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Secretary of State for Industry

19 December 1980

The Rt Hon The Lord Carrington
KCMG, MC
Secretary of State for Foreign and
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Foreign and Commonwealth Office
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*See Peter, We must not Prime Minister
lose out on this. To note that
this is planned
with due regard*

GUANGDONG NUCLEAR POWER STATION PROJECT

In my letter of 22 September I asked you to probe Chinese attitudes on this important project during your intended visit to Peking. In the event, you expressed the Government's general interest and support for the project to the Chinese Foreign Minister, Huang Hua during his visit to London in early October. Our Ambassador to Peking reinforced those statements in various discussions with Chinese Ministers.

2. However, in mid-October the French President reached an agreement in principle with Chinese leaders that France would supply the first nuclear stations to the PRC on advantageous financial terms. So far as we can gather, no final decisions have yet been taken but the advantages of working with the UK on a project supplying power to Hong Kong are recognised by the Guangdong authorities and probably also by the Chinese Government and the French. Our position rests largely on a presumption by other parties that the Hong Kong connection ensures our participation. The immediate fear is that French pressure for an all-French package will persuade the Chinese to take a decision which excludes a substantial UK share. An early initiative to the French is very desirable in order to forestall an all-French package. Our Ambassador to Peking, the Governor of Hong Kong, Sir Lawrence Kadoorie, Lord Weinstock and Whitehall officials all support this.

3. I am therefore seeking your agreement and those of colleagues to approaches being made in the first instance at official level to the appropriate French officials. These should parallel and give a steer to commercial discussions between GEC and Framatome (the French nuclear supplier). GEC have already been invited by Framatome to further discussions on 23 December. At the same time we should not close the door on a possible partnership with Westinghouse of America. Though unlikely to be preferred by the Chinese it would offer greater



benefits to British industry than a collaboration with the French. In the meantime our Ambassador in Peking should firmly restate our interest, seek further information about the likely Chinese choice of a supplier, and (depending on the response), indicate our willingness and ability to work ... with either the French or the Americans. The attached paper from officials has been agreed between Departments and sets out the arguments for this course of action.

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

Lawson.

Kear.



GUANGDONG NUCLEAR POWER STATION PROJECT

Background

1 Since early 1980 China Light and Power Co Ltd (whose Chairman is Sir Lawrence Kadoorie) and the Guangdong Electricity Company of the People's Republic of China have been conducting 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 in February 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 re-exported without prior consultation and will receive adequate physical protection.

2 In his letter of 1 December to the Prime Minister, Sir Lawrence Kadoorie noted that the joint feasibility study on this project was completed. The study which was formally given to the Chinese on 11 December, concludes that it is feasible for the Guangdong Electricity Company (KEC) and China Light and Power Company Limited (CLP) jointly to construct and operate a 2 x 900 MW PWR station some 30 miles north-east of Hong Kong, the foreign exchange cost of which would be met from electricity sales to Hong Kong.

3 There can be no certainty that the Chinese will proceed with the project. The recent 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 close relations between the UK, Hong Kong and the People's Republic of China (PRC) in a period when reassurance over the future of Hong Kong will be important given the expiry in 1997 of the lease on

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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. Neither would be constrained by their Governments' non-proliferation policies. The French position 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 have indicated their willingness to work with the UK in this way. Although the final decision rests with the Chinese the UK's chances of maximising its own share of the contract will be helped if we can present a well-prepared package to them in good time.

Purpose of Paper

4 This paper concentrates on the implications for the UK of collaboration with either PWR supplier, analyses the arguments for and against a partnership with either Framatome or Westinghouse and seeks Ministerial authority for the next steps.

The UK Position

5 The UK provided technical support to CLP from Dr Walter Marshall (Chairman Designate of UKAEA) and partly as a result of his efforts now 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 continuing of supply of electricity.

6 The UK's negotiating position is based upon the need for the nuclear power station to be partly 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 and on the choice of reactor will be taken by the PRC or Guangdong Authorities. As CLP have prepared the feasibility study jointly with KEC 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.

7 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. The French appear to have established a favoured position in Peking following an agreement in principle reached during the visit of the French President that France would be the preferred supplier of China's first nuclear station.

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 and we should be able to build on any misconceptions to argue that a major role for the UK would be a precondition of approval. Secondly the UK does have a considerable breadth of expertise in organising and regulating a nuclear industry and in supplying it with components. In the immediate future we must be careful to avoid conflicts with the needs of the UK nuclear programme, but on a realistic timescale for the Guangdong Project, it appears possible for the UK to arrange

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for the provision of the required expertise. Furthermore it has been suggested by the Chinese that an injection of equity from the UK would secure some influence. However, the precise meaning which the Chinese attach to "equity" is uncertain and needs to be explored with them. There are political constraints which Ministers will also need to consider. Equity should in any event not be offered until it is clear what is necessary to secure our commercial interests, and only then as a final step in securing them. Consideration will also have to be given to the arrangements for sharing liabilities in the event of a nuclear accident.

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 would be prudent to keep alternative options open, particularly with regard to the other potential supplier, since the final decision rests with the Chinese.

Arguments for and against an Anglo-French or Anglo-US package

11 The arguments for and against a partnership with either Framatome or Westinghouse depend on the likely benefits to the UK of association with either party. These benefits cannot be exactly forecast since they will depend on negotiations with the partner and with the Chinese. The minimum we should be looking for from either partner is:

Supply of hardware other than the nuclear island	£200m
10% of the nuclear island (hardware but no system)	£ 20m
Project design, planning, quality assurance, specialist remuneration, project management, spares training and insurance	£ 50m
Share of transmission costs	£100m
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Total	£370m
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Framatome

12 The arguments for a partnership with Framatome are:

(i) The French have established a favoured position in Peking and, if rejected by the UK, have the ability to offer a complete nuclear station without UK input.

(ii) An Anglo-French project would be 'communautaire' and could have wider implications for industrial co-operation.

(iii) Both GEC and CLP favour Framatome.

13 The arguments against such a partnership are:

(i) We could not expect to win any more than about £370m since Framatome would expect to supply much of the ancillary equipment of the nuclear island.

(ii) The possibility of securing even a small proportion of the fuel supply contract - say £50m - is not rated highly by BNFL.

(iii) GEC have no experience with Framatome and past Anglo-French joint ventures have met with mixed success.

(iv) There are technical doubts about the adequacy of a French reactor in Chinese seismic conditions; Framatome has stated willingness to modify its designs where necessary in line with latest international standards. This aspect will need to be discussed with the French.

Westinghouse

14 Arguments for Westinghouse are:

(i) It may be possible to win an additional 10% of the hardware of the nuclear island, worth £20m.

/(ii) ...



(ii) There is a much greater possibility of winning a substantial part of the fuel supply contract, and possibly all of it, worth £200m (particularly because of Chinese doubts about US non-proliferation policies).

(iii) GEC have a relationship with Westinghouse; the chance of gaining information relevant to the UK programme from the Guangdong project would be greater with Westinghouse than with Framatome.

(iv) Westinghouse would be willing (unlike Framatome) to work under the overall control of the NNC backed by Bechtel as architect engineers; the UK would thus have far greater control over management of the project.

(v) Much work has already been done on the safety of the Westinghouse design in the context of the UK programme.

15 The arguments against Westinghouse are:

(i) The Americans have achieved no special position comparable to the French; indeed the Chinese may continue to have some doubts about the new Administration's attitude towards China and this could affect their willingness to contemplate any US contribution to the Project.

(ii) A decision to go all out for an Anglo-US joint project would undoubtedly stimulate the French to produce an all-French package which, given the Chinese political commitment to President Giscard, might result in the UK losing all chance of any input.

Analysis

16 Given the apparent strength of the French position, an Anglo-American partnership might involve greater risks. The French are reported to have been asked for a total package but are also

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reported to be willing to establish an Anglo/French collaborative venture provided the UK Government initiates early discussions. To delay an official approach to Paris could therefore result in a further erosion of our position and a strengthening of that of the French.

17 The Governor of Hong Kong, our Ambassador in Peking, Sir Lawrence Kadoorie, CLP and GEC all favour an early initiative with the French. Nevertheless, because co-operation with Westinghouse would bring greater rewards and because a satisfactory partnership may not be established with the French, it would not be prudent to take a firm decision in favour of the French at this stage. To keep the Westinghouse option open would in any event strengthen our negotiating position with the French, and would give time for further discussions at industrial level with Westinghouse (in view of the change of US administration the time is not right for governmental discussions).

18 The objectives of an approach to the French would be to convince them that we were seriously considering the possibility of an Anglo-French package, to establish the degree of French interest, and to forestall any early all-French bid. Detailed contractual and technical discussions could then take place between GEC and Framatome with a view to maximising UK participation in a possible Anglo/French partnership. Neither set of discussions should, at this stage, commit us finally to a partnership with the French.

19 We need also to act with the Chinese in order to remove any doubts which they may have about the UK Government's interest in the project. But an approach to the Chinese now indicating the UK's choice of partner would seem premature, and in the case of an Anglo-French package would effectively rule out the Westinghouse option. In any case, the PRC are unlikely to reach final conclusions on the nuclear project feasibility study for some months and therefore final decisions do not have to be made yet. The need now is to reaffirm our strong interest in the project; to explore Chinese

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intentions further and to indicate our willingness and ability to work with either supplier.

20 Conclusions

- (a) the UK is reasonably well-placed to win a significant share of the hardware and associated orders, but cannot afford to be complacent;
- (b) the financial benefits to the UK could be significantly greater in a partnership with Westinghouse; there would also be benefits to the UK nuclear industry;
- (c) the French are, however, well-placed - they have obtained a Chinese political commitment, they appear to have offered an attractive financial package, and they have an established technical base;
- (d) the choice may therefore become one between a partnership bringing less financial benefit to the UK but a more assured opportunity of winning at least a proportion of the project; and a partnership where if everything went well the UK would stand to win up to £225m more in orders, but might well not succeed.

Recommendations

21 Against this background, officials recommend that:

- (i) discussion should now be initiated with the French, on a government-to-government basis in parallel with discussions continuing between GEC and Framatome;
- (ii) the possibility of a partnership with the American company Westinghouse should be kept open - as a bargaining counter with the French, in recognition of the several advantages which such an arrangement would have for UK

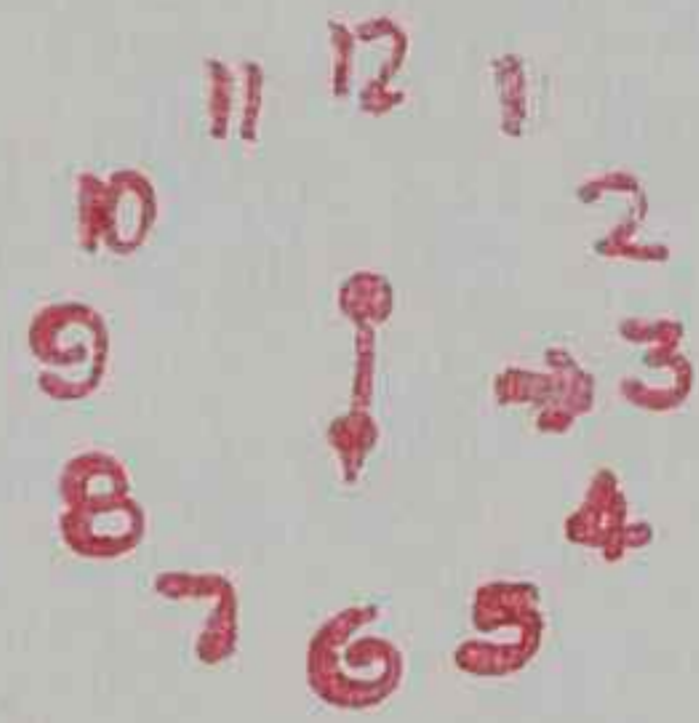
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interests, and in recognition of the fact that the Chinese will make the final decision on participation:

(iii) the Ambassador in Peking should re-state our commitment to the project, sound out the Chinese on their likely choice of PWR supplier and depending on the answer to this, stress our ability to collaborate with the French while pointing out that we retain strong links with the Americans.

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China

10 DOWNING STREET

From the Private Secretary

22 December, 1980

Guangdong Nuclear Power Station Project

The Prime Minister has seen the Secretary of State for Industry's letter of 19 December to the Foreign and Commonwealth Secretary on this subject. She has stressed that it is of the highest importance that we should not lose this contract. She wishes to be kept in close touch with developments.

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

M. O'D. B. ALEXANDER

I Ellison, Esq
Department of Industry

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