOLD THERE WAS NOW A LIKELIHOOD OF THIS GOING AHEAD.

FOLLOWING THIS MEETING AND OUR ADVISING BOTH BOB DAVIDSON AND MR. MANZIE OF WHAT HAD TAKEN PLACE, YOUR PEOPLE TELEXED MR. CHEN GANG INVITING THE CHINESE TO SEND A DELEGATION TO ENGLAND TO SATISFY THEMSELVES AS TO SUITABILITY OF UTILISING GEC TURBINES IN THIS PROJECT.

SUFFICE TO SAY THAT THE TURBINES GEC ARE OFFERING ARE REGARDED BY THE CHINESE SOMEWHAT AS PROTOTYPES, AND THAT THEY ARE LOOKING TO CHINA LIGHT AND POWER CO. LTD., FOR ADVICE AND GUIDANCE. IT IS AT THEIR INSISTENCE MR. STONES WILL BE ACCOMPANYING THE DELEGATION.

BY THE CHINESE SOMEWHAT AS PROTOTYPES, AND THAT THEY ARE LOOKING TO CHINA LIGHT AND POWER CO. LTD., FOR ADVICE AND GUIDANCE. IT IS AT THEIR INSISTENCE MR. STONES WILL BE ACCOMPANYING THE DELEGATION. THE RELATIONSHIPS BETWEEN MR. SHIH, CHAIRMAN OF GUANGDONG POWER COMPANY (GPC) AND MYSELF, AND BETWEEN MR. STONES AND HIS OPPOSITE NUMBER, MR. CHEN GANG, WHO WILL BE HEADING THE CHINESE DELEGATION, ARE PARTICULARLY CLOSE AND ARE BASED ON IMPLICIT TRUST. NEITHER PARTY WILL DO ANYTHING THAT WOULD IN ANY WAY PREJUDICE THE INTERESTS OF THE OTHER. I AM CONVINCED THAT IT IS TO THE MUTUAL INTEREST OF ALL OF US TO ELIMINATE COMPETITION AND TO CREATE THE RIGHT CLIMATE FOR A NEGOTIATED CONTRACT ALONG SIMILAR LINES TO CHINA LIGHT'S NEGOTIATIONS FOR THEIR CASTLE PEAK POWER STATION AT TAP SHEK KOK. WITH THIS IN MIND, I AM PARTICULARLY ANXIOUS TO AVOID INTERFERENCE IN THE FORM OF A HYBRID PROPOSAL, UNDER THE GUISE OF A BRITISH PACKAGE, BEING SUBMITTED TO OUR FRIENDS DURING THEIR VISIT TO ENGLAND. IF A UK/WESTINGHOUSE/BECHTEL PACKAGE IS PROPOSED IT WILL MEAN THAT A NUMBER OF OTHER PACKAGES FROM INTERNATIONAL SUPPLIERS WILL HAVE TO BE CONSIDERED IN WHICH CASE I AM CONFIDENT ALL BRITISH PARTICIPATION WILL BE ELIMINATED. THE ADDAGE THAT HALF A CAKE IS BETTER THAN NO CAKE AT ALL IS PARTICULARLY APPROPRIATE AT THE PRESENT TIME. I AM GRATEFUL TO YOU FOR HAVING SENT ME A COPY OF YOUR LETTER TO OUR MUTUAL FRIEND AND WISH YOU TO KNOW THAT MY VIEWS, WHICH ARE FULLY SHARED BY MR. STONES, HAVE NOT CHANGED AND HAVE BEEN REINFORCED IN THE LIGHT OF EXISTING CIRCUMSTANCES. SEASON'S GREETINGS AND BEST WISHES, LAWRENCE. ENDS MARCH MMMM

IMMEDIATE HOFO Ø14/24 00 D 0 1 JE DESKBY 240900Z Hd/FED HOLHED 00 F C 0 Hal/制KGD GPS 300 PS/PUS PSILIS Sir E Youde Ar Goodison CONFIDENTIAL DESKBY 240900Z FM B T C HONG KONG 240347Z DEC 81 - DOT (3) PE NO 10 DS TO IMMEDIATE DOI RC TELEGRAM NUMBER INDUS 192 OF 24 DECEMBER INFO IMMEDIATE FCO INFO SAVING PEKING MIPT FOLLOWING IS TEXT OF LETTER DATED 23 DECEMBER TO PRIME MINISTER:-BEGINS DEAR PRIME MINISTER. FROM A RECENT ANNOUNCEMENT APPEARING IN THE PRESS I WAS GLAD TO LEARN THAT THERE IS A POSSIBILITY OF YOUR VISITING CHINA SOMETIME DURING 1982. WITH THIS IN MIND, AND KNOWING YOU WILL BE PASSING THROUGH HONG KONG, MAY I , AS CHAIRMAN OF CHINA LIGHT AND POWER CO LTD (CLP), EXTEND TO YOU AN INVITATION TO INAUGURATE OUR NEW POWER STATION AT TAP SHEK KOK WHILST YOU ARE IN THIS PART OF THE WORLD. TO CASTLE PEAK POWER COMPANY LTD (CAPCO), YOUR ACCEPTANCE WOULD BE BOTH AN HONOUR AND A PLEASURE. WE ALSO BELIEVE THAT COMING AT THE TIME OF YOUR VISIT TO CHINA IT COULD DO MUCH TO ENCOURAGE FURTHER PROJECTS WHICH WOULD BE OF BENEFIT TO BRITISH INDUSTRY. THE GUANGDONG POWER COMPANY (GPC) WILL SHORTLY BE SENDING A DELEGATION TO THE UNITED KINGDOM TO VISIT THE GEC TURBINE WORKS AT RUGBY. THIS, IN CONNECTION WITH THE PROJECTED NUCLEAR POWER STATION FOR GUANGDONG PROVINCE. OUR SENIOR EXECUTIVE, MR STONES, WHO HAS BEEN VERY CLUSE TO THIS PROJECT SINCE ITS INCEPTION WILL BE ACCOMPANYING THEM. MR MANZIE OF YOUR DEPARTMENT OF INDUSTRY IS FULLY IN THE

PICTURE. HOWEVER, IN VIEW OF THE IMPORTANCE OF THE PROJECT TO

THIS PROJECT SINCE ITS INCEPTION WILL BE ACCOMPANYING THEM.

MR MANZIE OF YOUR DEPARTMENT OF INDUSTRY IS FULLY IN THE

PICTURE. HOWEVER, IN VIEW OF THE IMPORTANCE OF THE PROJECT TO

BRITAIN, IF YOU COULD SPARE THE TIME FOR A BRIEF INTERVIEW,

BELIEVE IT WOULD BE CONSTRUCTIVE FOR YOU TO SEE MR STONES AND HEAR

FROM HIM, FIRST HAND, OF THE VERY SENSITIVE RELATIONSHIP WHICH

HAS DEVELOPED BETWEEN-CLP AND THE GPC OVER THE PAST EIGHTEEN MONTHS.

WITH SEASONS GREETING AND ALL GOOD WISHES FOR 1982.

YOURS SINCERELY,

KADOORIE.

ENDS

MARCH

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PS/HOID DS DESKBY 240900Z HOYHKED 00 F C 0 PS/LPS GRS 90 Ps/Pus CONFIDENTIAL Sir Eyoude DESKBY 240900Z Mr. Goodison FM B T C HONG KONG 240345Z DEC 81 TO IMMEDIATE DOI TELEGRAM NUMBER INDUS 191 OF 24 DECEMBER INFO IMMEDIATE FCO INFO SAVING PEKING MY INDUS 183 AND 189. PRIME MINISTER'S VISIT. KADOORIE HAS JUST SENT ME LETTERS TO THE PRIME MINISTER AND LORD WEINSTOCK FOLLOWING THE DEVELOPMENTS ON THE GUANGDONG PROJECT REPORTED IN MYTELS INDUS 187 AND 188. SEE MIFTS FOR TEXTS. ORIGINALS PLUS A FURTHER PERSONAL LETTER TO THE PRIME MINISTER EXTENDING THE INVITATION TO HER HUSBAND FOLLOW BY BAG LEAVING HERE ON 28 DECEMBER ADDRESSED TO HAVELOCK. 2. YOU WILL NOTE THE FIRM RE-STATEMENT OF KADOORIE'S OPPOSITION TO A UK/WESTINGHOUSE/BECHTEL NUCLEAR ISLAND. MARCH NNNN

FROM The Rt. Hon. the Lord Kadoorie, CBE, JP St. George's Building

Hong Kong December 23, 1981 The Rt. Hon. Mrs. Margaret Thatcher, MP Prime Minister 10 Downing Street London SW1 ENGLAND Dear Mrs. Thatcher, I have today sent you an official invitation to inaugurate our new power station on your next visit to this part of the world. Should you be able to accept, I should like to add a personal invitation to your husband, as we would be delighted to show him Hong Kong at this most interesting period in its historical development. Needless to say, it would give us great pleasure if you are both able to fit this into your busy schedules. Sincerely yours, Hadoorig. Kadoorie

St. George's Building
Hong Kong FROM The Rt. Hon the Lord Kadoorie, CBE, JP December 23, 1981 The Rt. Hon. Mrs. Margaret Thatcher, MP Prime Minister 10 Downing Street London SW 1 ENGLAND Dear Prime Minister, From a recent announcement appearing in the Press I was glad to learn that there is a possibility of your visiting China sometime during 1982. With this in mind, and knowing you will be passing through Hong Kong, may I, as Chairman of China Light & Power Co. Ltd. (CLP), extend to you an invitation to inaugurate our new power station at Tap Shek Kok whilst you are in this part of the world. To Castle Peak Power Company Ltd. (CAPCO), your acceptance would be both an honour and a pleasure. We also believe that coming at the time of your visit to China it could do much to encourage further projects which would be of benefit to British industry. The Guangdong Power Company (GPC) will shortly be sending a delegation to the United Kingdom to visit the GEC Turbine Works at Rugby. This, in connection with the projected nuclear power station for Guangdong Province. Our senior executive, Mr. Stones, who has been very close to this project since its inception will be accompanying them. Mr. Manzie of your Department of Industry is fully in the picture. However, in view of the importance of the project to Britain, if you could spare the time for a brief interview, I believe it would be constructive for you to see Mr. Stones and hear from him, first hand, of the very sensitive relationship which has developed between CLP and the GPC over the past eighteen months. With Season's Greetings and all good wishes for 1982. Yours sincerely Kadonis:

CCRETURNETAL Minera Chia SECRETARY OF STATE FOR ENERGY THAMES HOUSE SOUTH MILLBANK LONDON SWIP 40J 01-211-6402 Rt Hon Patrick Jenkin MP Secretary of State for Industry Department of Industry Ashdown House 123 Victoria Street London 22 October 1981 SWl GUANGDONG NUCLEAR POWER STATION Thank you for copying to me your minute of 7 October to the Prime Minister. I am glad to see that increased emphasis will now be placed on the UK/Westinghouse option and that my officials will continue to be closely involved in developing policy on this project. NIGEL LAWSON

CONFIDENTIAL Chain

12 October 1981

Guangdong Nuclear Power Station

The Prime Minister has seen and noted your Secretary of State's minute of 7 October.

I am sending a copy of this letter to John Kerr (HM Treasury), Brian Fall (Foreign and Commonwealth Office), Julian West (Department of Energy) and David Wright (Cabinet Office).

Michael Shotar

I. K. C. Ellison, Esq., Department of Industry.

CONFIDENTIAL



PRIME MINISTER

Prime Minister

CONFIDENTIAL

To note that Mr Jenkin aims to keep open The possibilities of collaboration both with the french and the U.S. (I understand that there has earlier disgreement about whether to pushe the French or the US connection). M. Lanson,

GUANGDONG NUCLEAR POWER STATION (am bow), agrees with this line.

I have seen the record of your and Nigel Lawson's meeting with Dr Marshall of UKAEA, Mr Reinsch of Bechtel Corporation and Mr Stern of Westinghouse. So far my Department has taken the lead on the Guangdong nuclear project and I believe it would be appropriate for them to continue to do so. My officials will continue to consult their colleagues in the Department of Energy and in other interested departments in the development of policy.

The charts presented by Mr Stern showing the possible amount of work which might be done in the UK on the Guangdong nuclear projects do not differ greatly from estimates which have been made previously by my officials and those of the Department of Energy and the UKAEA. There is no dispute that a UK/Westinghouse package could provide greater industrial benefits to the UK than a UK/Framatome package. When Ministers decided in February this year to give greater emphasis to the UK Framatome option, while keeping the Westinghouse option, a major factor was the view that China was likely to place the reactor supply contract with Framatome in fulfilment of a commitment to Giscard d'Estaing that France would supply China's first two nuclear reactors. factor was the continuing strong pressure from Lord Kadoorie for a UK/Framatome package, at a time when negotiations on Castle Peak 'B' were in their final stages.

Now that the contract for Castle Peak B has been placed in the UK, officials will pursue with greater emphasis the UK/Westinghouse option. However they will need to continue to bear in mind that the final choice of reactor rests with the Chinese Government and



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that they are likely to be heavily influenced by the financial elements of any package deal.

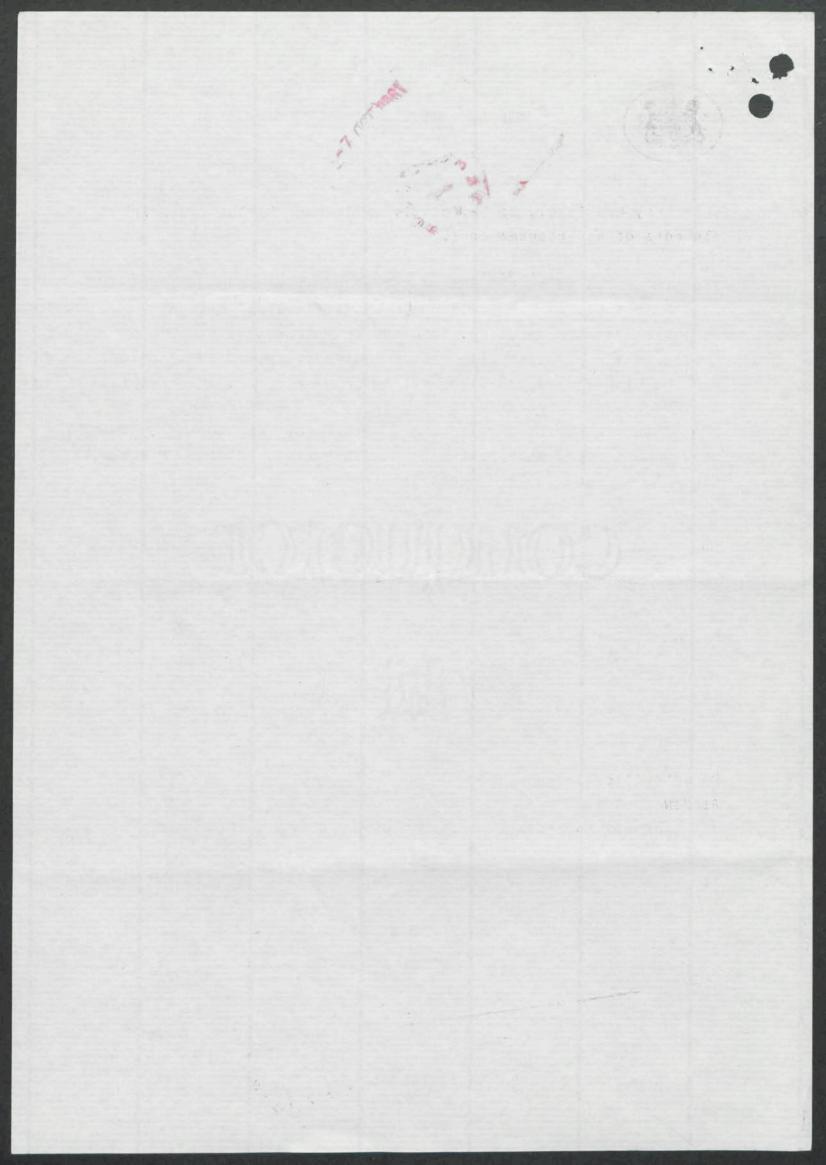
The aim should be to put the UK into a position where we can respond readily to a Chinese decision in favour of either potential reactor supplier. GEC and Framatome have already developed ideas on a collaborative tender but possible means of working with Westinghouse are yet to be worked out. My officials are accordingly arranging further talks with Westinghouse in the near future and will involve other Departments and the AEA. I am sending a copy of this letter to Geoffrey Howe, Peter Carrington, Nigel Lawson and to Sir Robert Armstrong.

PJ

PJ

7. October 1981

Department of Industry Ashdown House 123 Victoria Street





Hyran US

10 DOWNING STREET

From the Private Secretary

30 July 1981

VISIT OF SIR LAWRENCE KADOORIE

I am afraid it will not be possible for the Prime Minister to see Sir Lawrence Kadoorie as she will not be in London between 4th and 17th August.

CAROLINE STEPHENS

Mrs. Catherine Bell, Department of Industry.

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Secretary of State for Industry

Caroline Stephens
Private Secretary to the
Prime Minister
10 Downing Street
London SW1

ASHDOWN HOUSE
123 VICTORIA STREET
LONDON SWIE 6RB

TELEPHONE DIRECT LINE 01-212 3301 SWITCHBOARD 01-212 7676

28 July 1981

Doar Caroline

VISIT OF SIR LAWRENCE KADOORIE

I am writing to let you know that Sir Lawrence Kadoorie, the Chairman of the China Light and Power Company, will be visiting the United Kingdom again from 4-17 August. He has asked whether it would be possible for him to see the Prime Minister sometime between 7 and 14 August.

2 Since his last visit and meeting with the Prime Minister on 30 July 1980, negotiations have been successfully concluded on the Castle Peak B power station project and full commercial contracts are expected to be signed on 27 August in Hong Kong. Largely in recognition of his efforts to persuade China Light's partner (a subsidiary of Exxon) to enter into negotiated contracts with UK firms instead of using normal international tendering procedures, Sir Lawrence was awarded a life peerage in the recent Honours List (but he has not yet chosen his title).

A further meeting with the Prime Minister would enable Sir Lawrence to explain to her the increasing likelihood of two joint ventures with the Chinese being established and the effect that this may have on future Hong Kong/China relations. The Guangdong nuclear power project is a hydro-electric scheme which would be sited in China and supply power to both China and Hong Kong.

4 The Foreign and Commonwealth Office have expressed their support for this request for a meeting. I would be grateful if you would let me know whether the Prime Minister wishes to see Sir Lawrence.

CATHERINE BELL Private Secretary

Jours sincerely

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CC: DIJ Hay May

10 DOWNING STREET

28 April 1981

THE PRIME MINISTER

Dear Sir Lawrence,

Thank you very much for your letter of 1 April.

The agreement reached on the Castle Peak B Station was indeed marvellous news, and I was delighted that it proved possible to bring the long and difficult negotiations to a successful conclusion. We very much hope that the Castle Peak B orders may pave the way, as you suggest, towards a joint venture for the Guangdong nuclear project.

All good wishes and many thanks for the vital part you have played in all these matters.

Yours sincerely,

(sgd) MT

Sir Lawrence Kadoorie, CBE, JP.

Syle flu Itale) to deal -JH 42 MS 24/4 DEPARTMENT OF INDUSTRY ASHDOWN HOUSE 123 VICTORIA STREET LONDON SWIE 6RB TELEPHONE DIRECT LINE 01-212 3301 SWITCHBOARD 01-212 7676 Secretary of State for Industry 24 April 1981 Anis Mish wir Tim Lankester Esq Private Secretary to the Prime Minister 10 Downing Street London SW1 Dear Tim Thank you for your letter of 1/3 April seeking a response that the Prime Minister might send to Sir Lawrence Kadoorie in answer to his letter of I April. I attach a draft reply. The background is I think well known. China Light and Power and their Associates, Esso Eastern (part of the Exxon Corporation) have now signed letters of intent with GEC for the Castle Peak 'B' power station in Hong Kong with a value to UK industry of at least £550m. Contracts should be signed by 1 August and the project is the largest power plant order ever secured by the UK. 3 CLP are continuing to discuss with the Guangdong Power Company the possibility of a joint venture nuclear power station. The feasibility report for this is currently being discussed in Peking and the Foreign Secretary during his recent visit emphasised the UK's interest in participating in the project stressing the significance of the Hong Kong connection. Ministers have approved the exploration of an Anglo/French option and this is still being pursued. Sir Lawrence Kadoorie will be visiting the UK later this year. He has seen the Prime Minister on previous occasions and if this were possible again, depending of course on the Prime Minister's programme, then she might mention this in her reply. Private Secretary



DRAFT LETTER FOR PS/PRIME MINISTER TO SEND TO

Sir Lawrence Kadoorie Chairman China Light and Power Co Ltd St George's Building Ice House Street Hong Kong

Thank you for your letter of 1 April. The agreement reached on the Castle Peak B Station is indeed excellent news, and a clear demonstration of the confidence you have in the competitiveness of British industry. It is also further proof of the special relationship that exists between China Light and Power, the Exxon Corporation and the United Kingdom. The development of even closer ties between the UK, Hong Kong and the Peoples Republic of China is also an objective to which we are both committed.

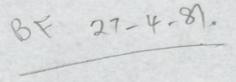
(I hope that we shall be able to meet on your next visit to

prome posses to to bring the long to my the reg much hope that the Constre Peak B to control as you want to the pare the way, towned as you arrest, for towneds a joint renture for the congest, the Grand and middle project.



ack seat to SirL. looking for papers.

13 April 1981



I attach a letter the Prime Minister has received from Sir Lawrence Kadoorie.

The Prime Minister will wish to send a reply to Sir Lawrence and I should be grateful if you could let me have a draft reply by 27 April.

TPL

Ian Ellison, Esq., Department of Industry. 2

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10 DOWNING STREET

From the Private Secretary

10 April 1981

I am writing to acknowledge your letter of 1 April which we have only received today. I will of course place this before the Prime Minister at once.

T. P. LANKESTER



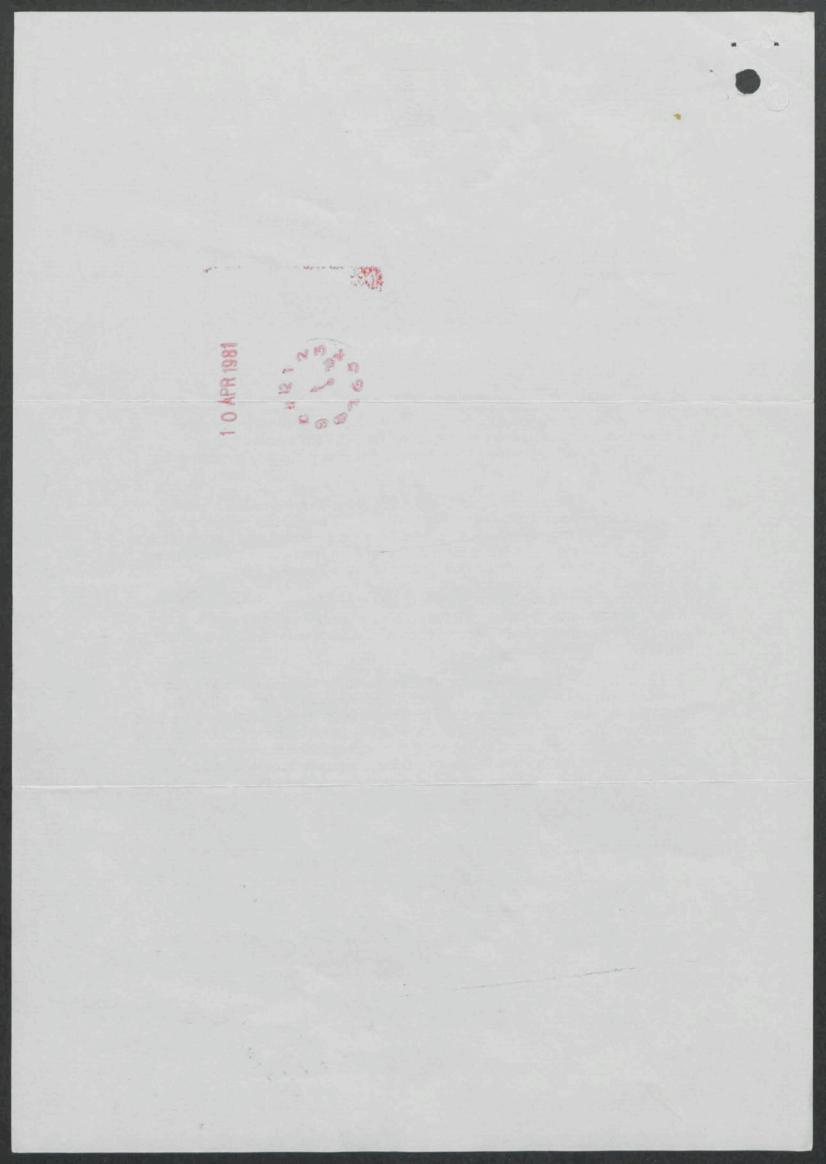
10 DOWNING STREET

PRIME MINISTER

I will pass this letter from Lawrence Kadoorie to the Department of Industry for a draft: I think you will wish to send a short reply.

Is - willow order fried

St. Goorge's Building Cables "Kadoorie" Hong Kong Tolophone: 5-249221 Hong Kong Tolox: 73427 April 1, 1981 The Rt. Hon. Mrs. Margaret Thatcher, M.P. Prime Minister 10 Downing Street London S.W. 1 ENGLAND Dear Prime Minister, It gives me great pleasure to be able once again to report the satisfactory conclusion of arduous and difficult negotiations which have involved your Government, the Hong Kong Government, Exxon and China Light & Power Co. Ltd. Our negotiations which, over the past three years, have resulted in orders worth more than £1,000 million being placed in the United Kingdom, reflect great credit on all concerned and, in particular, Mr. A.G. Manzie, who led the team from your Department of Industry and Mr. W.F. Stones, leader of our China Light & Power team. Thank you for your personal interest and assistance which have been invaluable throughout. We were delighted to have had Lord Carrington and his party present at the new Power Station site on the day of announcement. With the completion of the recent study we have carried out together with the Guangdong Power Company on the feasibility of building a nuclear power station in Guangdong Province, I believe that with careful handling the orders to which I have referred above can be regarded as a further step towards the accomplishment of what may be described as the world's greatest joint venture i.e. the future relationship between the United Kingdom, Hong Kong and China. With best wishes, Sincerely yours, Lawrence Kadoorie LK/mw





10 DOWNING STREET

PRIME MINISTER

Confirmation from Sir Keith, that barring a last minute hitch, we have won the Castle Peak B contract without the additional concessions which were agreed at the last meeting of EX Committee. The contract still has to be endorsed by the Esso Eastern Board; until it has been, no announcement can be made. It is hoped that the contract can be announced on 30 March when Lord Carrington will be visiting Hong Kong.

T.P. Lankester

24 March 1981



CONFIDENTIAL

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PRIME MINISTER

HONG KONG: CASTLE PEAK B POWER STATION

I am very glad to report that the negotiations in Hong Kong have gone well and that the negotiating committee which conducted the discussions on behalf of China Light and Power (CLP) and their partners, Esso Eastern, has recommended to the respective Boards that the UK offer should be accepted. Final clearance may take a few days, but Esso hope Board approval will be given by 27 March which would allow a Letter of Intent to be signed before the end of the month.

During the discussion, CLP again showed the tough bargaining attitude experienced during the previous negotiations for the Castle Peak A Station and Transmission contracts. They were assisted on this occasion by two teams of international consultants (from the USA and Switzerland) and they queried the UK prices for a large number of items whose combined value amounted to over 60% of the total. The equipment suppliers were forced to make a number of price adjustments and in all a price reduction of about £28 million was agreed. Most of the reductions were made by Babcock Power because the GEC Turbine Generators' prices were, according to the consultants, much more competitive.



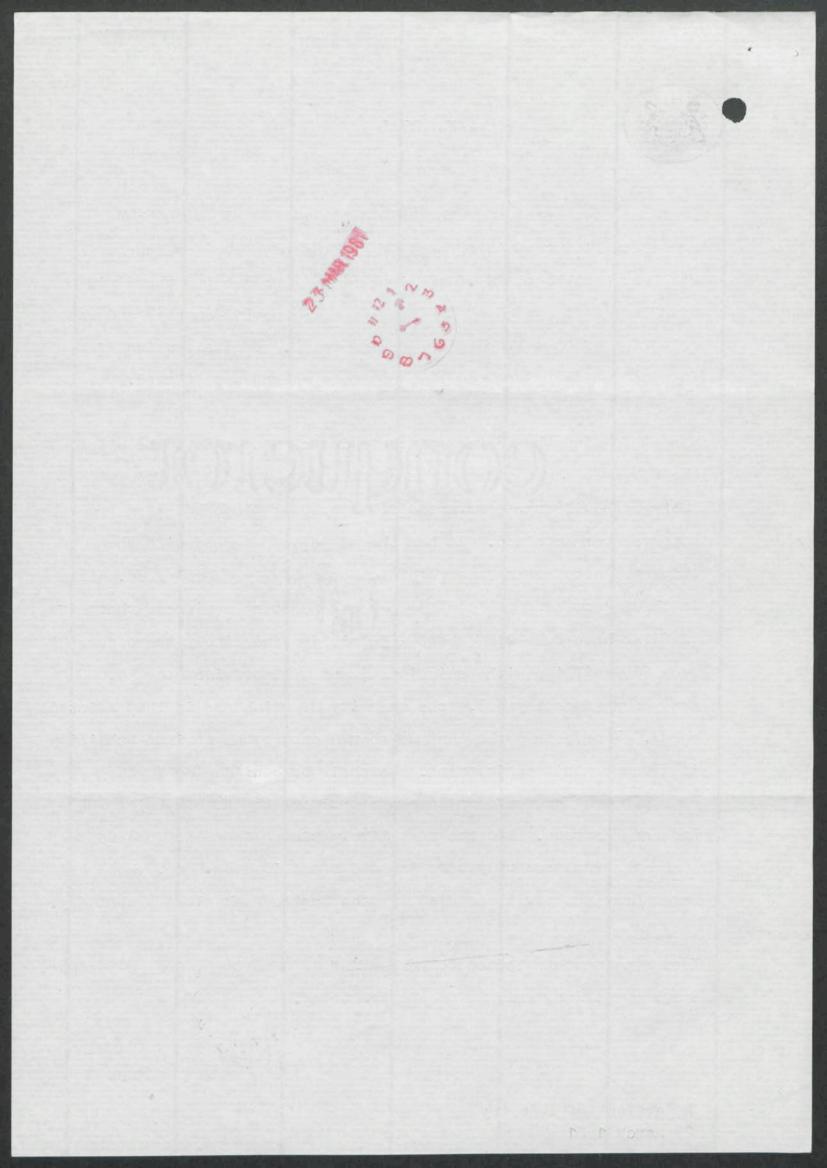
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From the Government side the only concessions made were those agreed by Ministers in respect of consultancy services (these will now cost about £13.5 million which is well below the limit of £20 million agreed at the meeting of EX on 21 January) and the reduction of Cost Escalation premium to 1%. Capitalisation of interest which was agreed at EX on 9 March was not offered.

When informing the UK team of their decision to accept the offer, the CLP/Esso negotiators stressed that they would be severely embarrassed if any premature disclosure took place before Board approval was obtained. It has therefore been agreed with them that publicity arrangements should be carefully coordinated. This is the largest export order for power generating equipment that UK firms have ever won (about £550 million and likely to reach over £600 million with variations), and will provide over 34,000 man years of employment, the majority of which are in the assisted areas. I have no doubt that we should ensure the maximum publicity is given to this achievement. We shall be considering further how this can best be done in consultation with the companies, CLP and Esso Eastern. But the most likely timing is an announcement on 30 March simultaneously here in London and in Hong Kong, where Peter Carrington will be visiting the Castle Peak site on that day.

I am copying this letter to Members of EX Committee, George Younger, Humphrey Atkins, and Sir Robert Armstrong.

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PRIME MINISTER

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Castle Peak B

Kenneth Baker told you that we have won the Castle Peak B order. This was news to us. However, I have now spoken to the Department of Industry who tell me that the order appears to have been won without the further concessions that were agreed could be given at the last meeting of Ex. The Department and the companies don't yet have absolutely firm confirmation that the order has been secured; therefore, nothing should be said about it for the time being.

Keith Joseph will be minuting you reporting the outcome of the negotiations on Monday.

T. P. LANKESTER

20 March, 1981.

Prince Miss CONFIDENTIAL at least for the moment not to press for the PRIME MINISTER lost escalation concession. He says SEC may be CASTLE PEAK "B" STATION, HONG KONG able to get the contra miton At EX on Monday (EX(81)2nd) Cecil Parkinson and I were invited 73 to reconsider the case for any further subsidy measures beyond the capitalisation of interest agreed at the meeting. We were invited to consult the Chairman of GEC with a view to persuading GEC to finance any further concession on the price offered. Officials here have talked to GEC, and in addition to Babcocks since the latter are in fact responsible for more than 50% of the total contract price. Officials have also kept in continuing touch with the negotiations in Hong Kong. Briefly, the negotiations in Hong Kong have concentrated upon the hardware prices: the CLP/Exxon side, advised by an American consultant, have challenged more than 60% of the price items. Between them the British companies have conceded more than £20 million to keep within the range of what CLP/Exxon argue as internationally competitive. So far, therefore, the contract prices appear to be moving towards agreement, though further pressures from the customer cannot be ruled out. Negotiations on the financing terms are under way. CONFIDENTIAL



CONFIDENTIAL

- 4 In officials' discussions with GEC and Babcocks the companies have pointed out that ECGD's Cost Escalation Scheme was drawn up in such a way as to provide an incentive to companies using the Scheme to control their costs by requiring them to meet 10% of the total cost of increases above the threshold. At a threshold of 7%, with inflation at 11%, the company's contribution over the whole order would be some £15 million. In the course of undertaking a hardware cost-cutting exercise, with possibly further demands from the customer to come, the companies were understandably reluctant to take on further liabilities, which would not arise if the hardware negotiations broke down. This seems a not unreasonable approach given the state of the negotiations.
- 5 CLP/Exxon have not intimated formally that they wish to question the Cost Escalation threshold. Obviously, until they do, the question of adjusting the threshold from 7% to 5%, at a net present value cost to the Government of £16 million, does not arise. From the outset it was envisaged that no concession would be made until demonstrably necessary.
- 6 In view of the concern of colleagues, our negotiators in Hong Kong will make no move on the Cost Escalation threshold issue. If it becomes crucial our negotiators are reasonably

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sure that they could hold a final decision until Ministers can be contacted. If the issue does become crucial I shall press the companies again. For the moment, therefore, I would not press this, though I would wish to keep open the alternative of returning to colleagues if the threshold issue becomes the lynchpin for securing the order and if I cannot persuade the companies to bridge the entire gap or most of it.

The project remains of great industrial importance, with implications ranging far wider than Hong Kong itself; it would preserve good quality employment in the areas of highest unemployment in the United Kingdom; and its failure would have serious implications for the prospects of British industry in Hong Kong, an aspect particularly stressed by Sir Murray Macclehose when he called on me yesterday. I very much appreciate the readiness of colleagues to accept the capitalisation of interest.

8 I am copying this to Members of EX and to Sir Robert Armstrong.

Catherine Bell

P K J 12 March 1981

(Approved by the Secretary of State and signed in his absence)

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Herekap Ref: A04423 CONFIDENTIAL PRIME MINISTER Castle Peak B Power Station, Hong Kong BACKGROUND At their meeting on 21st January the Committee approved a package of assistance, recommended by the Secretary of State for Industry in EX(81) 1, to enable United Kingdom industry to submit proposals for this contract without competing in international tender (EX(81) 1st Meeting). The main features of the assistance were support from Department of Industry funds of up to £20 million spread over the period 1981-1991 for consultancy services; and charging 1 per cent, rather than the standard 2 per cent, for the ECGD's Cost Escalation premium, at a cost of £17.5 million over the same period, and recognising that further flexibility and a reduction in the premium might be necessary to secure the contract. In his letter of 2nd March to the Chancellor of the Exchequer, the Minister of State, Department of Trade, Mr. Parkinson, recommended two further specific concessions in the light of the negotiating position now reached:-(i) That the ECGD should accept liability under their cost escalation scheme of the amount of annual cost increase incurred above a threshold of 5 per cent rather than the standard 7 per cent. (ii) The offer, if necessary, of some measure of interest capitalisation so that interest due in the pre-commissioning period could be deferred, but not waived. Mr. Parkinson proposes that the cost escalation concession should not be revealed to Parliament or to the European Commission. These concessions are supported by the Secretary of State for Industry, 3. in his letter of 5th March to the Chancellor of the Exchequer, and by the Foreign and Commonwealth Secretary in his minute of 6th March to the Chancel lor. -1-CONFIDENTIAL

CONFIDENTIAL The Chancellor of the Exchequer, however, in his letter of 6th March to the Secretary of State for Trade argues against reducing the cost escalation scheme threshold, although he is prepared to agree to interest capitalisation if this is judged essential to secure the contract. Mr. Ibbs, in his minute of 5th March to Mr. Lankester, has set out the CPRS's doubts on the degree of subsidy now proposed. The note by Department of Industry officials, annexed to Mr. Parkinson's letter of 2nd March, purports to set out the facts on the subsidy. I understand that it is not, however, accepted by the Treasury. On their arithmetic the total subsidy before the present proposals were put forward represented 44 per cent of the total costs of the project - for the basic interest subsidy common to all ECGD support, for the costs of the cost escalation arrangements at a premium of 1 rather than 2 per cent, and for the costs of financing the consultancy services. The percentage for the subsidy goes up to 56 per cent on their calculations if allowance is now made for a cost escalation threshold of 5 per cent and for the extra interest subsidy involved in the capitalisation proposals. 56 per cent compares with the normal subsidy on ECGD schemes of around 35 - 40 per cent. There is little doubt that the degree of subsidy is high but in considering it the Committee will wish to bear the following points in mind: (i) The consultancy services will be financed from the Department of Industry's present public expenditure allocation. (ii) While capitalisation of interest is not always allowed, it is frequently used by ECGD and by our competitors. (iii) Apart from the cost escalation concessions, ECGD's support will be on orthodox terms - they expect to negotiate adequate security for the loans, and the interest rate of $8\frac{1}{2}$ per cent and the credit period of 12 years from commissioning are both in line with OECD consensus arrangements; and (iv) the costs of the ECGD concessions in the present public expenditure period will be negligible. -2-CONFIDENTIAL

- 7. You will recall from the discussion of EX(81) 1 that the contract was thought to offer a chance of a major boost for our power plant industry and to be highly attractive:-
 - (i) It would be the largest power plant export order ever won by the United Kingdom.
 - (ii) In addition to GEC and Babcock, a good number of subcontractors would benefit - see the list at Annex F of EX(81) 1.
 - (iii) There would be about 34,000 man years of work for United
 Kingdom firms from 1981 to 1989 with 68 per cent of this
 in Assisted Areas, and significant benefits for the Glasgow
 area and Larne in Northern Ireland see Annex G of
 EX(81) 1 for details.
 - (iv) It could boost the United Kingdom's chances for further major orders in Hong Kong and the Far East - Department of Industry officials judge that, if GEC fail to get Castle Peak B, the Chinese will rule them out of the Guang ong project; see also the Foreign Secretary's minute of 6th March.

HANDLING

- 8. You will wish to ask Mr. Parkinson and the Secretary of State for Industry to make the case for the proposed concessions and to advise on the state of the negotiations. The Chief Secretary and Mr. Ibbs will then wish to elaborate on their doubts on the degree of subsidy which would be involved if the concessions were made in full. The Lord Privy Seal will want to comment on the wider implications of securing this order.
- 9. Subject to what Mr. Parkinson and the Secretary of State for Industry say, it seems that the negotiators who are now in Hong Kong need firm instructions this week. If this is right, you will need to confirm at the meeting that it is agreed that they can offer interest capitalisation if necessary and whether they can also offer reduction in the cost of escalation threshold to 5 per cent.

- 10. If the concessions are to be made you will wish to decide whether Parliament should be informed. The formal position on the previously proposed package was that unless the assistance is notified to, and cleared with, the European Commission it would be contrary to Community Law. At their last meeting the Committee did not, however, dissent from the Secretary of State for Industry's view that the Commission should not be informed of the assistance either now or later, and that Parliament should not be notified of it when the project was announced. While there are obvious risks in this it seems a necessary procedure to ensure that Commission delay and intervention does not mean the United Kingdom losing the contract; and it is the procedure followed by the last Government for Castle Peak A.
- 11. Whatever the Committee's decision on these proposals, you may also wish to endorse Mr. Ibbs's recommendation paragraph 4 of his minute of 5th March to Mr. Lankester that future cases should be presented against the background of broad and agreed criteria.

CONCLUSIONS

- 12. In the light of the discussion you will wish to record conclusions -
 - (i) confirming whether the negotiators may offer capitalisation of interest if necessary;
 - (ii) ruling on whether they may offer a reduction in the cost escalation threshold from 7 per cent to 5 per cent;
 - (iii) on whether Parliament should be informed of some, or all, of the arrangements;
 - (iv) on any more general conclusions on the criteria to be adopted for future cases.

(Peter Le Cheminant)

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CHANCELLOR OF THE EXCHEQUER

- I have seen Cecil Parkinson's letter of 2 March
 (supported by Keith Joseph in his letter of 5 March) seeking agreement for a reduction in the threshold of the ECGD Cost Escalation Cover Scheme for the Castle Peak 'B' project in Hong Kong from the normal 7% to 5% per annum.
 - 2. I fully support this proposal on the grounds that the order, if secured, would make a sizeable contribution to promoting British commercial interests in Hong Kong and in the Far East generally. Moreover, I share the Governor's wish to see GEC win this contract for wider political reasons.

 Deep concern at the charging of full-cost fees for overseas students and the proposals in the British Nationality Bill have led to accusations in Hong Kong that the United Kingdom is less interested in the Territory. Success in winning this order by HMG making the financial terms as flexible as possible would be an indication that we are committed to maintaining our economic and political involvement in Hong Kong.
 - 3. There are also strong trade promotion reasons for supporting the bid for this order. UK firms will wish to compete for several major projects in Hong Kong, including the extension of the Mass Transit Railway and the construction of a new international airport. The prestige for Britain in securing the Castle Peak 'B' order would greatly aid their efforts. Moreover, the Hong Kong market acts as a 'shop /window'



window' for the rest of the region, especially China. If we are to win orders in these markets we must show ourselves to be competitive in Hong Kong. This is especially valid for the Guangdong Nuclear Power Station project, for which we must maintain the goodwill of the China Light and Power Company and its Chairman, Sir Lawrence Kadoorie. It is due to his efforts that GEC received the offer of exclusive negotiation for the Castle Peak 'B' contract. Failure on our part to provide attractive financial terms for Castle Peak 'B' could sour him in relation to the Guangdong Project.

4. I am copying this letter to the other members of the EX Committee and to Sir Robert Armstrong.

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(CARRINGTON)

Foreign and Commonwealth Office 6 March 1981



Treasury Chambers, Parliament Street, SWIP 3AG 01-233 3000

6 March 1981

The Rt. Hon. John Biffen MP Secretary of State for Trade

hear secretary of state,

CASTLE PEAK "B" POWER STATION PROJECT

Thank you for your letter of 2 March, in which you seek my agreement to two further concessions in the terms of ECGD support for this contract.

I recognise that Keith Joseph's paper for EX noted that further flexibility might be necessary to secure this business. But the concessions you propose would in fact, on the normal market related method of calculating subsidy costs, be more expensive than those we agreed at EX. I am already concerned about the level of subsidy in this case and to be faced with a further significant addition is very worrying. However, I am prepared to agree interest capitalisation, if this is judged essential to secure the contract. But I do not think we should alter the normal 7 per cent threshold for cost escalation cover, which is a key element in the terms of the scheme.

While I recognise the importance of this contract, I doubt whether the further increase in the already very high level of subsidy which would be involved if this concession were agreed could easily be defended. As you acknowledge, the total subsidy could then amount to £180 million or 56 per cent of UK content in NPV terms. In this context, I am also doubtful about the propriety of not informing Parliament of such a significant change in the terms of the scheme. I do not think we should necessarily be guided by the actions of our predecessors on Castle Peak "A".

Apart from the direct public expenditure costs involved,
I am also worried about the repercussions of a concession in
this case. I am not convinced by your argument that it
would be possible to prevent this constituting a precedent;
indeed all the signs are that NEI and other companies engaged
in large project business will be quick to press for similar

/concessions.



concessions. The danger is of a very significant relaxation in the terms of the scheme which would involve a substantial and continuing burden on public expenditure.

I am copying this letter to the recipients of yours.

Yours finasely,
hickard Tolkice,
for, [appoint by the Chancelor and
GEOFFREY HOWE fighted in his abtence]







Secretary of State for Industry

DEPARTMENT OF INDUSTRY
ASHDOWN HOUSE
123 VICTORIA STREET
LONDON SWIE 6RB

TELEPHONE DIRECT LINE 01-212 3301 SWITCHBOARD 01-212 7676

5 March 1981

The Rt Hon Sir Geoffrey Howe QC MP Chancellor of the Exchequer Treasury Chambers Parliament Street London SW1P 3AG

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CASTLE PEAK "B" POWER STATION PROJECT

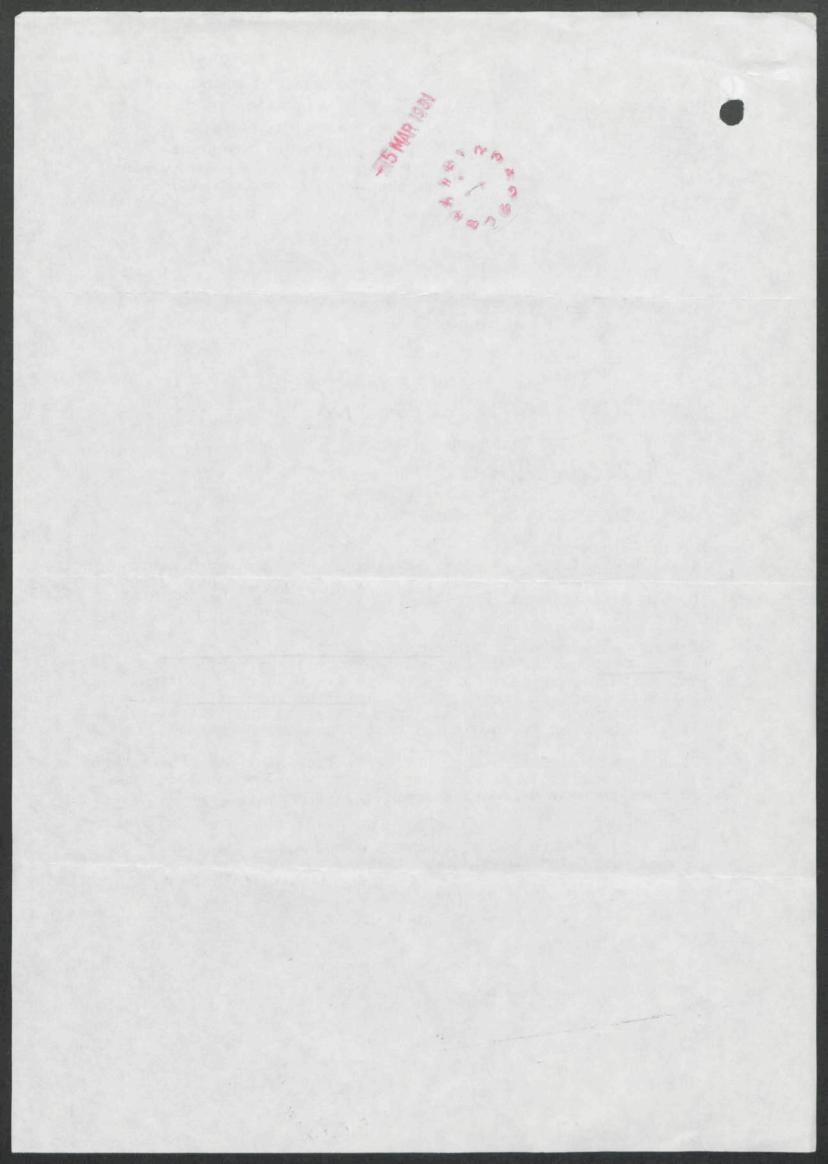
Cecil Parkinson's letter to you of 2 March sets out proposals developed jointly by officials from his and my Departments and ECGD to meet the pressures that are going to be confronted by our officials in the final negotiations for the "B" Station contract.

I share worries about the costs of supporting these large overseas projects. On the other hand a large part of the expenditure implications, particularly on the export credit interest make-up, stems from the level of interest rates and the comparative figures for lower inflation and interest rates illustrate clearly the impact of our present high rates.

This is an extremely important order from many standpoints and I go along with Cecil Parkinson's view that we should be ready to make these additional concessions if necessary to secure this order.

I am copying this letter to Cecil Parkinson, other members of the EX Committee and to Sir Robert Armstrong.

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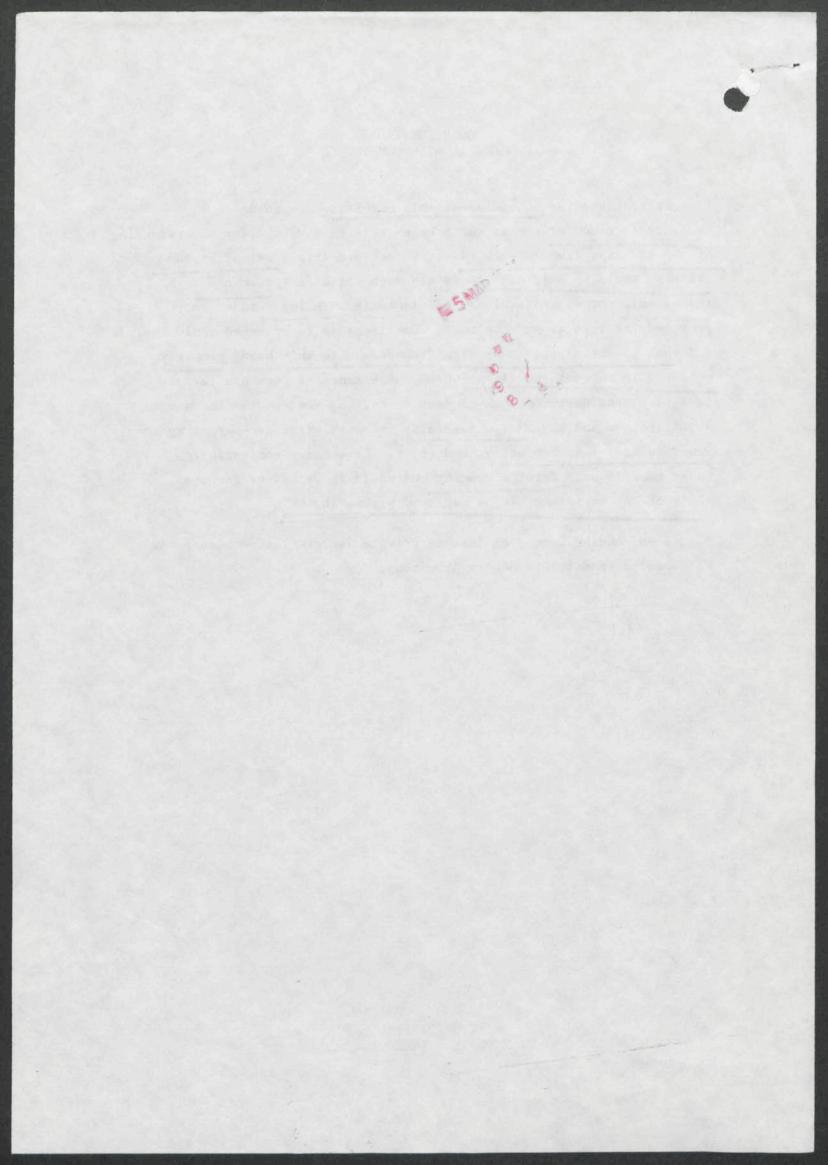
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- 1. When this project was discussed at EX Committee on 21 January, the cost of Government support appeared to be worth around one-third of the UK element of the contract. I sent you a minute expressing my concern in general about such high levels of subsidy, though in the special circumstances of Hong Kong I was prepared to accept that this power station order scraped through.
- 2. EX Committee were warned that the one-third may in the end, however, not be enough of an inducement for the Hong Kong utility to place the order with the UK. Now Cecil Parkinson in his letter to the Chancellor dated 2 March is proposing that our negotiators currently in Hong Kong should be allowed to concede a support level of over one-half. In fact, on the Treasury's agreed net present value basis of calculation, the proposed support of around £180 million would represent 56% of the £320 million that the contract is worth to the UK.
- 3. A subsidy of over 50% does appear to exceed normal commercial prudence. If it were to be justified, one would need very clear evidence of (a) the true importance of the order to the power plant industry, and (b) the value of retaining our position in the Hong Kong market (i.e. the volume of future business likely to arise and the size of subsidies then likely to be extracted). I am not satisfied that such judgements are possible on the evidence at present available. I suggest that those concerned should be asked to give as clear answers as possible to these questions before a decision is taken.

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- 4. If requests for subsidies of this magnitude are going to continue to come forward it would be as well to have a clear understanding of the justification in each case. To achieve this a set of broad criteria would be helpful: there are such criteria for inward investment, where the level of assistance is much lower than that proposed for this export contract. Questions to be answered would include (a) what is the export trade significance and is this being properly measured in current conditions where the balance of payments is far less of a consideration than it used to be, (b) what is the industrial justification and is an export subsidy the most effective way of spending money to assist the industry, and (c) is the subsidy conferring an undue benefit on a foreign economy and would it be better for the whole of any assistance to be deployed within the UK?
- 5. I am sending a copy of this to Private Secretaries of members of EX Committee and to Sir Robert Armstrong.

JA



DEPARTMENT OF TRADE 1 VICTORIA STREET LONDON SWIH OET TELEPHONE DIRECT LINE 01 215 5144 SWITCHBOARD 01 215 7877 From the Minister for Trade The Rt Hon Sir Geoffrey Howe QC MP Chancellor of the Exchequer Treasury Chambers Parliament Street LONDON SWIP 3AG 2 March 1981 Polish shis Kly on Construction Costs Dear Charella CASTLE PEAK "B" POWER STATION PROJECT You will recall that EX Committee met on 21 January to consider the provision of Government support for GEC's attempt to negotiate a contract for this project. The Committee approved the proposals in paragraph 6 of Keith Joseph's paper (EX(81)1), one of which read as follows: "The halving of the ECGD Cost Escalation premium from about £35m to £17.5m, recognising that further flexibility and a reduction in premium may be necessary to secure the contract (this concession would be in addition to the normal assistance being provided to the contract by ECGD)." In accordance with this decision my officials and Keith Joseph's have been considering what measures are necessary to enable GEC to offer a fully competitive price. Following representations by the company, DOI officials have produced a paper (attached) suggesting that the threshold for CEC cover should be 5% parather than the normal threshold of 78 pa. Lott Escustin lover I consider that in the circumstances of this particular contract such a concession would be both defensible and consistent with the decision of EX Committee. A similar concession was, indeed, made by our predecessors in respect of the "A" station, and the attached paper argues that the cost of the concession I propose would be in Ine with the cost of the concession in that case. I should emphasis that this concession is intimately related to the circumstances of Athis particular case, and that I intend to direct ECGD that it is not to be regarded as a precedent. We also have to consider whether Parliament should be informed of this concession. Parliament has been told that the normal threshold is 7% pa; but when our predecessors made a similar concession, on the "A" station, to that which I now propose they took the view that -1-



formal notification to Parliament was unnecessary. I propose to follow this precedent, which would have the advantage of not attracting gratuitous criticism from the Commission.

If GEC are to be able to offer a fully competitive package, I think we shall also need to offer some measure of interest gapitalisation. This technique is widely used by ECGD to allow UK exporters to offer the most attractive bids, and calls for the interest due in the pre-commissioning period to be deferred and repaid together with and over the same period as the principal repayments. Other credit insurers also use this technique, and we understand that some of them have already indicated to the customers that they are willing to offer not only interest capitalisation but also other features which we would have difficulty matching if the project were to go to international tender. For instance, both France and Japan are likely to offer to dispense with progress payments during the manufacturing period. The Japanese in particular are known to give high priority to winning a major power station order in Hong Kong because of the wider effects it would bring for their prestige in Southern Asia. Equally, the UK industry claims that its prospects would be severely damaged in this area if this order were lost. It is significant that the Japanese success in winning the (smaller) order for the Hong Kong Electric station, like the British success in winning the Mass Transit contract, depended at least in part on a concession of the sort I propose.

I would not, however, propose that ECGD should take the initiative in conceding capitalisation of interest; simply that they should be authorised to offer it should it be judged necessary to the success of the <u>UK bid</u>. Moreover, I propose that the ECGD team should seek to limit interest capitalisation so far as possible; it might not be necessary for the whole of the pre-commissioning interest to be capitalised, and I would propose to leave this question of degree to the judgement of the ECGD team on the spot. Capitalisation would not constitute a direct charge to ECGD's trading account, although the potential liability would be increased (in recognition of which an increased premium would be payable).

It is difficult to estimate the overall cost of Government support on the basis I propose, given the long manufacturing and repayment periods involved. Losses on CEC will depend on the levels of inflation prevailing during the manufacture of the project, which extends to 1989. The cost of interest support will depend on the level of short term interest rates prevailing throughout the rest of the century, when the final loan repayment is received. One can start from the basis of the current long term sterling market interest rate of 14%. Since this rate is conventionally held to yiel a 3% real rate of return one can deduce from this a market expectation of long term inflation averaging 11%. On this basis the overall cost of the proposed support for this project would be about £180m (NPV), representing rather over 50% of the NPV of the UKelement of the contract. Alternatively one can argue that the market's



perception of future inflation fails to take adequate account of the success of our economic strategy. If, for example, long term inflation were to come out at only 7% pa and, consistent with such an average, interest rates were to average 10%, then this cost would reduce to £64m, representing under 20% of the NPV of the contract.

These figures are comparable with those for many projects in developing countries, where the Aid and Trade Provision is used as well as normal ECGD support.

I hope you will be able to agree to cover on the terms I propose above. Since the negotiator in Hong Kong will be pressed to indicate the final proposals in the very near future with a view towards reading a "yes" or "no" decision by the end of next week, I should be grateful for a very early response. I am copying this letter to the other members of EX Committee and to Sir Robert Armstrong.

Town siccols,

Nather Combrack

CO. CECIL PARKINSON

Approved by the Minister but signed in his absence.

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POWER STATION PROJECT

INTRODUCTION

Ministers approved the proposals in the Secretary of State for Industry's Memorandum EX1 (1) that support should be made available to help UK industry on this project by way of: -

- payment for certain consultancy services;
- a halving of the Cost Escalation Premium "recognising that further flexibility and a reduction in premium may be necessary to secure the contract".

It has now become apparent since the UK's offer was submitted last month that the client's evaluation is not confined to a comparison of base prices.

GEC were requested to offer a fixed price and a variable price subject to escalation and even with the support offered by the Cost Escalation Cover Scheme (CEC) the inflation applicable to Unit 4 to be borne by the client exceeds 56%. This is substantially higher than the client would experience were he to buy plant from our major competitors. Unless the support given under the CEC can be altered the UK offer for this prestige £550M project will be judged uncompetitive. This paper considers the options available.

THE COST ESCALATION COVER SCHEME

The CEC Scheme was introduced in 1975 with the objective of offsetting the effects of high inflation on major export contracts. The scheme is based on the principle that ECGD will be liable for a portion of the amount of annul cost increase incurred above a threshold. The threshold was originally set at 10% but subsequently lowered to 7%.



The scheme also assumes that the escalation takes place over the full period of manufacture which in this case equates approximately to 22.2% over 38 months for Unit 1. The mean point of manufacture is nevertheless about two-thirs along the manufacturing cycle and the 22.2% escalation effectively has to be achieved over 26.3 months before ECGD have a liability. With a 1% per annum premium to ECGD the annual inflation would have to exceed the following before the 7% threshold came in to play: -

| | 1% Premium |
|--------|------------|
| Unit 1 | 11.4% p.a. |
| Unit 2 | 10.3% p.a. |
| Unit 3 | 9.4% p.a. |
| Unit 4 | 9.1% p.a. |

By comparison during the past $3\frac{1}{2}$ years annual inflation in competitor countries has moved as follows: -

Japan (Mitsubishi) 6.6%

Switzerland
(Brown Boveri) 3.2%

Germany (KWU) 4.8%

In France (Alsthom) where inflation is higher, a cost escalation cover scheme exists with the added benefit of a lower threshold (6.5%) and some relief against exchange rate fluctuations.

REDUCATIONS IN THE THRESHOLD

While the CEC scheme aims to maintain the competitiveness of major UK manufacturing exports, it cannot achieve that with a 7% threshold. To reduce the cost increases borne by the client towards the levels of our competitors would however require a threshold of about 3-1%. This would be prohibitively expensive and an obvious subsidy.



An alternative approach is to accept that the CEC scheme also aims to minimise the risks associated with uncertain future inflation that otherwise have to be taken account of in the contractors fixed price. The contractor has limited influence over national inflation rates and if he reduced his fixed price in line with official inflation assumptions and the CEC threshold was set accordingly then there would only be a public expenditure liability if the actual inflation rose above the official estimates.

On the basis of Treasury forecasts of future rates of inflation for the PESC period, carried forward at the 1983/4 6% level through the balance of the manufacturing period, then the threshold could be set at 5% providing for a liability only if inflation exceeded: -

Unit 1 8.51%

Unit 2 7.69%

Unit 3 7.02%

Unit 3 6.80%

(1% premium assumed throughout)

The net cost(£m) would be:

| Premium Level | Outturn Cost | NPV* Survey Prices | NPV* (DoT) |
|---------------|--------------|--------------------------|------------|
| 1% | 3/4 | 19 | 14 |
| 0% | 50 | 30 | 24 |

Expenditure (£m) over the PESC period would be:

| 1% | .98 | .38 | .22 |
|----|------|------|------|
| 0% | 7.19 | 5.29 | 5.22 |

^{*} NPV Survey Prices are outturn prices deflated to 1980/81 values on the basis of reciprocal of inflation assumptions. NPV/(DoT) are outturn prices deflated to 1980/81 values using the 14% discount factor as for the Export Assistance Exercise (notification to Ministers of estimated cost to the public purse of ECGD support for large projects).



For illustration purposes with a 6% threshold the total net costs (£M) could be:

| Premium Level | Outturn Cost | NPV* Survey Prices |
|---------------|--------------|--------------------------|
| 1% | 18 | 9 |
| 0% | 3/4 | 20 |

Alternatively it could be argued that contrary to Government policy, the reduction in inflation will not be sustained. If inflation were to rise from 6% in 1983/4 to 7% in 1984/5 and 8% thereafter through the manufacturing period, the costs (£M) could be as follows: -

| Threshold | Premium Level | Outturn Cost | NPV Survey Prices |
|------------|---------------|--------------|-------------------------|
| 5% | 1% | 52 | 28 39 |
| 6 % | 1% | 36 | 18 |
| | 0% | 52 | 30 |

On the Castle Peak "A" Station ECGD effectively met inflation up to 4% and over 7% with GEC bearing the inflation betweeb 4-7%. The lowering of the threshold would have a similar effect to what was done on the "A" Station where the client is aware that a subvention was offered. The total estimated cost if net claims on the "A" Station are projected to be £39M at outturn prices on a contract value of £350M. The cost of a 5% threshold on a "B" Station valued at about £550M would be between £34M and £50M at outturn prices depending on the final premium charged.

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CONCLUSION

The UK team will be hard-pressed to convince the client that the proposals lodged for the Castle Peak "B" Power Station are internationally competitive at the priced currently offered. Unless there is some improvement in the Cost Escalation Cover support the escalated prices, taking account of cost increases, will be seen to be even less competitive. To lower the CEC threshold to 5% to reflect government expectations of reducing inflation in the coming years, would enable the UK escalated price to be lowered with the cost of failure to sustain reduced inflation not being borne by the client or the contractor. Such an action need not result in any greater proportional call on the public purse in respect of the "B" Station than it did for the "A" Station.

RECOMMENDATION

Department of Industry officials accordingly recomment that the threshold of the Cost Escalation Cover Scheme be reduced from 7% to 5% in view of the considerable national importance of securing the £550M Castle Peak "B" Station project and on the basis that this concession will not set a precedent.

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Foreign and Commonwealth Office London SW1

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25 February 1981

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GUANGDONG NUCLEAR POWER STATION

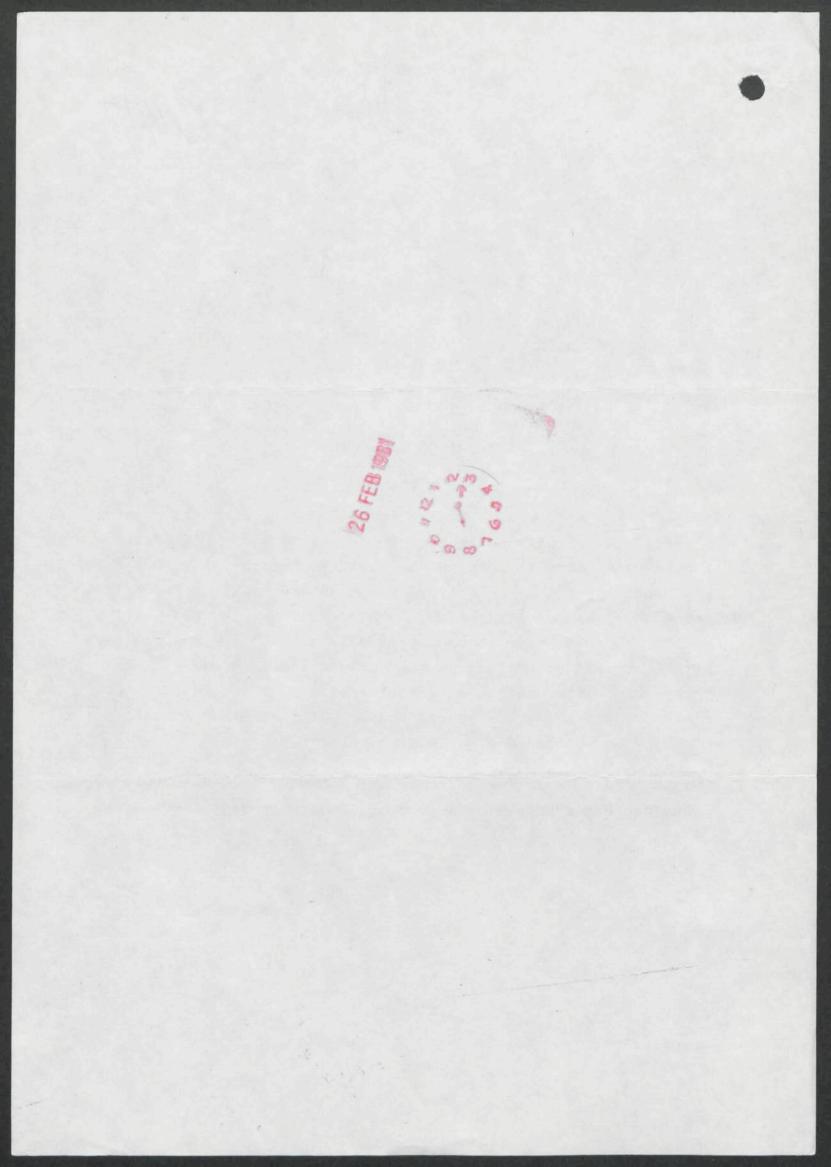
Thank you for your letter of 23 February.

I doubt whether the Chinese will take early decisions on the Guangdong project. But I remain convinced that our best chance of securing a significant share of the business for UK industry if it goes ahead lies in cooperation with the French. I also attach very great importance to following the advice of Sir L Kadoorie at a time when, as you point out, the negotiations over the Castle Peak 'B' contract have reached a crucial stage. I therefore agree that GEC should be authorised to conclude an agreement with Framatome on the conditions mentioned in your letter. As you say, if the Chinese reject an Anglo-French package, GEC and other British firms would not be precluded from seeking other partners.

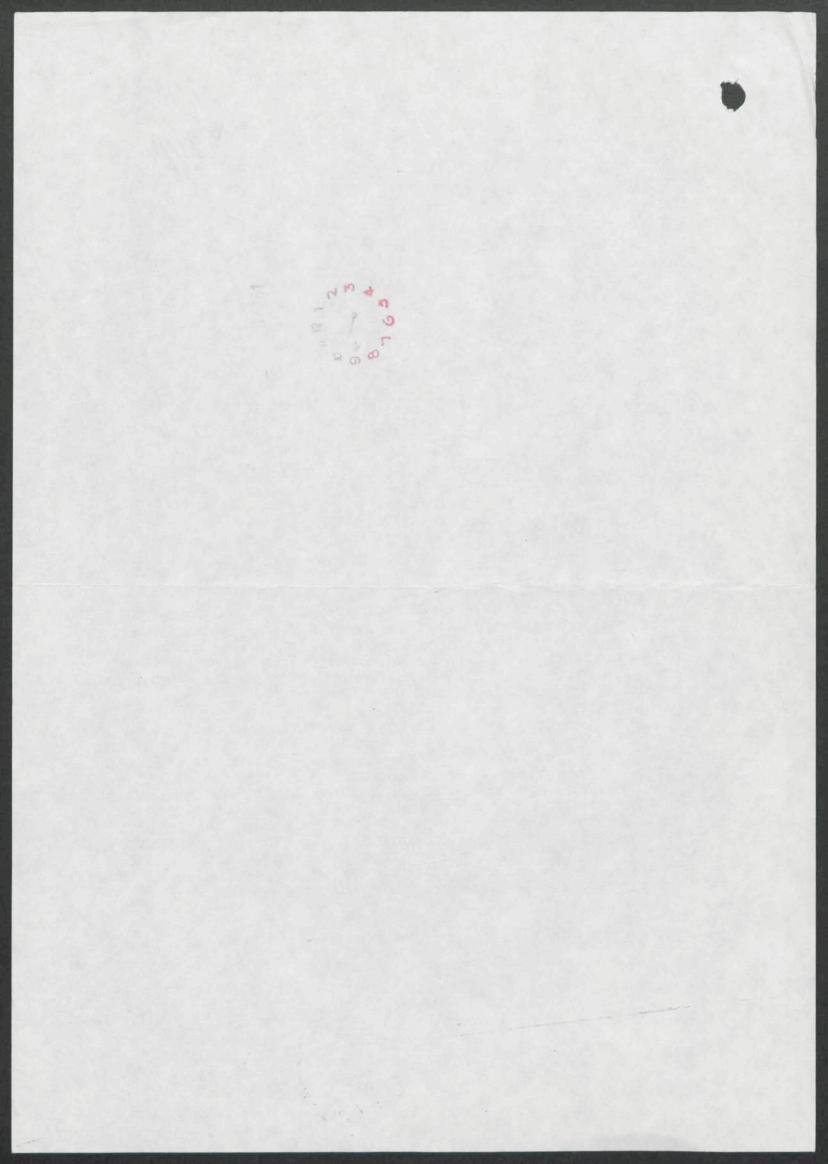
I am copying this letter to the Prime Minister, Geoffrey Howe, John Biffen and David Howell.

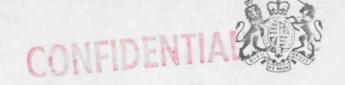
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The Rt Hon Sir Keith Joseph Bt MP Secretary of State for Industry Ashdown House 123 Victoria Street London SW1



CONFIDENTIAL 01-211-6402 The Rt Hon Sir Keith Joseph Bt MP Secretary of State for Industry Ashdown House 123 Victoria Street London 25 February 1981 GUANGDONG NUCLEAR PROJECT Thank you for copying to me your letter of 3 February to Peter Carrington. You will recall that in my letter of 8 January I argued for keeping open the option of collaborating with Westinghouse. I am now persuaded that it is in the UK's interest for GEC now to conclude an exclusive agreement with Framatone in order that the negotiations over the Castle Peak 'B' contract are not prejudiced. I note that there is no evidence that China has decided not to purchase a reactor from Westinghouse and that this outcome could present valuable opportunities to UK industry. I think that it is important therefore that the Nuclear Industry should not be impeded in pursuing possible collaboration with Westinghouse on this project and I welcome the provisos which you included in your letter. I hope that the Embassy in Peking will be active in monitoring the development of Chinese thinking about the project in order that UK industry may have the best chance to maximise business with Westinghouse if they become the chosen reactor vendor. I am copying this letter to the recipients of yours. D A R HOWELL





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10 DOWNING STREET

From the Private Secretary

25 February, 1981.

Guangdong Nuclear Power Station

The Prime Minister has seen a copy of the Secretary of State for Industry's letter of 23 February to the Foreign and Commonwealth Secretary, about co-operation with the French on the Guangdong Nuclear Project. She has taken note of the proposal in the final paragraph of the letter.

I am sending copies of this letter to Roderic Lyne (Foreign and Commonwealth Office), John Wiggins (HM Treasury), Stuart Hampson (Department of Trade) and Julian West (Department of Energy).

M. O'D. B. ALEXANDER

I.K.C. Ellison, Esq., Department of Industry.





Secretary of State for Industry

DEPARTMENT OF INDUSTRY ASHDOWN HOUSE 123 VICTORIA STREET LONDON SWIE 6RB

TELEPHONE DIRECT LINE 01-212 3301 SWITCHBOARD 01-212 7676

23 February 1981

The Rt Hon The Lord Carrington KCMG MC Secretary of State for Foreign and

Commonwealth Affairs

Foreign and Commonwealth Office London SW1

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GUANGDONG NUCLEAR POWER STATION

Following my letter to you of 19 December 1980, we agreed to sound out officially the French attitude to a joint approach on the Guangdong nuclear power station project, while keeping open the door to partnership with Westinghouse of America.

Accordingly, officials from the Departments of Industry, Trade, Energy and the FCO met French officials in Paris on 9 February. The French recognised the significance of the Hong Kong connection and agreed, in principle, to the conclusion of commercial arrangements under which Framatone would supply the nuclear island and GEC the conventional island, including turbine generators. The French were prepared to consider some cross sub-contracting for equipment for the two islands but they strongly resisted any UK share in the fuel supply, on the grounds that this was tied to the responsibilities and obligations of the nuclear island supplier. Officials do not consider this is the last word on fuel supply and will continue to press for a share.

At the commercial level, GEC have had further discussions with Framatone. A draft agreement has been produced which GEC are prepared to sign, but they require Government approval before doing so. The draft agreement allows either party to scrap their exclusive commitment, if the Chinese seek separate bids for the respective islands. Meanwhile, there is considerable pressure from Framatone, China Light and Power (CLP) (the potential joint customer), and strong advice from the Governor of Hong Kong and HM Ambassador to Peking in favour of a deal with the French.

At the moment, all the signs are that the Chinese have not reached final decisions about nuclear power. Indeed recent events suggest that economic constraints are putting many investments



back in time. Nevertheless, one major factor in favour of an immediate deal with the French is that it is preferred by Sir Lawrence Kadoorie, the Chairman of CLP, whose goodwill is essential for the forthcoming negotiations on the Castle Peak "B" Power Station Project. Castle Peak "B" is potentially the largest ever order for the UK power plant industry and, unless CLP awards the contract for it to GEC, their chances of gaining any part of the Guangdong nuclear project will be remote.

The arguments in favour of a deal with the French are reinforced by GEC's view that the UK can only secure a share in the project if we take an early decision to participate with a foreign nuclear island supplier and jointly mount a determined commercial drive. Also, although the Chinese will make the final decision, the French appear to have a favoured position in Peking.

It is possible to argue that in the longer term there could be merit in a deal involving GEC with Westinghouse/Bechtel/British Nuclear Fuels Limited. Dr Marshall (UK AEA) considers that, in view of Chinese uncertainties, the Government would take a risk by selecting Framatone at this stage, especially as the commercial benefits from a Westinghouse deal are potentially greater. But the considerable and immediate importance of the Castle Peak "B" Station and the need for CLP's fullest cooperation are the overriding considerations. Dr Marshall, together with the nuclear industry, accept the strength of the Castle Peak "B" argument.

The proposed agreement between GEC and Framatone would not preclude GEC from seeking an agreement with Westinghouse should the Chinese reject an Anglo-French offer. Exploration of the American Administration's attitude to the sale of nuclear hardware to the People's Republic of China is therefore continuing. British Nuclear Fuels Limited will pursue discussions with Westinghouse on fuel supply. It is also desirable that both the Hong Kong Government and CLP should press for dual sourcing of fuel for Guangdong under an Anglo/French prtnership so as to secure a role for BNFL. It is perfectly legitimate to argue that the Chinese should not rely upon one source of supply of fuel.

There are no relevant public expenditure implications at this stage. We and the French agree that equity is not an issue at the moment and the French have assured us that no unusual credit arrangements have been proposed. Officials here are, however, preparing the paper on equity requested in Geoffrey Howe's letter of 31 December 1980 as a contingency should the issue of equity be resurrected.

Against this background officials advise that the Government should agree to GEC entering into an agreement with Framatone for a joint approach to the Guangdong nuclear project, subject to:



- a GEC seeking to secure a balance of advantage in the supply of hardware from UK and French sources;
- b The agreement being exlusive, thus ruling out an all-French proposal;
- c The agreement not precluding a deal with Westinghouse, if the Chinese reject the Anglo-French proposals;
- d The possibility of future dual sourcing of fuel by BNFL being pursued (with the support of CLP and the Hong Kong Government if necessary);
- e BNFL continuing discussions with Westinghouse;
- f Discussions with the French on safety issues being pursued;
- g The National Nuclear Company discussing their possible involvement in the project with Framatone with a view possibly to obtaining sub-contracting orders for UK suppliers of reactor components.

I agree with the advice of officials and I would welcome your early agreement and that of colleagues to my authorising GEC to go ahead with their agreement with Framatone on the basis proposed. It would be helpful to have your comments by close of play on Wednesday 25 February in time for the next stage of officials' discussions in Hong Kong on the Castle Peak "B" Project.

I am copying this letter to the Prime Minister, Geoffrey Howe, John Biffen and David Howell.

Com. Kevil

21 FEB 1981

CX Ms Walten M buyuid PRIME MINISTER CASTLE PEAK 'B' POWER STATION, HONG KONG I have seen the Secretary of State for Industry's paper EX(81)1. I agree with him that to gain this large export order would help to secure the capacity of the UK power plant industry, whose strategic importance we have recognised. I therefore support the measures he suggests to assist UK industry in this case, set out in paragraph 6 of his memorandum to the Committee. I am sending copies of this minute to the other members of EX Committee. Secretary of State for Energy 21 January 1981

Ref A04046

M

PRIME MINISTER

Castle Peak B Power Station, Hong Kong EX(81) 1

BACKGROUND

- 1. The Secretary of State for Industry seeks approval of a package of financial assistance to enable United Kingdom industry to secure the contract for the Castle Peak B power station in Hong Kong. The proposals have been agreed inter-departmentally at official level see the detailed report annexed to EX(81) 1 except that the Treasury are against the proposed concession on the premium charged by the ECGD for cost escalation insurance.
- 2. With the aid of a similar financial package approved by the last Government, GEC and Babcock won the £350 million contract for the Castle Peak A station in 1978. Work on this has gone well and, as a result, the China Light and Power Company (CLP) who are also in the lead in the negotiations for the Guang Tong nuclear station and Esso Eastern have given the United Kingdom the opportunity to submit proposals for Castle Peak B without going to international competitive tender. The Department of Industry have to submit the offer by 31 January.
- 3. The contract would be a major boost for our power plant industry and is highly attractive
 - i. at £550 million it would be the largest power plant export order ever won by the United Kingdom;
 - ii. in addition to GEC and Babcock, a good number of sub-contractors would benefit - see the list at Annex F;

- iii. there would be about 34,000 man years of work for United Kingdom firms from 1981 to 1989 with 68 per cent of this in Assisted Areas, and significant benefits for the Glasgow area and Larne in Northern Ireland see Annex G for details;
- iv. it could boost the United Kingdom's chances for further major orders in Hong Kong and the Far East and Department of Industry officials judge that, if GEC fail to get Castle Peak B, the Chinese will rule them out of the Guang Mong project.
- 4. To secure this deal the Secretary of State for Industry proposes paragraph 6 of EX (81) 1 that the Government should finance the consultancy services for the project by up to £20 million in the period 1981-91 and that ECGD should halve their cost escalation premium from £35 million to £17.5 million. These proposals should be judged against the background of the advice from the private sector accountants on secondment to the Department of Industry's Industrial Development Unit that both GEC and Babcock are providing for under-recovery of their own overheads and are not making excessive allowances for contingencies. (Annex D.)

Subsidy of Consultancy Services

- 5. The CEGB will provide consultancy services to CLP. It is proposed that, as for Castle Peak A, the Government should finance these services at a cost for this contract of £12.5 million from 1981-91, and by a further £7.5 million if this should prove necessary in negotiation and provided that GEC/Babcock made a comparable price reduction. The money would be found from DOI's current public expenditure allocations, and represents a subsidy to the power plant industry and to exports and not to the CEGB (who are operating on commercial terms).
- 6. The subsidy would be paid under Section 7 of the 1972 Industry Act.

 There is no statutory barrier to this, but the payments would be outside the Government's guidelines which provide for Section 7 assistance to be used to stimulate investment rather than to preserve employment and win exports.

7. Unless this assistance was notified to, and cleared with, the European Commission it would be contrary to Community Law. It is proposed, however, that the Commission should <u>not</u> be informed of the assistance either now or later; and this means that Parliament will not be notified of it when the project is announced. There are obvious risks in this, but it seems a necessary procedure to ensure that Commission delay and intervention does not mean the United Kingdom losing the contract; and it is the procedure followed by the last Government for Castle Peak A. These points are set out in more detail in the section headed "Method of Support" on page 4 of the paper by officials.

ECGD Support

- 8. Although the amounts are very large, ECGD's support will, with the exception of the cost escalation arrangements, be on orthodox terms. They expect to negotiate adequate security for the loans. The interest rate of $8\frac{1}{2}$ per cent and the credit period of 12 years from commissioning are both in line with OECD consensus arrangements.
- 9. A concession is, however, proposed on the premium for cost escalation cover. Under the cost escalation scheme companies exporting capital goods worth at least £2 million, and with a manufacturing period of more than two years, can pay a premium to insure against cost escalation within various bands. This Government has twice extended this scheme for one year and in April 1980 increased the premium from 1 per cent to 2 per cent. In the present case it is proposed to charge only 1 per cent, thereby reducing premia by £17.5 million spread over ten years 1981-91. Treasury officials object to this concession which means loss of premium income to ECGD and which, they fear, could make it difficult to turn down claims for similar concessions in other deals.
- 10. Department of Industry officials judge that it will be necessary to make such a concession to secure the deal. They point out that the premium should represent a profit; and that, in the present case, ECGD would only have to pay out if inflation was running at higher levels than currently expected. They would see it, therefore, more in terms of abating the profit than incurring a cost. It could also be argued that the arrangement should not be repercussive if it is kept secret.

HANDLING

- 11. After the Secretary of State for Industry has introduced the paper, you will wish to hear the views of the Chancellor of the Exchequer, with particular reference to the cost escalation premium proposals, the Foreign Secretary, and Mr Parkinson who is representing the Secretary of State for Trade who is in India. (The Secretaries of State for Employment, Scotland, Northern Ireland have seen copies of the paper and strongly welcome the project for the benefit it would bring to employment.)
- 12. The main questions seem to be
 - i. Is it necessary for the Government to give assistance at all to a project which will bring major benefits to the firms concerned - the judgment that the major contractors are under-recovering their overheads is relevant here;
 - ii. will withholding information about financial assistance from the Commission and from Parliament lead to trouble? It clearly could: but it seems necessary to secure the order; the French would no doubt do just the same; and most MPs would see it as fair tactics to win a major prize for the United Kingdom;
 - Does the Chancellor of the Exchequer wish to press his officials' objections to the concession on the cost escalation premium?

The Department of Industry have to make their offer by 31 January and the Committee will therefore wish to come to firm decisions as soon as possible to avoid the risk of any delay.

CONCLUSIONS

13. In the light of the discussion you will wish to sum up with reference to the three measures listed in paragraph 6 of EX(81) 1, either approving them as a whole or noting any reservations on them.

14. If the proposals are approved, you might also wish to ask the Secretary of State for Industry to inform the Law Officers of the decision and invite them to consider, on a contingent basis, what would be the Government's defence if the Commission found out about the subsidy.

KWT

(Robert Armstrong)

20 January 1981

BUNFIDENTIAL



PRIME MINISTER

CASTLE PEAK 'B' POWER STATION, HONG KONG

I have seen a copy of Keith Joseph's memorandum (EX(81)1) seeking approval to go beyond the normal ECGD assistance in supporting GEC/Babcock bid for the contract to build this power station.

I am writing to express my strong support for his proposal on the grounds that the order, if secured, would preserve the 950 jobs at the GEC factory in Larne which would otherwise be lost. GEC have invested substantial sums of money in re-equipping the Larne factory which has a reputation for producing high-quality machinery for export. I consider it vital to use all reasonable means to help the company maintain this important employment in the South East Antrim area which has been so badly affected by the recession. The ICI plant at Carrickfergus is to close and there have been heavy redundancies at other firms, including today's announcement of 800 redundancies at the British Enkalon plant in Antrim town.

I am sending a copy of this minute to the other members of EX Committee and to Sir Robert Armstrong.

H.A.

20 January 1981

COMMERCIAL IN CONFIDENCE Qa 05225 MR LANKESTER From: J R IBBS EX COMMITTEE: CASTLE PEAK 'B' POWER STATION The proposals put forward by the Secretary of State for Industry give rise to four main questions: (1) How much subsidy is involved? (2) Is this scale of subsidy essential to win the contract? (3) Is it worth paying the subsidy? (4) Are the particular mechanisms for providing subsidies to this contract acceptable? How much subsidy is involved? The total cost to HMG of the subsidy is £150-160 million at net present value: £ million Standard Subsidy Net present value of the interest make-up in 122 ECGD's loan package Additional Subsidies Cost of reducing the ECGD premium for cost escalation cover 173 from 2% to 1% Cost of free provision of consultancy services $12\frac{1}{2} - 20$ (not discounted)

Total Subsidy

150 - 160 million (say)

3. If the UK is awarded the contract, British industry will secure around £450 million of business (see Annex C of the paper by officials).

COMMERCIAL IN CONFIDENCE

- 4. The ratio of total subsidy to the value of the contract is therefore 1:3. The "additional" subsidy is about ###7-8% of the contract.

 Is this scale of subsidy essential to win the order?
- 5. The evidence in the paper points strongly to the conclusion that without a subsidy on at least this scale the order will not be secured. The contract will then go to international tender, which the Japanese are thought almost certain to win with a cut-price offer that the UK could not match.

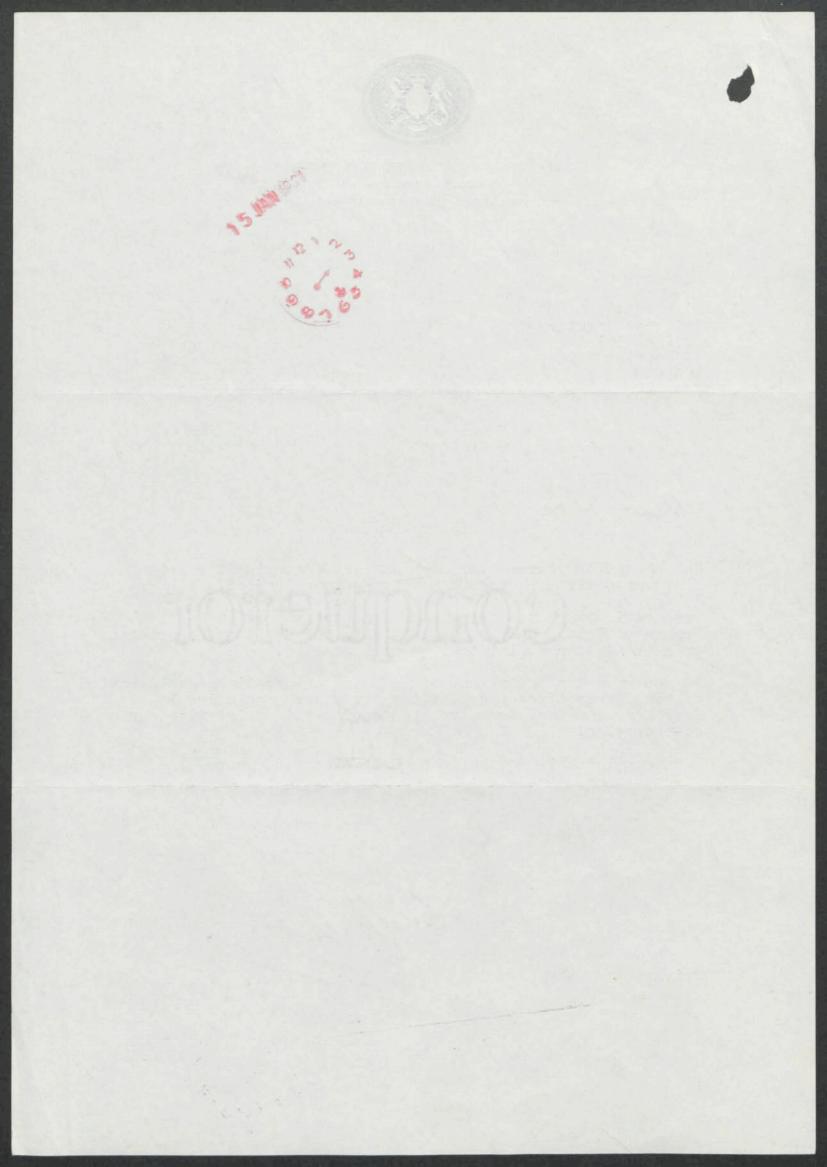
Is it worth paying the subsidy?

- 6. There are powerful arguments in favour of assisting British industry to win Castle Peak 'B':
 - The UK must retain a healthy power plant industry to ensure a sound base for its future nuclear power programme. Until this programme is under way, the industry is dependent on export orders, which it cannot win without substantial Government subsidies, particularly with sterling at its present level. Castle Peak 'B' offers a good opportunity to secure a large part of the export business needed.
 - This project is particularly deserving of support because of the need to keep the Japanese out and also because of the value of Hong Kong as a shop window for China and the Far East.
- 7. The CPRS agrees with these arguments and therefore, despite the large subsidy involved, supports the Department's efforts to win the order.
- 8. Nevertheless, it is not difficult in individual cases to argue for large subsidies which defy the normal rules of economic sense. The present proposition probably just scrapes through. It is important for EX Committee to ensure that such arguments are not used beyond the minimum number of cases

COMMERCIAL IN CONFIDENCE needed to maintain the desired industrial base and to cover the most important market opportunities. Are the mechanisms for subsidising this contract acceptable? Clearly some £30-40 million of subsidy has to be found $\underline{\text{in addition}}$ to the standard loan package. We appreciate the reluctance of Treasury Officials to see Section 7 money and ECGD funds used in this way, but there does not appear to be any other mechanism for providing the necessary support. 10. I am sending a copy of this minute to Sir Robert Armstrong.

20 January 1981

SECRETARY OF STATE FOR ENERGY THAMES HOUSE SOUTH MILLBANK LONDON SWIP 4QJ 01 211 6402 Mike Pattison Esq Private Secretary to the Prime Minister 10 Downing Street LONDON SW1 15 January 1981 Dear rike Thank you for your letter of 8 January conveying the Prime Minister's views on the Guangdong Nuclear Project. Preparations are now being made for exploratory talks with French officials and for contact with the UK State Department once the Reagan Administration is installed. M As you know the Department of Industry are leading consideration of the alternative opportunities for power generation in Hong Kong and they are already pursuing this point with our co-operation. I am copying this letter to the recipients of yours. Yours ever, Geoff Part G S DART Private Secretary





10 DOWNING STREET

PRIME MINISTER

This note from DOI explains the relationship between the Guangdong Nuclear Power Station project - which you considered earlier in the week - and the Castle Peak "B" coal-fired power station project in Hong Kong. The latter is likely to be discussed in EX quite soon.

MAD



Secretary of State for Industry

DEPARTMENT OF INDUSTRY ASHDOWN HOUSE 123 VICTORIA STREET LONDON SWIE 6RB

TELEPHONE DIRECT LINE 01-212 3301 SWITCHBOARD 01-212 7676

January 1981

Mike Pattison Esq Private Secretary to the Prime Minister 10 Downing Street London SW1

Dear Mike

GUANGDONG NUCLEAR POWER STATION PROJECT

- 1 I understand that the Prime Minister has asked about the relationship between the Guangdong nuclear and the Castle Peak "B" coal fired power station projects. China Light and Power (CLP) envisage that the 4 x 660 MW unit of the latter will be commissioned in each of the years, 1986, '87, '89 and '90. The attached table from the CLP 1980 Development Plan shows this. If, however, the nuclear project went ahead as a joint venture between CLP and the Guangdong Electricity / that Company (KEC) then CLP are projecting / the 2 x 900 MW PWRs could be supplying some 60% of their output to Hong Kong in each of the years 1987 and 1988. This would result in the commissioning of both Units 3 and 4 of the Castle Peak "B" station being deferred by 2 years till 1990 and 1992. Depending on the projections for power demand they could be deferred still
 - 2 However, officials consider that it is unrealistic to imagine that China could construct and commission its first nuclear power station by 1987. It currently has no relevant safety organisation or licencing body and the civil construction task itself will be daunting. The re-evaluation of investment priorities and experience gained on other recent major capital projects may lead the Chinese to look very cautiously at such an undertaking.
 - 3 The likelihood therefore is that the Castle Peak "B" station project will proceed to full 4 unit commissioning by 1990. It is on that basis that officials within this Department as well as GEC and Babcock Power aim to submit a competitive UK package proposal to CLP by the required deadline of 31 January. The "B" Station will continue to receive the priority which such a tangible £500 million project deserves.
 - 4 If the nuclear station did not proceed then CLP would no doubt have to order a "C" station at some stage to meet the possible continued growth of demand.

THERINE BELL Private Secretary

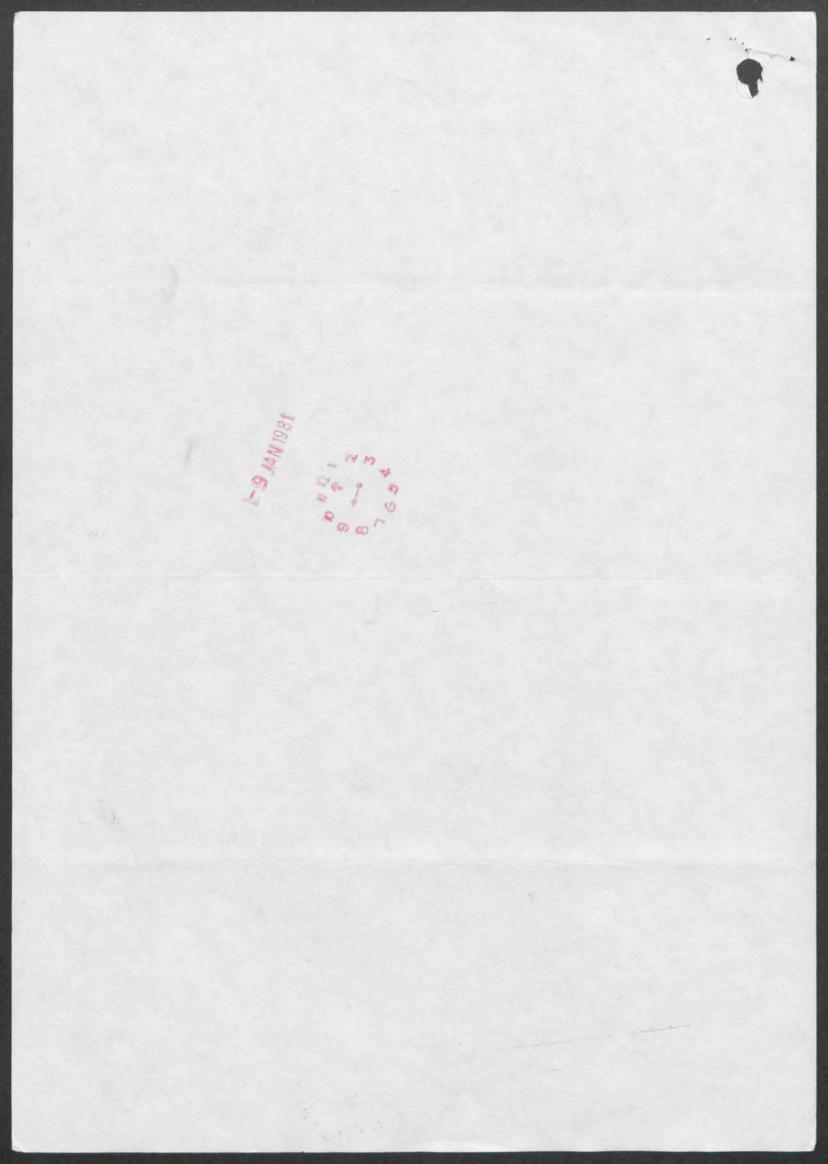
(v) Based on (i), (ii), (iii) and (iv) above, the following Base Generation Development Plan is proposed:-

| Year | Maximum Demand (MW) | New Capacity (MW) | Capacity Retired (MW) | Total Capacity (MW) | Capacity Reserve |
|------|---------------------------|-------------------------|-----------------------------|---------------------------|---------------------|
| | | | | | |
| 1981 | 2180 | GT 4x60 | - | 2656 | 21.8 |
| 1982 | 2440 | A1 350 | - | 3006 | 23.2 |
| 1983 | 2695 | A2 350 | - | 3356 | 24.5 |
| 1984 | 2960 | A3 350 | 3 x 30 | 3616 | 22.2 |
| 1985 | 3210 | A4 350 | - | 3966 | 23.6 |
| 1986 | 3480 | B1 660 | | 4626 | 32.9 |
| 1987 | 3770 | B2 660 | 4 x 60 | 5046 | 33.8 |
| 1988 | 4085 | PS 3x150 | - | 5496 | 34.5 |
| 1989 | 4415 | B3 660 | 4 x 60 | 5916 | 34.0 |
| 1990 | 4760 | B4 660 | - | 6576 | 38.2 |

Figure 10.1 shows this Base Development Plan in graphical form.

It should be noted that the timing of Units Bl and B2 is firm, but that for B3 and B4 is tentative and should be reviewed in the coming year.

- (vi) It is recommended that A3 and A4 of Castle Peak 'A' Station be advanced by three months and six months (i.e. to be commissioned in January 1984 and October 1984) respectively, subject to confirmation that the financial and tariff issues associated with the proposed advancement can be resolved.
- (vii) If the joint nuclear power Station suggested to be built in Guangdong is found to be feasible and if CLP is to be involved in the development, the generation development plan should be altered as follows:-



10 DOWNING STREET 8 January 1981 From the Private Secretary The Prime Minister has seen the correspondence between Ministers about the Guangdong nuclear project, resting with your Secretary of State's letter of 5 January to the Secretary of State for Industry. She is content to see exploratory discussions undertaken with the French, but she would wish Ministers to ensure that other options are kept open. The Prime Minister has enquired about the extent to which Hong Kong will be committed to take a substantial proportion of its power needs from this station. If the UK finally gets little out of this contract, she hopes it will prove possible for us to concentrate on alternative opportunities to develop generating capacity in Hong Kong itself, and thus perhaps reduce the use made by Hong Kong of Guangdong. You are looking into this for us. I am sending copies of this letter to Michael Arthur (Lord Privy Seal's Office), Peter Jenkins (HM Treasury), Stuart Hampson (Department of Trade), Catherine Bell (Department of Industry) and David Wright (Cabinet Office). M. A. PATTISON Geoffrey Dart, Esq., Department of Energy. 438

PRIME MINISTER

PRIME MINISTER

GUANGDONG NUCLEAR POWER STATION

You asked for Walter Marshall's views.

He has made his views clear to the Departments of Industry

He has made his views clear to the Departments of Industry and Energy - Flag A is a long paper, which he describes as a draft, produced when he heard that decisions were imminent on approaching the French. His central point is that the fuel supply contract is the real prize. He compares it to the sale of razor blades in the razor manufacturing industry. He and his colleagues in the industry have seen no sign that Industry/ Energy have given serious attention to securing the fuel contract. He believes that if the French are now approached, even tentatively, with the thought of splitting the nuclear and conventional contracts, their position on fuel supply would be overwhelming.

The Department of Energy have gone a long way towards meeting Marshall's point by redefining an approach to the French as exploratory, and on the basis that the talks would in no way commit the UK to participate in an Anglo/French package. But the Industry/Energy argument is based essentially on the need to pre-empt a unilateral French bid for the package, and we have no evidence that they have accepted Marshall's view that the fuel contract ought to be our over-riding interest. Of course, Marshall sees it purely in terms of our nuclear industry interest, whilst Industry have to look at the prospects for other areas of British industry.

You have already seen the Lord Privy Seal's letter (Flag B) proposing "early and substantive discussions with the French". The Chancellor (Flag C) has not dissented from the idea of an approach to the French - he is more concerned about the Chinese angle. Mr Howell (Flag D), as I have noted above, pressed for the discussions with the French to be exploratory and with options clearly left open. Industry (Flag E) originally proposed an approach to the French.

United Kingdom Atomic Energy Authority

From the Deputy Chairman Dr W Marshall, CBE, FRS 11 Charles II Street London SW1Y 4QP

Telephone: 01-930 5454

STRICTLY PERSONAL

5 January 1981

Mr M Patterson 10 Downing Street London

Dear Mr Patterson

On the telephone today you told me that the Prime Minister wanted to have my personal views on the Guangdong project and the proposal to have early discussions with the French. I told you that I had set out my views in a letter and paper to Mr Manzie of the Department of Industry just before Christmas but at the time I could not remember the date attached to them. May I therefore inform you that my letter to Mr Manzie of the Department of Industry was dated 18 December 1980 and the paper entitled, "The Guangdong Project" also dated 18 December 1980 was marked "second draft".

I would be grateful if you would look at the letter and paper together. In particular, I would very much regret it if you saw only the paper and not the covering letter because the latter describes rather carefully the circumstances and short notice at which the paper was prepared.

Within a day or so I should have the considered reactions of the nuclear industry to what I have written and I think it would be worthwhile our having a word together later this week to see if their comments in any way change the sense of the arguments I have set out in my paper.

Yours sincerely

W. Manhall

W Marshall



DEPARTMENT OF ENERGY Thames House South Millbank London SW1P 4QJ

Tel: Direct Line: 01-211

Switchboard: 01-211 3000

Mike Pattison We spoke.

With the Compliments of

the

Secretary of State

Start 5/1

11 Charles II Street Thirted Kingdom Atomic Energy Authority London SW1Y 4QP Telephone: 01-930 5454 From the Deputy Chairman 19 9 DEC Dr W Marshall, CBE, FRS Min Cake 18 December 1980 cc W. Tucker, A. / Conto Mr G Manzie Department of Industry Ashdown House 123 Victoria Street SW1E GRB London Dear Gordon I am not sure why you are in a hurry to make this submission to Ministers tonight, but I assume you have got good reasons for it. The attached paper setting out my views is not as polished as I would like it to be, but it is the best I can do within the deadline you gave me. I have been able to discuss it with Ned Franklin and Jim Stewart and have modified it in minor ways they suggested. They have not yet had a chance to discuss it with Rooney. I have not had a chance yet to discuss this paper with BNFL or Weinstock. I have, however, talked with Lord Weinstock today and he tells me that he has not been consulted on your proposal to approach the French now and therefore he has no opinion on it. He volunteered that when he saw the British Ambassador in Paris a few days ago he told the Ambassador that a UK approach to France at this point in time would be premature. I have also spoken today to BNFL and they have authorised me to say that they as a Company are also opposed to an approach to the French now. Therefore, I would be grateful if you would put at the end of your recommendation a paragraph which reads as follows. "This recommendation has been agreed interdepartmentally, after receiving advice from Hong Kong and Peking. We have not had time to discuss the paper with people outside the Departments, but the broad sense of our conclusion, that we should approach the French now, has been conveyed to a number of people. Dr Marshall of the UKAEA, Dr Franklin of NNC, and BNFL are opposed to this recommendation. Lord Weinstock has not been consulted and therefore has no view one way or the other." I am sure you will realise that you will put me in an impossible position if this point is not made clearly to Ministers and I would be grateful, therefore, if you would confirm that a paragraph along these lines has been included in your paper. May I also ask you to verify my account of other peoples' opinions. It is always possible that I have misunderstood them and therefore it would really be best if you consulted them directly. Cont'd ... 7563

18th December 1980 Mr G Manzie Incidentally, Aboudarham has requested a meeting with me when I take my Pressure Vessel Study Group to Framatome on 19th January. In my view. if we are to have discussions with the French it would be much better for them to arise naturally in that kind of way, rather than as a result of an official delegation to Paris, but that, of course, is a decision you must make. I appreciate that this letter will set you some problems and I give you my most grovelling apologies for being difficult. However, I have an absolute duty to keep you informed of my own opinions and of the opinions of other people. in the business, in so far as I can establish them, in the brief time you have given me. I would have much preferred to have consulted all the organisations carefully on the attached paper and given you our collective judgement on the matter. I am also very conscious that my consultations with them today have been on the basis of the brief telephone message you were good enough to give me yesterday. None of us have seen your submission and, therefore, we are unable to judge the force of the argument that we should approach the French now. It is a great pity that you are obliged to take action without yourself first carefully consulting the industries involved. Yours sincerely Walter W Marshall Att I have marked this letter "First Draft" because I amy have inadvertently misrepresented the views of the people I have talked to and therefore I want to give them all a chance to comment before finalising it. That is unsatisfactory but it is the only thing I can do at 24 hours notice.

The Guangdong Project

The purpose of this note is to set out my thinking on this project so that the Department of Industry can take account of that in deciding how to proceed further with this project.

At the meeting in the Department of Industry chaired by Mr Manzie on 20 November, I gave a report on my first discussion with Lu Ying and Mr Davidson gave a report on the discussions GEC had had with both Framatome and Westinghouse. That meeting was not attempting to make decisions but the consensus view at that time appeared to be that we should keep our options open for working either with Westinghouse or Framatome. Since that time there has been a sharp shift of opinion in favour of working with the French and further arguments have been put forward that we should make a deal with the French, now, that they should provide the nuclear island and that we should provide the conventional plant. I still have modest reservations about working with the French and serious reservations about making a deal now but I recognise the content and force of the unanimous decision of Government departments to the opposite sense. It would, therefore, be unrealistic of me to oppose this course of action but, for the sake of the record, I would like to set out my analysis as I see it today so that my point of view can be understood. I hope, anyway, that it will be helpful whatever course of action we take.

This is an exceedingly complex project with many ideas interwoven one with another. I shall, therefore, set out various considerations under the following sub-headings: Technical; Safety; Equity; Security of Supply; Chinese Attitudes; CLP Attitudes; French Attitudes; Westinghouse Attitudes; Financial Assessment; Recommendations and Position of the UKAEA.

Technical

For the purpose of this discussion the technical content of the project can be summarised by reference to Table 1 which divides work under the headings of "nuclear plant", "conventional plant", "civil work", "architect/engineer" and "fuel supply". The nuclear island is further sub-divided into NSSS and the balance of nuclear plant (BONP). The fuel supply is further sub-divided into

the first core, reload fuel for the first 10 years and reload fuel for the formowing 20 years. Against each heading I have given a rough estimate of the value of the work in two columns; first the value of the work to the western contractor and the second the value of the work which necessarily must be performed inside China. The right hand side of the Table shows the possible suppliers of each item. This list of possible suppliers is not, of course, exhaustive. Thus, for example, as possible architect/engineers I have listed only Electricite de France, NNC, Bechteland a consortium of NNC plus Bechtel. An exhaustive list would, of course, add KWU, Stone and Webster, Gibbs and Hill etc.

A more detailed breakdown of the equipment and its value is shown in Table 2 where against each item of equipment there is shown the possible French supplier, the possible UK supplier and an indication is also given of those components which can be supplied by Westinghouse directly.

The joint utilities CIP and KEC have already decided that they will not place a complete turnkey contract for the entire station and neither will they adopt an "American" style of operation of appointing an architect/engineer and leaving it to him to place a large number of individual small contracts on other companies. Roughly speaking, therefore, we can assume that the project will be divided up into something like this set of packages. A key issue is whether the project will place a contract for the nuclear island as a whole or just for the NSSS. From the presentations which the reactor vendors made in Guangdong, we note that Framatome and KWU would prefer to have a contract for the nuclear island as a whole whereas Westinghouse would prefer to have a contract for the NSSS alone. It is also important to consider how far the civil work can or should be separated from the provision of other plant but that is a matter to which I have not yet given any thought.

The NSSS must be manufactured in special purpose factories in the USA, France, Germany, Italy or Japan but at the level of this discussion we may assume that all NSSS supplies are technically equivalent.

The balance of nuclear plant consists of conventional hardware such as small diameter pipes (about 20 miles of it), water tanks of various types and EOCS pumps. In contrast to the NSSS, there is nothing special about this

hardware and it can be provided from almost any country including the UK. The use feature of the BONP is not the hardware but the system of design and control with which it is put together. This is normally done by an architect/engineer working in close collaboration with the NSSS supplier. It is the BONP that determines the safety characteristics of the plant and, roughly speaking, it is the BONP that varies from one country to another depending on the safety regulations prevalent in any particular country.

In the supply of conventional plant a key question of some controversy is whether the turbines should operate at high or low speed. In their presentation in Guangdong, GEC recommended high speed turbines. The Chinese reaction to the GEC presentation was hostile and quite out of keeping with the technical discussion. I assume it was stimulated by some aspect of internal Chinese politics we do not yet understand.

The civil work to be undertaken by China is a matter of some concern. We have no evidence that China can organise itself to produce this civil work on time and to quality.

So far as the architect/engineer is concerned, I am doubtful if Electricite de France would want to undertake the work. They are very busy with their own domestic programme and they would not want to get involved in any discussions which concern a BONP to meet different safety standards (because that would reflect upon their domestic decisions). This is what Aboudarham has told me informally and in apparent confirmation of this, Framatome have told Kadoorie that if they had the contract for the nuclear islant, they would employ Bechtel as their architect/engineer partner. However, these views should be treated with caution; if the French get the business they will surely think this out again and may decide this must have a French architect/engineer because of the key and central role an architect/engineer plays in a nuclear project.

NNC standing alone is not a credible architect/engineer because of their inexperience with PWRs. Obviously Bechtel standing alone is a credible architect/engineer. Bechtel and NNC working in a joint venture would have the advantage of using an experienced architect/engineer (Bechtel) with an input from NNC about the capability of British manufacturers.

The value of the fuel contracts are substantial. We surely must try to secure those.

In discussing this subject it is very important to make a distinction between three possible questions.

- 1. What is the risk of a nuclear power station to Hong Kong?
- 2. Is the reactor design sufficiently safe?
- 3. Does the reactor design meet British, ie NII, guidelines?

For all conceivable reactor designs the risk to Hong Kong is entirely negligible. That as a real question may, therefore, be ignored. In my opinion all reactor designs which are likely to be offered to this project are sufficiently safe and there is no significant difference between them from this point of view. Both of these points are, however, a statement of my personal opinion, both statements would be disputed by the anti-nuclear groups which are active throughout the world, and it is unfortunately true that the general public in most countries are afraid of nuclear power. It is therefore worth asking the third question which is both narrower and more precise.

Earlier this year, Kadoorie made a statement to the joint project that he would be unable to participate in any project which did not meet the UK guidelines fully. At the time I advised him that this was a more extreme statement than was justified by the facts but he nevertheless felt as a matter of principle he must argue for UK guidelines on safety. That decision, which he has held to consistently (until very recently) has guided much of my thinking on this project.

If the reactor is to be built to UK safety guidelines then, in my judgement, it is easier to accept a KWU reactor or a Westinghouse reactor than a Framatome reactor. I always anticipated some difficulties in reconciling Kadoorie's position on safety standards and the possibility of a French nuclear island. That difficulty has recently been enhanced. NNC has nearly finished its design consideration of the PWR to be built in the UK and the safety provisions are substantially different from PWRs which have been built in the past. All the changes lie in the BONP. The NNC design has been reviewed by Westinghouse who have indicated that they will be obliged to build similar reactors in the USA in order to recapture public confidence after Three Mile Island. This last point

MY and Westinghouse for early next year. In my opinion, the Germans will be obliged by German Law to modify their designs to a similar level and, at that point, there will be a broad international consensus on the "post-TMI design of PWRs". That design will show considerable differences from the present French BONP. To explain these developments in detail I append to this note a record I made on 26 November concerning the NNC/Westinghouse/Bechtel conclusions on the BONP.

Therefore, if we are to use a French reactor we have only the following choices.

- 1. To have them build only the NSSS.
- 2. To have them build the entire nuclear island and abandon our application of British safety guidelines,

or,

3. have them build the nuclear island but impose on them a BONP which is consistent with the new NNC design.

This last solution would be rather uncomfortable and difficult to negotiate. Last Friday I explained these three choices to Kadoorie and he immediately elected for the second choice. This was a surprise to me because he had previously consistently argued for the application of British safety guidelines. I accept that if those are now to be abandoned the argument for the French providing the entire nuclear island is strengthened. I have previously argued very strongly against having a French nuclear island. I acknowledge that this recent decision by Kadoorie, which needs to be confirmed in writing, annihilates much of my previous argument and I am reduced to the plea that we will get more work for the UK if our partner is Westinghouse than if our partner is Framatome.

Equity

The Chinese proposed to finance the project 90% by loans 10% by equity. Sixty per cent of the equity, ie 6% of the money, would be provided by internal effort within China and 40% of the equity, ie 4% of the expenditure, would be provided from outside China. The original intention was that 4% would be provided by CLP. When Kadoorie decided not to do this - presumably for fear of nationalisation - the Chinese were bitterly disappointed and clearly upset. However, they appear to have accepted the idea that there should be set up a Hong Kong Nuclear Investment Company (HKNIC) which would provide 4% of the money

required. The Chinese have said that they would welcome it if this equity were producted from the UK and it would be even better if it would come from the UK Government. Because they appear to attach importance to this matter I have, on a personal basis, suggested that this equity be taken up by the Atomic Energy Authority, or some similar Government body or consortium, but of course I have carefully qualified this proposal to ensure that it is not taken up unless the UK get the bulk of the project.

If the UK were to take up equity, I shall assume that it would be done by a consortium of AFA, BNFL, CFGB, NNC and GEC.

There are several features of this equity position which puzzle me. I do not really know why the Chinese want it. It cannot be for financial reasons because 4% of the money is so tiny and conceding 40% of the equity to the UK Government would, in my opinion, be a sizeable sacrifice of Chinese freedom of action. If we did have 40% of the equity the decisions on contractors would be heavily determined by us and the bulk of the contract would then be British. That is why, in my opinion, such an equity position is attractive to us. My own opinion therefore is that the Chinese will not follow this idea up unless they see political advantage to it, or unless there is some argument in favour of it which I have not yet seen but which presumably is connected with internal Chinese affairs.

The second feature of the equity argument which is strange to me is the proposal being made by Kadoorie that in HKNIC the voting rights should be weighted to give CLP control, although they only buy 10% of the HKNIC shares. Furthermore, Kadoorie is proposing that HKNIC and KEC, having set up the Guangdong nuclear project with a 60:40 equity ratio in favour of the Chinese, should promptly set up a Project Management Company consisting of KEC and CLP with a 50:50 equity ratio to do all the work. This in effect gives CLP 50% of the decision making, ie veto power, for 4% of the equity contribution. I am surprised that any connectial concern would want to contribute to HKNIC in these circumstances. I am sure that the British Government would not want to do so.

My present position on equity is that I would recommend the British Government, acting through a technical consortium, should take equity if such a decision would give us a UK led package with everything provided from the UK except the NSSS and provided that the equity participation was real, ie not symbolic as

liniting?

Patish Government should take equity if we provided only the conventional plant or if HKNIC were insulated from decision taking as Kadoorie is at present planning.

Security of Supply

China and Hong Kong both have an interest in having a secure supply of electricity and this means getting a secure supply of fuel to the reactor. To guard against political upsets in the future this must therefore involve BNFL. We ought to make an argument therefore that BNFL should provide all the reload fuel and possibly the first charge as well, but a counter-argument can well be that a secure supply of fuel is assured providing that BNFL exist and that therefore all that needs to be established is that they are capable of supplying the fuel, not that they would actually provide it. The French will deploy this argument very strongly but, because of the history of American instability in this field, Westinghouse's objectives would be more muted.

Chinese Attitudes

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It is only through involvement in this project that I have come to appreciate the obscure nature of the oriental mind. I cannot hope to interpret Chinese attitudes properly. I can only note what I have heard from them, note the comments our China experts have made and think how I would react if I were in the Chinese position at this point in time.

In my view the dominant Chinese thought at the moment might well be that they wish to keep their options open. They would like to keep a set of opportunities, hopefully competing opportunities, which would enable them to pick and choose what suits them best. Having already received a turnkey French offer for the Shanghai project, I think that they may have received a turnkey French offer for South China as well. Even if this is not the case the Shanghai bid would no doubt have been regularly up-dated by the French and serve the same purpose. Surely they will want to see what other proposals they can get and then play off one "supplicant" against another. I assume that KWU can be eliminated from the race for political reasons. They have told me that they are not mounting any sales effort in China and certainly they have such a low profile that their presence is not actually discernable. I assume that the Japanese can be eliminated

following the disastrous Chinese experience with them at their steel plant. This inside that the only other plausible alternatives that the Chinese can develop are a French/UK proposal, a Westinghouse proposal and a Westinghouse/UK proposal. The proposals involving Westinghouse are entirely dependent on the attitudes of the new Reagan proliferation. Lu Ying has given me very positive encouragement to explore the American position. He has got Deputy Governor Wang to say very clearly that the Chinese will take a long time to make up their minds and this gives us time to explore the American position. All this encourages me to think that the Chinese have not actually made up their minds in favour of the French and would not take seriously an all French proposal at this moment in time. They appear to be in a hurry, but as best I can judge they give higher weight to exploring the American option.

Of course the fact that the Chinese want the American option to be explored does not necessarily mean that we should do so, but because a UK/ Westinghouse package would be advantageous to us, it is my opinion that we should take time to do this before we get committed either way.

CLP Attitudes

Both Sir Lawrence Kadoorie and Sir Sydney Gordon appear now to have made up their minds that it would be best to get a nuclear island from France. Simultaneously they expressed doubt whether GEC can be the chosen supplier of the turbines. I can see that this point of view might well be in the best commercial interests of CLP. However, in my opinion, it is not in the best commercial interests of the UK to concede a nuclear island to France, and to leave the turbine decision to the later decision process (which Kadoorie has described to us) seems to me most unwise. I have explained to Kadoorie that a French nuclear island could not easily be reconciled to British safety guidelines. He has replied that in that circumstance he is now prepared to abandon the latter.

French Attitudes

I am sure the French would best prefer to get a complete turnkey contract. I think they may well have made that offer for South China as well as Shanghai, but if so I think the Chinese have rejected it, either because it would be unrealistic to exclude the British altogether or because it was premature. As a fallback position the French would like to provide the nuclear island and concede the conventional plant to us. They have indicated therefore that they would be willing to agree with us a plan in which they provide the nuclear island

with all the fuel and we provide all the conventional equipment. They would ee to this but they would, of course, do their best to erode our participation in time and we may or may not be able to negotiate a secure fraction of the work.

Westinghouse Attitudes

The ambitions of Westinghouse are limited to providing the NSSS and the first charge of fuel. That limited ambition of course fits in very elegantly to UK ambitions to provide more plant. Westinghouse, Bechtel and NNC are already close associates in the UK PWR. The same composition with a different weighting of responsibilities would be very suitable for the China project. This combination would be even more suitable if we were to persuade the joint utilities to go for 4-loop plants rather than 3-loop plants.

Financial Assessment

I have previously argued, and still favour, a British led package sub-contracting the NSSS to either Westinghouse or Framatome and relying upon Bechtel to work with NNC as the architect/engineer. From Tables 1 and 2 we can assess the equipment and fuel value to the UK on this scheme as the following.

| BONP conventional plant architect/engineer services first fuel charge reload fuel for 10 yrs | \$263 \$323 ? \$195.6 \$652.0 |
|--|---|
| reload fuel for following 20 yrs | \$1304.0 |
| Total | \$2737.6 |

If we follow the alternative of offering the nuclear island to the French then, for obvious technical reasons, this will be a French led project. The French will argue, and will succeed in arguing, that BNFL should have only a reserve position in the supply of fuel and they will therefore get the entire fuel contract. We would therefore, at best, get the conventional equipment. But in view of the antagonism to GEC which has been displayed by the Chinese and which I do not fully understand and given the French reputation for being difficult people to work with, I think there is a very fair chance that that will slip away also. This route, therefore, gives us a doubtful figure of \$323M. The

difference between these two figures is so stark that I could not myself make ecommendation to the British Government that we should seek a French package although I would not have the courage to oppose it if mine were the sole voice doing so.

Recommendations

Despite the formidable array of departmental opinion that we should make a deal with the French now, it remains my view that we should pursue simultaneously the UK/Framatome project and the UK/Westinghouse project. We should keep both on the string and decide between them later. If we proceed in this way we will inhibit Framatome and Westinghouse from making a turnkey offer. But this policy only makes sense if we can be sure that the American proliferation position will change under Reagan and the Chinese will wait until that has happened. All the information I receive from the Reagan transition team is that US proliferation policy will change and there are some guesses that the new President will announce on 20 January an intent to do so. My best judgement is that the policy will change but there will be no announcement on 20 January (except of a vague kind) because how can Reagan announce "a change" without defining "a change to". Nevertheless, in my view the new administration will also have China high on its priority list and I therefore think there is a good chance that proliferation difficulties on this project can be rapidly resolved, particularly if the project is a joint British/American affair. It is also my opinion that, if we make an immediate deal with the French now, Westinghouse will get the immediate sympathy of the new administration and will be empowered to make a major sales pitch to the Chinese. Whatever happens it will, of course, take at least six months and possibly a year for the new American position to emerge formally. However, the Americans will be able to do sufficient in informal discussions with the Chinese to capture their attention.

For these reasons I would recommend that NNC should make an immediate agreement with Bechtel that whatever happens they will find a way of working together on this China project. We should then tell both Framatome and Westinghouse that we will be willing to work with either of them in either a UK/Framatome or a UK/Westinghouse package and that the decision between those two options will be a political one made by the Chinese. If it is assumed that

both Westinghouse and Framatome believe we have a favoured position there is hance that they will compete for the privilege of being our partner and that is the type of competition I would like to see in this project.

If, despite these arguments, it is decided to make an approach to the French now, please let us not concede immediately that they are to provide the nuclear island and all the fuel since that gives them a wonderful basis from which to erode our conventional island. Let us instead offer them a NSSS and the first charge of fuel and claim everything else for ourselves. I have every confidence that later negotiations will erode our participation to a more modest level.

Position of the UKAEA

As this project evolves we need to keep under review the role of the At the moment we are serving as advisors to Kadoorie, advisors to the Hong Kong Government and a servant to the Department of Industry. There are some conflicts between those three roles. Those conflicts are not acute at the moment but they will grow in time. If we now decide to go for a French nuclear island it would be very uncomfortable for the UKAEA to be safety adviser to Kadoorie. When the NNC design becomes public knowledge, and the approval of Westinghouse is clear, there are certain to be some questions and probably some controversy about the French designs. Quite apart from the NNC developments, there are genuine doubts about the seismic design of the French reactor. (I think the Chinese technical people realise this.) I therefore think the French safety people are a more appropriate group than the UKAEA to defend the French position. Personally I do not wish to get into a position where I am defending an NNC design in the UK and a French design in China. I think, therefore, that at the appropriate moment in 1981 the UKAEA ought to withdraw from this project if we follow the French route. So far as advice to the Hong Kong Government is concerned, this could be done equally well either by the AEA, the NRPB or the French.

\$366M

Westinghouse (USA) Westinghouse (Europe) Framatome (France) Breda (Italy) GHH (Germany)

NUCLEAR ISLAND

BALANCE OF NUCLEAR PLANT

(NSSS

\$263M

USA France UK

CONVENTIONAL

TURBINE GENERATOR

\$323M

GEC Alstrom etc

STEAM EQUIPMENT

CIVIL WORK

China

ARCHITECT

Electricite de France /Bechtel NNC NNC plus Bechtel

ENGINEER

FUEL

FIRST CORE

\$2151.6M

RELOAD FOR 10 YRS RELOAD FOR 20 YRS

Westinghouse Cogena (France) BNFL (UK)

****** 11

Break-down of the Proposed Nuclear Power Plants in Guangdong into Principal Items of Equipment and Design, Construction and Management Tasks with Cost Estimates and Possible Contractors

TABLE 2

(The overall cost is comparable with the KEC/CLP Joint Feasibility Study. The breakdown of equipment costs is based on the paper by J.A. Richardson, 'Summary of Current (1978-79) US Total Cost Projections for 1200 MW(e) PWR Power Plants'. Costs are expressed in 1980 US dollars and are based on two 900 MW(e) stations.)

| Item of Equipment or Expenditure | Approximate cost 1980 US\$ x 106 | Fractional cost (% of total equipment cost) | Possible French Contractor | Possible UK Contractor | Possible Supply by Westirghouse |
|--|--|---|-------------------------------|--|---------------------------------------|
| NUCLEAR ISLANDS | | | | | |
| Nuclear Steam Supply Systems | | | | | |
| Reactor pressure vessels | 45 | 4.7 | Creusot-Loire | | |
| Vessel internals | 40 | 4.2 | Creusot-Loire | Fairey Engineering GEC Vickers | _ |
| Control rods and drive mechanisms | 25 | 2.6 | Alsthom-Atlantique | GEC | Yes |
| Steam generators [tubing] | 85 | 8.9 | Creusot-Loire [Vallourec] | (Foster Wheeler) [Tube investments Accles & Pollock] | - |
| Coolant pumps | 30 | 3.2 | Jeumont-Schneider | - | |
| Pressurisers | 20 | 2.1 | Franatome | Babcock Int. Clarke Chapman Foster Wheeler | Yes |
| Main coolant piping Emergency core cooling system | 15 30 | 1.6 | SPIE-Batignolles | Cameron Iron Works | |
| accumulators | | | Creusot-Loire | Babcock Int. | |
| high head injection pumps | | | EIS Pompes Guinard | Weir | |
| low head injection pumps | | | EIS Pampes Guinard | Stone-Platt | - |
| water storage tanks heat exchangers | | | Bignier Schmidt-Laurent | Head Wrightsons | - |
| meat exchangers menical and volume control system, | 30 | 3.2 | Framatome Framatome | Whes soe CEC | |
| residual heat renoval system | | 3.2 | Fichicitorie | 430 | |
| nce of Nuclear Plant | HE FERRING | | | | |
| Steel liner of containment building | 37 | 3.9 | Creusqt-Loire | Braithwaite McAJ.pine | - |

| | Service of the later of the lat | Maria de la Companya | | Taylor woodrow | |
|---|--|---|---|-------------------|------------|
| | | | | Whessoe | |
| | 1.6 | 0.2 | Atelier at Chantier, CFEM | Carruthers | - |
| Polar crane | | | Neypric | Warton | |
| hergency diesel generators | 7.8 | 0.8 | Alstham-Atlantique | GEC | Yes |
| rergency diesel generators | | | Robatel | | |
| 2 to toward negative tions | 5.8 | 0.6 | Alsthom-Atlantique | GEC | Yes |
| Containment penetrations | 14.7 | 1.5 | CHEM | | Yes |
| tructural steel | | | Pechiney Ugine Kuhlmann | | |
| Refuelling water storage tank | 1.9 | 0.2 | Bignier Schmidt-Laurent | Babcock Int. | Yes |
| eruetting water storage can | | | | NEI . | |
| Spent fuel storage racks | 1.3 | 0.1 | Bignier Schmidt-Laurent | Fairey | Yes |
| pent ruer storage racks | | | | GEC | |
| Auxiliary feedwater system | 1.35 | 0.1 | Alsthom-Atlantique | GEC | - |
| | 1.5 | 0.2 | | Carruther | / - |
| pent fuel flask crane | | | | Warton | |
| | 0.9 | 0.1 | | Johnson-Matthey | Yes |
| lydrogen recombiners | 4.2 | 0.4 | | ŒC | - |
| leating, ventilation and air conditioning | 4.6 | | | | |
| equipment | . 3.2 | 0.3 | | Stone-Platt | - |
| ump pumps | 1.0 | 0.1 | | GEC | - |
| Containment spray system | 2.3 | 0.2 | | CEC | - |
| Component cooling water system | 1.7 | 0.2 | Velan | Hopkinsons | |
| hin steam isolation valves | 17.2 | 1.8 | SPIE-Batignolles | ŒC | |
| Piping | 8.6 | 0.9 | Jeumont-Schneider | BICC | Yes |
| Electric cable | 0.0 | 0.5 | Pechiney Ugine Kuhlmann | | |
| | 0.0 | 0.1 | Alsthom-Atlantique | CEC | |
| Safety related switchgear | 0.8 | 0.1 | ALSERGII ACIAICAÇES | Reyrolle Parsons | |
| | 10.5 | 2.1 | Rateau-Velan | Hopkinsons | Yes |
| alves | 19.5 | 2.1 | Sereg & Gachot | Crosby | |
| | | Partie Colo | Bouvier Darling | Rotork | |
| | | | Bonvier_paritie | Newman Hattersley | |
| | | 0.0 | 17 -1 143 | GEC . | Yes |
| Electric motors and controls | 2.4 | 0.3 | Alsthom-Atlantique Jeumont-Schneider | GEL | 103 |
| (보기) 그 [1] 그 [2] 가 있는 맛의 뭐 뭐 뭐 된 뭐 !! | | | | GEC | Yes |
| Safety related panels in Control Room | 1.3 | 0.1 | Alsthom-Atlantique | GEC | - |
| Essential AC power supply | 1.0 | 0.1 | Alsthom-Atlantique | | State Line |
| Fire protection equipment | 6.7 | 0.7 | | Chubb | Yes |
| Cable trays and conduit | 1.2 | 0.1 | | BICC | ies |
| Reinforcing steel for concrete | 47.5 | 5.0 | | ma | Vac |
| Radioactive waste treatment plant | 71.2 | 7.5 | Alsthom-Atlantique | GEC | Yes |
| | | | Atelier et Chantier | | |

**Control panel and protection system

49

5.6

Alsthom-Atlantique

GEC

Yes

Break-down of the Proposed Nuclear Power Plants in Guangdong into Principal Items of Equipment and Design, Construction and Management Tasks

with Cost Estimates and Possible Contractors

| Item of Equipment or Expenditure | Approximate cost 1980 US\$ x 106 | Fractional cost (% of total equipment cost) | Possible French Contractor | Possible UK Contractor | Possible Supply by Westinghouse |
|---|--|---|--|-------------------------------------|---------------------------------------|
| | | | | | |
| TURBINE ISLAND | | | | | |
| Turbine-Generator Plant | | | | | |
| Turbine-generator) Moisture separator/reheaters) Main steam piping) Lubrication system for turbine) Cooling system for generator) Control panel) | 204.3 | 21.5 | Alsthom-Atlantique | GEC NET Parsons GEC GEC GEC GEC GEC | Yes |
| Balance of Plant | | | | | |
| Electrical distribution yard Sea water circulating pumps Main condensers Condenser tubing (aluminium bronze) (titanium) | 2.1 2.2 4.9 8.9 | 0.2 0.2 0.5 0.9 | Alsthom-Atlantique Alsthom-Atlantique | GEC Weir GEC | - |
| Feedwater heaters | 7.3 | 0.8 | Alsthom-Atlantique | GEC | W. T. T. |
| Condensate extraction pumps | 0.9 | 0.1 | ETS Pompes Guinard | Weir | 1 . 1 |
| Boiler feed pumps | 1.7 | 0.2 | ETS Pompes Guinard | Weir | |
| Feedwater heat drain pumps Instrumentation and station compressed air supply | 0.6 0.2 | 0.1 | ETS Pampes Guinard | Stone-Platt GEC | 1 |
| Concrete piping for seawater flow | 1.4 | 0.1 | | Taylor Woodrow | 1 1 - AND 1 - T |
| Crane for turbine hall | 2.8 | 0.3 | Neypric | Carruthers Warton | |
| Station switchgear | 9.1 | 1.0 | Alsthom-Atlantique | GEC | |
| Secondary plant cooling system | 1.2 | 0.1 | | ŒC | |
| DC standby power supply | 0.4 | 0.0 | | ŒC | |
| Air extraction system for condenser | 0.5 | 0.1 | | GEC | - |
| Lifts for personnel and equipment | 0.6 | 0.1 | | | - |
| Chlorination equipment for seawater flow | 0*1 | 0.0 | | | 一 |
| Condensate polishing plant | 0.2 | 0.0 | Alsthom-Atlantique | GEC | |
| "the are uniter amaly amount | 1.1 | 0.1 | Alsthom-Atlantique | CEC | |

| Water storage tanks | 3.0 | 0.3 | | Pabeock | Yes |
|----------------------------------|---------------|--|--------------------|----------------------------|-----|
| Piping | 10.2 | 1.1 | | Babcock | - |
| Valves | 13.5 | 1.4 | Alsthom-Atlantique | Hopkinsons | Yes |
| TOURY WO | | | Gachot | Crosby | |
| | N. A. Balling | | | Rotork | |
| | | | | Newman Hattersley | |
| Electric motors and controls | 2.0 | 0.2 | Alsthom-Atlantique | GEC | Yes |
| Electrical cable | 6.1 | 0.6 | | BICC | Yes |
| Structural steel | 35.5 | 3.7 | CIFEM | | |
| Cable trays | 1.0 | 0.1 | | BICC | Yes |
| | | | | THE REPORT OF THE PARTY OF | |
| OTHER MAJOR ITEMS OF EXPENDITURE | | | | | |
| Civil construction work | 309.5 | A COLUMN TO THE STATE OF THE ST | | McAlpine | - |
| CIVIL CONSCIOUS MOLIC | | | | Taylor Woodrow | |
| Project design) | | | Edf, Bechtel | NNC | Yes |
| Troject design | | | | Bechtel | |
| | | | | NNC | |
| Construction management) | 153.0 | | Franatome | NNC | Upd |
| OURCE COLOUR METABOLISTIC / | | | | GEC | |
| Quality assurance) | | | CERCA, CFEM | NNC | Yes |
| quartey assurance | | | Framatone | CEC | |
| Project management | 67.9 | | CFEM, Framatome | NNC | - |
| Trojace intragramme | | 17-17-17 | | GEC | |
| Plant erection | 95.2 | | | Each contractor | |
| Supply of specialists | 69.0 | | Franatone | UKAEA | Yes |
| Supply of Specialists | | | | NNC . | |
| | | | | QEC | |
| Spares) | | | | Various | Yes |
| Training) | 67.0 | | | CEGB | Yes |
| Insurance) | | To the second | | | |
| Contingencies | 85.0 | | | | |
| | | | | | |
| FUEL | | | | LUK MALSILENY | |
| Initial charge | 195.6 | | FBFC | BNFL | Yes |
| Replacement fuel for 10 years | 652.0 | 是在天际 | FBFC | BNFL | Yes |
| Replacement fuel for 20 years | 1304.0 | | FBFC | BNFL | Yes |
| Transmission lines | - 240.0 | DE OF REAL | | | |
| | | | | | |

NOTE FOR THE RECORD Developments in the Design and Safety Analysis of the first PWR in the UK as I see them.

At the meeting of the Nuclear Industry Group on 25 November 1980 a presentation was made by NPC on the recent developments in the design and safety analysis of the Sizewell PWR. This note summarises the main developments

In May 1980, NPC selected the Callaway I plant as the basis for the NSSS design for the UK plant. Callaway I is a Westinghouse 4 loop plant producing 3425 MW (thermal) and is due to start operation in 1982. It has type F steam generators and a single 1800 rpm turbine-generator.

To make use of current UK experience with the turbine-generator manufacture, the UK plant will use two 600 MW turbine-generators.

The safety philosophy adopted in the UK and set out in the CEGB design guidelines requires additional safety features to those currently employed in the USA. In particular, there is a need for increased plant redundancy. Having carried out a probability analysis of existing plant designs, NPC have come to the opinion that a 4 train ECCS is required. (Most PWR plant in the USA have a 2 train system.) The need for a 4 train system is now accepted by Westinghouse and Bechtel. In addition to redundancy, there is also a requirement for the use of diverse equipment with independent back-up on all essential safety systems.

Having made the decision to adopt a 4 train ECCS, the layout of the nuclear plant must be changed. In particular, the four trains will be spread all the way around the main containment instead of only around one half. An access route for bringing heavy equipment into the containment must be provided but the details of this are not settled.

An additional requirement for the UK plant is the reduction of radio-· logical exposure for operating personnel. The CEGB requirement sets a maximum total annual dose of 0.2 man-rem/MW(e), (ie 240 man-rem for the proposed station). This dose is half the best dose achieved so far in any US plant and one sixth the average US dose. (The average dose in Europe for plants recently commissioned is in the range 300-400 man-rem.)

To achieve the required reduction in man-rem, NPC are proposing: 7.

- a) additional space for access to plant for inspection and maintenance
- b) special equipment to reduce dose and exposure time (eg multistud tensioner for removing the RPV head bolts)
- c) remote handling devices for routine inspections (eg non-destructive examinations - especially the steam generator)
- d) decontamination areas for equipment and changing rooms for personnel within the containment.

- It should be noted that the largest cause of occupational exposure in the US has been the examination and repair of the steam generators. If relable operation of the steam generators can be achieved then a substantial function of the operator dose can be avoided.

 9. Using the ideas described above, NPC have prepared an initial design which has been discussed with Westinghouse and Bechtel. Further discussions are now underway and Westinghouse are introducing new ideas from their own
 - development work and safety analyses in the USA.

 10. Specific topics in the joint discussions have included:
 - a) the use of deepwell pumps for safety duties. These pumps have vertical shafts with a top mounted motor. The vertical design gives better opportunity for providing inlet subcooling and reduces the required floor space.
 - b) the detailed layout of the containment to reduce operator dose
 - c) the necessity to depart from the SNUPPS layout because of the 4 train ECCS and the construction of the reactor on soft terrain
 - d) the detailed design of the containment including containment diameter, the roof design and the possibility of providing temporary access at ground level during construction. For the roof design, it was originally intended to use a flattened dome to reduce the containment volume but on advice from Westinghouse a hemispherical roof is now being considered.
 - 11. As a result of safety assessments following the accident at Three Mile Island, Westinghouse have now made the following proposals:
 - a) deepwell pumps should be used for all safety related duties
 - b) the ECCS should be built entirely within the primary containment. (With present designs and in the event of an accident causing severe damage to the reactor core, highly active water will pass through the ECCS which is partially located outside the containment.)
 - 12. NPC have accepted the logic of the Westinghouse suggestions and are now working on the engineering solution. In one possible design, the Refuelling Water Storage Tank (RWST) is moved inside the containment and located in the reactor sump. Since water for the ECCS is normally drawn initially from the RWST and later from the sump, by moving the RWST to the sump, change over valves can be eliminated. In the initial NPC design, there were two RWS tanks each supplying water to two of the four ECCS trains. It would therefore be necessary to provide two separate tanks in the sump to give the required redundancy.
 - 13. Consideration had also been given to modifications to the proposed ECCS trains to reduce the space requirements within the containment. It was proposed to increase the capacity of the High Head Safety Injection pumps so that they could supply the required flowrate for longer into an accident. For longterm ECCS during an accident, the pumps for the Residual Heat Removal System would double as the Low Head Safety Injection pumps. For accidents, where the HHSI pumps could not supply sufficient flow, a new storage tank would be installed.

This tank would be filled with pressurised water and would be designed to inject during the period when the flow from the HHSI pumps was insufficient. Even wit. these space reductions, the ECCS pumps cannot be accommodated within the circular containment building and it is proposed to build extensions to the containment to hold the pumps. These extensions will be designed to withstand full containment pressure during accidents but will be provided with man-access ways so that maintenance work can be carried out while the plant is in operation. NPC are proposing to use a forged ring component for part of the shell of the steam generator to eliminate the welds at the change of section. It was pointed out during subsequent discussions at Harwell that the main, essential and back-up feedwater supplies all use the same nozzle on the steam generator. Thus, despite the diversity of feedwater supply, there is a possibility of common mode failure through damage to the single nozzles. NPC have carried out a probabalistic assessment of Anticipated Transients 15. Without Scram and have come to the view that this type of accident should be considered as a design fault. This will have serious implications for the design and safety analysis of the vessel. It will also mean that thermal-hydraulic assessments of ATWS events will be required. In addition, NPC are now reconsidering a fast boration system. This system was initially designed to cope with accidents involving multiple steam line breaks but was set aside after discussions with Westinghouse. Fast boration does however offer a secondary shutdown mechanism to limit the risks of ATWS. NPC are using the existing fault analysis as the basis for the UK Safety Case. They have however identified the need to carry out significant additional analyses to study. a) fault combinations identified by the UK probability approach b) sensitivities and margins to variations in plant behaviour and parameter assumptions. It was felt that additional assistance from the AEA was required in this area. Although it is the safety policy of NPC and CEGB to concentrate on preventing class 9 accidents rather than migitating the consequences, it was felt that further attention needs to be paid to fission product release. is in line with recent arguments put forward by Levenson in the USA. I am impressed with the careful thought that NPC have put into these 19. matters. I am obliged to accept the logic of all their arguments although it is disappointing that the BONP and the layout of the plant will be so different from any earlier Westinghouse or Framatome reactors. However, it is important to note the close agreement which has been reached between NPC, Westinghouse and Bechtel. It seems highly probable that when the Americans begin construction of reactors again, their reactors will look very much like this one. Obviously this design has been put together to meet the criteria of the NII and to look ahead to the new regulations that are likely to be introduced in America by the NRC. It would be disastrous if we over-simplified our own approach and halfway through construction the NRC introduced new regulations which, by "knock on" effect obliged us to make changes. I think also it is very important to note that the NSSS itself is a well-proven system. It is only the BONP which is being changed.

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20. If we treat ATWAS as a design basis accident and the NRC make it a regulation in the near future, I think German law will compel KWU to follow it. It is then fascinating to speculate how the French will react. They will still be mass-producing, using superb production engineering, a reactor whose design the rest of the world has decided is inadequate. As a side issue, it is also fascinating to speculate on the attitude of the Chinese when they understand all this. They will be torn between a desire to have a well-proven plant and a desire to have up-to-date technology.

W Marshall

26 November 1980

CONFIDENTIAL so on the understanding that these talks would in no way commit the UK to participating in an Anglo-French package and that the possibility of proceeding with a British-led package including the supply of a Westinghouse reactor is kept fully open and will continue to be explored. I should also like to emphasise the urgency of the approach to the Chinese authorities recommended at paragraph 21 (iii) of the official paper. In addition to firm information on the likely Chinese choice of reactor we also need a much clearer view of the realistic timescale for the project in order that I can better assess the role which the UK nuclear industry could play in the project. I am copying this letter to the recipients of yours. han en Acro D A R HOWELL

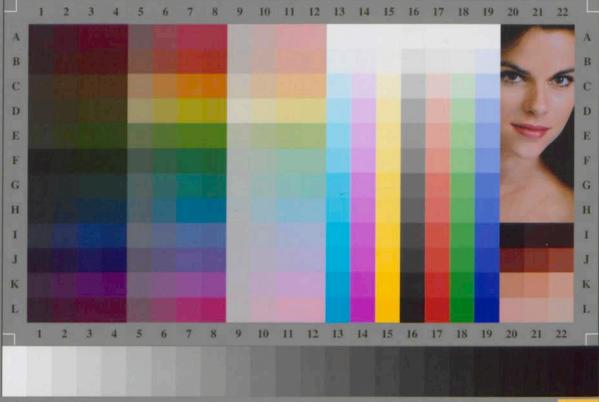
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